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Music Performance Anxiety and Dispositional Flow in Predicting Audition Success in Amateur Percussionists

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To the Graduate Council:

I am submitting herewith a thesis written by Benjamin Hyun Stocking entitled "Music Performance Anxiety and Dispositional Flow in Predicting Audition Success in Amateur Percussionists." I have examined the final electronic copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Arts, with a major in Psychology.

Jacob J. Levy, Major Professor

We have read this thesis and recommend its acceptance:

John Lounsbury, Dawn Szymanski

Accepted for the Council:

Carolyn R. Hodges

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

Music Performance Anxiety and Dispositional Flow in Predicting Audition
Success in Amateur Percussionists

A Thesis Presented for the
Master of Arts
Degree
The University of Tennessee, Knoxville

Benjamin Hyun Stocking
May 2013

Abstract

The purpose of this study was to examine personal characteristics of adolescent/young adult percussionists who were successful in their audition for a highly competitive, performing arts unit (i.e. a World-Class junior drum & bugle corps). We were particularly interested in investigating the predictive influence of daily practice time and two psychological variables related to optimal performance (i.e., dispositional flow and musical performance anxiety-MPA).

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Chapter I

Introduction and General Information

Peak performance plays a pivotal role in high-stakes auditions because an auditionee must be able to display composure and expertise while under the watchful eye of someone who serves as an evaluator (Privette, 1983). A single audition could determine the difference between who makes the cut and who goes home; it could impact the outcome of one's entire career. This all or nothing mentality can result in a highly competitive and stressful environment. Kenny (2011) described that an audition situation is among the highest of all music performance anxiety situations to be placed in for a musician.

A review of the literature has revealed several factors that contribute to performance success, but unfortunately, the literature lacks a more comprehensive understanding of audition success in a variety of high stakes settings such as music auditions, sports tryouts... etc.(Lilen & Humphreys, 2001). Although there is evidence to believe that audition scenarios are considered to be considerably more anxiety provoking, there are no empirical studies that assess the relationship between psychological variables such as performance anxiety and audition success.

A reason to believe why it would be difficult to investigate audition outcomes in general is because so few actually are successful in making the cut. This factor alone would make it difficult to study and assess what exactly contributes to a successful audition as such a shortage in successful auditionees in a given audition limits the variability to predict what made the audition successful in the first place. In order to

assess audition success, one would need a population with enough auditionees who are successful and unsuccessful in making the cut. For the purposes of this study, we took a sample from a population of percussionists who auditioned for a select number of positions on a world-class junior drum and bugle corp.

Before examining the relationship between performance anxiety and audition success, it is important to keep in mind other possibilities that may account for audition success. So many variables might impact how an audition might go. Does it matter if the person auditioning is experienced with auditions? Does practice time and preparation matter? What about the evaluator? The literature has remained sparse in accounting for other factors contributing to audition success. This gap in the performance research has driven a review of the literature to identify variables that may be potential predictors of audition success. Research on audition and performance success has already identified experience and preparedness as other important variables that may related to audition success.

Chapter II

Literature Review

Experience

For the purposes of this study, the question still remains: are there differences between those who audition successfully (offered membership) and those who are unsuccessful (were cut)? The literature on actual audition or tryout success remains very sparse. Findings have shown several factors that have contributed to audition outcomes. Fuller (1990) had explored the factors related to success in all-state choir auditions. His findings revealed that higher levels of motivation and audition experience are related to success.

Another study looking at variables which impacted all-band auditions in South Dakota suggested that the level in which the person auditioning feels comfortable impacts their predictability for success (Lilen & Humphreys, 2001). Both "feeling comfortable" and "being experienced" appear to fall under components of performance anxiety and flow, but further studies would be warranted to investigate their influence on audition success.

Zwaan and F. M. ter Bogt (2010) echo the above findings that performance experience explains much of how successful audition outcomes. In looking at the show "Dutch Idol", Zwaan and F.M. ter Bogt, assessed various factors that set finalists on the show apart from those who were otherwise cut in previous rounds. Their findings showed that contestants who came from backgrounds that allowed them more performing experiences had a better change in advancing to later rounds of the competition. The

authors go on to add that the majority of the findings revolved around the notion of contestants being more “prepared” for their auditions. From these findings, it would appear that the mere audition experience is not enough in predicting successful outcomes. The concept of preparedness seems to imply that the manner in which an auditionee practices before an audition may also be important. But before examining what this preparedness or preparation looks like, we will first examine the psychological variable of performance anxiety and how it might hinder preparation and practice.

Performance Anxiety

Although Kenny (2011) asserted that an audition was among the most anxiety provoking situations, no research has assessed the relationship between music performance anxiety and audition outcomes. Performance anxiety is a common struggle that affects a person not only psychologically, but physiologically and behaviorally as well (du Boucher-Ryan & Bridge, 2011). Studies have indicated that performance anxiety is very common and is related to poorer performance, especially with musicians (Osborne & Kenny, 2005).

In a survey, Wesner, Noyes & Davis (1990) looked at 294 musicians and their attitudes and experiences with performance anxiety during their careers. Results revealed that 16.5% of musicians reported that they experienced performance anxiety to the point where their performance had been dramatically hindered. While an overall 21.4% commented that they experienced performance anxiety frequently, 16.1% said that performance anxiety had a negative effect on their careers. Although, Wesner, Noyes & Davis may have not included other variables that may have impacted their results, such

as, age, skill level, and other environmental circumstances, their findings support the assertion that performance anxiety plays a negative role in many musicians.

To target a more specific population, van Kemanade, van Son, & van Heesch (1995) conducted a similar study among professional musicians in an orchestra. Of the 155 musicians who filled out a survey, 58.7% of them had experienced performance anxiety. Of the 58.7% of those who had experienced performance anxiety, 55% reported that their performance anxiety had affected their work throughout their careers. There was no relationship between the length of professional experience with performance anxiety. Although, results could be attributed to the fact that orchestral musicians could experience performance anxiety in a different manner than other professions, the literature consistently shows that high performance anxiety is related to hindered performance and that many professionals are affected by it.

Performance anxiety has also been related to struggles with self-confidence and cognitive anxiety. The Competitive State Anxiety Inventory (CSAI-2, Martens, Burton, Vealey, Bump, & Smith, (1990) is an instrument used to measure three aspects of competitive state anxiety: self-confidence, cognitive anxiety, and somatic anxiety. After studying musicians, it was found that these two components predict global performance and technical accuracy (Yoshie, Shigemasu, Kudo, & Ohtsuki, 2009). It is evident by the literature that music performance anxiety is related to poor performance, but in terms of audition success and outcomes, no significant relationships have yet been made. In the current study, we are interested in looking at how music performance anxiety relates to audition outcomes, but how it relates to how performance preparation quality and

experiences of flow.

Quality of Preparation and Flow

Studies have found that high flow and low performance anxiety are related to peak performance (Kirchner, Bloom, & Skutnick-Henley, 2008). But what would this mean in terms of audition preparation? Erickson, Krampe & Tesch-Römer (1993) believed that practice and preparation is not so much about the quantity, but the quality of practice it requires a person to be motivated to attend a practice session, a concrete understanding of the task being practiced to ensure correct practice, and repetitive practice. By definition, deliberate quality practice is the effective enhancement of performance that involves successive, mindful repetitions of the task which is being practiced, along with immediate feedback (Pusic, Pecaric & Boutis, 2011). The literature on performance anxiety might suggest that high levels of performance anxiety inhibit performer's desire and ability to effectively prepare (Kirchner, Bloom, & Skutnick-Henley, 2008). If a performer is not engaging in effective practice, it may be unlikely that a psychological state referred to as flow is experienced.

Flow has been closely related to optimal performance. "Flow", a term coined by Csikszentmihalyi (1990) was defined as "a state of consciousness where people become totally immersed in an activity, and enjoy it intensely" (Bakker, p. 27, 2005). It has been shown to be essential in peak performance and experience (Privette, 1983). Through these definitions of flow, it would seem that a person, who experiences a high level of flow during practice and preparation for an audition, would be more likely to experience successful performance. Jackson and Csikszentmihalyi (1999) introduced nine

dimensions of flow. The first dimension, Challenge and Skills Balance of Flow (CSB-Flow), seems to be the foundational component in relationship to our current study.

Challenges and Skills Balance of Flow

Jackson and Csikszentmihalyi (1999) conceptualized the experience of flow in two dimensions of experience –challenges and skills. Challenges were defined as situational demands, while skills were defined as all of the abilities available. They asserted that if the challenge level was perceived to exceed the average skill level, a musician or athlete would feel anxious and not experience flow. If the challenge is perceived below the average skill level of a musician, feelings of boredom and apathy would be experienced. Thus, for a musician or a performer to experience flow, the challenges and skills for a particular task, must go beyond the performer's average levels and be perceived as something that can be accomplished. In regards to audition preparation, experiencing the Challenge/Skills Balance dimension of flow might be important in seeing who makes cut vs. who does not. In addition, we are also interested in examining how music performance anxiety might relate to experiences of the Challenge/Skill Balance Flow during the audition preparation.

The aims of the current study are to take a closer look the two psychological variables of music performance anxiety and flow in relationship with audition success. Specifically we would like to look at the Challenge/Skills Balance dimension of flow. We hypothesized that:

1. There will be a direct, positive correlation between Music Performance Anxiety (MPA) and Audition Outcome (lower scores on Audition Outcome were indicative of more successful audition outcome).
2. There will be a direct, negative correlation between Challenge/Skills Balance dimension of Flow and Audition Success (lower scores on Audition Outcome were indicative of more successful audition).
3. There will be a direct, negative correlation between MPA and Challenge/Skills Balance of Flow.
4. Challenge and Skills Balance will mediate the relationship between MPA and Audition Success.

Chapter III

Materials and Methods

Participants

Archival data from 112 percussionists who auditioned for a world-class junior drum and bugle corps were collected for this study. The average age of participants was 18.95 ($SD = 1.20$), with approximately 80% ($n = 90$) of the population being male. Approximately 40% ($n = 44$) of the participants were college music majors, with another 39% ($n = 43$) being non-music majors (and 25 not indicating major or may not be enrolled in college). The age and gender breakdown of participants was consistent with the demographics of the participating drum corps.

Procedure and Instrumentation

All data were originally collected as part of a performance enhancement program with the drum corps and maintained in a secure data archive. All potential participants agreed to allow their non-identifying information to be archived for future research, and the organization responsible for maintaining the archive granted permission to the authors to access the data. As an archival study, this study was approved by the authors' Institutional Review Board. Participants completed (via paper and pencil administration) the measures described below.

Performance Anxiety

The Music Performance Anxiety Inventory for Adolescents (MPAI-A; Osborne & Kenny, 2005) was used to assess the somatic (e.g., "Before I perform, I get butterflies in my stomach"), cognitive (e.g., "I often worry about my ability to perform"), and

behavioral (e.g., “I would rather play on my own than in front of other people”) characteristics of performance anxiety. The scale consists of 15 items in which the respondent answers how often they experience the characteristic on a seven-point Likert-type scale ranging from: 0—Not at all, to 6—All the time. This scale has high internal consistency (Osborne & Kenny, 2008), and has demonstrated construct validity by significant positive relationships with self-reported social phobia, convergent validity with moderate to strong relations with an adult measure of MPA, and discriminant validity by a weak positive relationship with depression, and no relationship with externalizing behavior problems (Kenny, 2011; Osborne, Kenny, & Hols, 2005). The internal consistency of this measure within the current population (Cronbach’s alpha = .88) was similar to other studies with similar populations (Osborne & Kenny, 2008).

Flow

The Challenge-Skill Balance subscale of the Dispositional Flow Scale-2 (DFS-2; Jackson & Eklund, 2002; Jackson, Eklund, & Martin, 2010) was used to assess the dynamic of challenges and skills in the three months leading up to the participants’ audition. Csikszentmihalyi’s (1990) concept of challenge-skill balance is crucial to the definition of flow. Flow occurs only when the individual moves beyond his or her average experience of challenge and skill. The moving beyond average signifies an investment of psychic energy into a task, which is also a pre-requisite to flow. The respondent indicates how often they experience the behavior, feeling, or sensation described in the items on a five-point Likert-type scale ranging from: 1—Never, to 5—Always. The internal consistency of this measure within the current population

(Cronbach's alpha = .75) was similar to other studies with other populations (Jackson, Eklund, & Martin, 2010).

Audition Outcome

Following the auditions, the director of the participating drum corps added the outcome of the audition to the database. Participant outcomes were one of the following: 1. They were offered a position in the drum line (i.e., successful outcome); 2. They were asked to return for an additional audition (i.e., "called-back"; moderately successful outcome); or 3. They were not offered a position or asked to return (i.e., "cut"; unsuccessful audition). The nominal scale for this variable was 1 = audition success; 2 = call back; and 3 = cut.

Chapter IV

Results and Discussion

Results

Means, *SDs*, and intercorrelations among the study variables are shown in Table 1. To test the hypothesized model of direct and indirect (mediated) relations (shown in Figure 1), Preacher and Hayes' (2004) simple mediation procedure (SOBEL) for SPSS was used. In Step 1 of the mediation model, the regression of MPAI-A scores on Audition Outcome, ignoring the mediator, was significant, $b = .16$, $t(112) = 2.48$, $p = .015$. Step 2 showed that the regression of the MPAI-A scores on the mediator, DFS-2-Challenge/Skills Balance (DFS-CSB), was also significant, $b = -.17$, $t(112) = -3.70$, $p < .001$. Step 3 of the mediation process showed that the mediator (DFS-CSB), controlling for the MPA scores, was significant, $b = -.42$, $t(112) = -3.12$, $p = .002$. Step 4 of the analyses revealed that, controlling for the mediator (DFS-CSB), MPA scores were no longer a significant predictor of Audition Outcome, $b = .09$, $t(112) = 1.39$, $p = .177$.

To test whether the indirect effects were significant we used a bootstrap analysis to create 10,000 bootstrap samples from our dataset as recommended by Mallinckrodt, Abraham, Wei, & Russell (2006). Results of this analysis, using a bias corrected 95% confidence interval for indirect relations, indicated that the indirect link was statistically significant at $p = .02$. The mean indirect (unstandardized) effect of DFS-CSB on Audition Success was .070; the standard error of the mean indirect effect was .031; and the 95% confidence interval for the mean indirect effect was .019 (lower limit) and .138 (upper limit). Finally, the squared multiple correlation of the predictor variable on

Audition Success was .13, which indicates that MPA and experiences of challenge and skills balance accounted for approximately 13% of the variance in Audition Success and results in a Cohen's $f^2 = .15$, a medium effect (Cohen, 1992), with Challenge/Skills Balance fully mediating MPA in predicting Audition Success

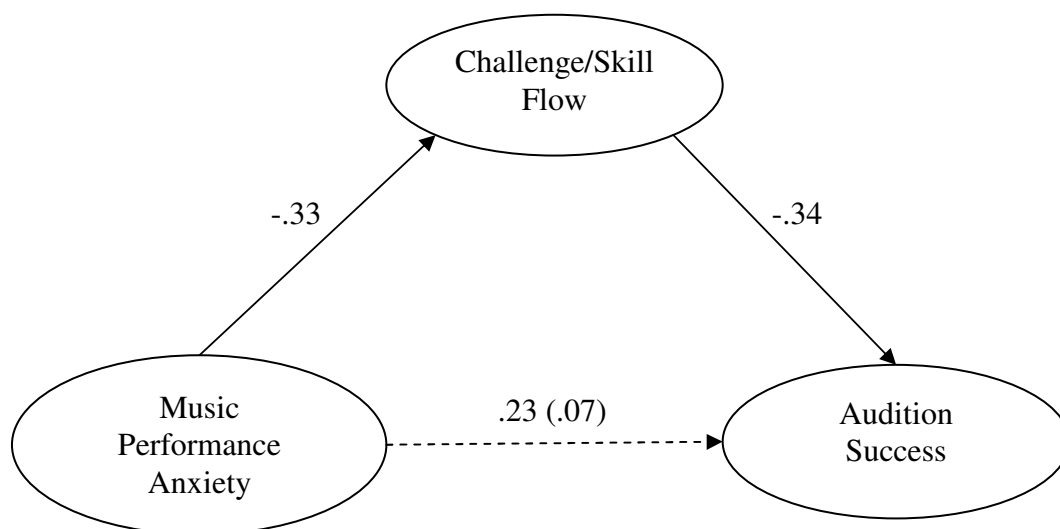


Figure 1. Mediation Model

Table 1.

Summary of Intercorrelations, Means, and Standard Deviations for Scores in the MPAI-A, DFS-CSB, and Audition Success.

Measure	1	2	M	SD
1. MPAI-A	--		3.14	1.09
2. DFS-CSB	-.33**	--	4.11	0.57
3. Audition Success	.22*	-.37**	2.25	0.78

Note. MPAI-A = Music Performance Anxiety Inventory-Adolescents (n = 113); DFS-CSB = Dispositional Flow Scale 2, Challenge-Skill Balance Dimension (n = 114). The range for MPAI-A scores was 0-6 with higher scores indicative of greater magnitudes of music performance anxiety. The range for DFS-CSB scores was 1-5, with higher scores indicative of more frequent experiences of this dimension of Flow. Audition success were rated on a 1-3 scale (n = 115), with 1 = offered position in the drumline; 2 = called back for an second opportunity to audition; and 3 = not offered a position (i.e., “cut”).

* $p = .017$; ** $p < .001$.

Discussion

The essential aim of the current study was to examine the two psychological variables of music performance anxiety and flow in relationship with audition success. Based on previous findings in the literature, no studies have ever examined these two variables in this particular setting. We found that percussionists with fewer experiences and symptoms of MPA and achieved more frequent experiences of Flow during their preparation were more likely to be successful in their World Class drum & bugle corps audition—i.e., more likely to “make the drumline.” Our findings echo the findings of Kirchner, Bloom & Skutnick-Henley (2008) who found a negative correlation between flow proneness and performance anxiety. As it relates to preparation time, it appears that quality (being immersed in the experience—i.e., flow) of practice were valuable for successful auditionees. This is consistent with the body of research indicating the importance of deliberate practice to a flow state (e.g., Duckworth, Kirby, Tsukayama, Berstein & Ericsson, 2005 ; Ericsson, Krampe & Tesch-Römer, 1993).

Typically when conceptualizing music performance anxiety and audition, the focal point is on the stress and anxiety surrounding the audition itself, which is consistent with Kenny’s (2011) assertion that auditions are among the more stressful situations a musician faces. From this, one could argue in affirming that all auditionees typically experience elevated arousal and anxiety at the state level during an audition because of the sheer stressfulness of the situation. This shared state of stress does not explain the differences in those who make the cut versus those who do not. Rather than having the

focal of the actual audition situation, a question is to be asked if the music performance anxiety had been experienced for auditionees for the several months that led up to the audition itself. This would imply that music performance anxiety may affect some auditionees who are generally more vulnerable or prone to anxiety. The data found in this study suggests that indeed, music performance anxiety affected some auditionees for the two months leading up to the audition which might hold certain implications about how these auditionees were able to effectively prepare themselves. This would imply that music performance anxiety inhibits an auditionee from engaging in the challenge and skills dimension of flow during practice time.

The significant inter-correlations among the predictors, in which MPA was negatively correlated with Flow (DFS-CSB), meaning that auditionees with higher MPA were less likely to challenge their skills during practice, which inhibited flow. DFS-CSB was also negatively correlated with audition outcomes. Both psychological variables independently related to each other as well to audition success. But when controlling for DFS-CSB as a mediator, MPA, which predicted audition success alone, now became insignificant (see figure 1). It is reasonable to interpret the results of this mediation as a causal pathway which leads to audition success. From this interpretation, one could infer that performers with stronger magnitudes of MPA may have avoided practicing (since anxiety tends to manifest in terms of avoidant behavior) or limited practicing on elements of their performance they felt less confident about. Prior research suggests that the level in which the person auditioning feels comfortable impacts their predictability for success (Lilen & Humphreys, 2001).

Our results of DFS-CSB being a mediator between MPA and audition outcomes lends itself to the idea that if performers are anxious, they will be less likely to challenge themselves and become immersed in practice. It is reasonable to suggest that auditionees who were more prone to anxiety, were not challenging themselves in practices months before the actual audition. This goes back to Jackson and Csikszentmihalyi's (1999) model that performers, who are not constantly challenging themselves relative to their skill level, do not experience flow.

Implications

In summarizing the findings of this study, the challenge skill balances dimension of flow (DFS-CSB) is pivotal as a mediator between MPA and audition success. Auditionees who are more prone to music performance anxiety experienced an imbalance in their ability to challenge themselves relative to their skills. Moving forward in finding ways to help individuals who struggle in audition settings, it will be important to correct such challenge skill imbalances. An instructor can facilitate this process by helping a musician preparing for an audition to manage their anxiety better and encourage them to work on challenging themselves more. This would allow the performers to set themselves up to experience flow more often during preparation, which would increase their probability for audition success.

Since our results imply that MPA affected how one prepares for an audition, a possible limitation to this study would be obtaining a more robust assessment of the actual preparation activities of the auditionees leading up to an audition. This might offer more insight into how the musicians are experiencing flow during their practice time. It

would also give further information into how MPA might specifically affect a musicians' ability to challenge themselves during practice. Future research in the area of audition success might focus on variables such as talent and previous audition experience in addition to flow and performance anxiety.

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VITA

Benjamin Stocking was born in Seoul, Korea, but was later adopted by Gene and Colleen Stocking when he was two. He grew up in Connell, Washington and was the youngest of four adopted siblings: Joseph, Jill, Sora, and Jacob. He attended Connell High School and graduated as class Valedictorian with honors. After graduating, Benjamin served a two year service mission for his church in Ecuador, South America. This challenging, yet rewarding experience taught him the importance of hard work and dedication. This is also where he found his passions for teaching and learning about diverse cultures.

Upon returning from his service mission, Benjamin attended Brigham Young University where he received his Bachelors of Science Degree in Psychology with a minor in Spanish in August of 2012. After graduating, he accepted a graduate teaching assistantship at the University of Tennessee, Knoxville in the Psychology Department. Benjamin has and continues spread his love and passion for psychology to his students through teaching several introductory courses at the University of Tennessee, Knoxville. Benjamin will continue his education at the University of Tennessee, Knoxville with the hope to gain a Ph.D. in Counseling Psychology.