DEVELOPMENT OF THE MUSIC PERFORMANCE ANXIETY SCALE

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ABSTRACT

This paper describes the steps to develop the Music Performance Anxiety Scale (MPAS) and the researcher's experience throughout the whole process of developing the instrument. Pretest was earlier conducted among a small sample of respondents and content and face validity were established through extensive literature review and interview with experts. Fifty-eight (58) potential items of MPAS which was measured using a 7-points Likert-type format and one openended question for some comments and suggestions was developed. A sample of 36 students in the Faculty of Music, Universiti teknologi MARA completed the pilot study and the instrument was tested for internal reliability coefficient using Cronbach's alpha test. The MPAS demonstrates that all the seven dimensions of music performance anxiety construct are reliable (Cronbach's alpha = above 0.7) indicating good reliability. As a result, a valid and reliable fiftyeight (58) items of MPAS was produced which could be utilized in efforts to measure music performance anxiety among music students.

Keywords: Music performance, anxiety, music performance anxiety.

INTRODUCTION

Music is a fundamental channel of communication that provides a means by which people can share emotions, intentions, feelings and meanings even though their spoken languages maybe mutually understanding. A successful musician must not only have excellent and technical skills but should also have the capacity to withstand the psychological and physical demands of performing before public. The stress of preparing and delivering a performance can often create high levels of anxiety. Music performance anxiety which is also referred to stage fright is experienced by a high percentage of professional musicians and music students (Kenny, 2008). Survey recorded that stage fright was the major problem amongst musicians. According to Osborne and Kenny (2005), Music Performance Anxiety (MPA) is a condition in which a performer's response to stress goes beyond the normal arousal state, resulting in detrimental consequences. Dyce and O'Connor (1994) stated that sometimes a moderate amount of anxiety can be perceived as a facilitator of performance. However, Wesner, Noyes and Davis (1990); and Steptoe and Fidler (1987) viewed that a higher level of anxiety may increase significant debilitating effects. Determining the extent to which stressful performances may affect musicians is thus very important to better understand the MPA phenomenon.

Consistent across these studies and other existing literature is the finding that, the anxiety experienced during the music performance process is a real phenomenon which is prevalent

among students and may have debilitating effects on students' performances. Despite the existence of anxiety during the performance among music students, this phenomena has yet to be empirically investigated among music students in Malaysian Universities. Hence, a study on "Music performance anxiety among music students in Malaysian Universities" was conducted to measure their music performance anxiety. This paper depicted the process of developing the instrument called the "Music Performance Anxiety Scale" and described the pilot study that was conducted in the study.

LITERATURE REVIEW

Numerous studies in music performance anxiety (MPA) have observed the terms of stage fright, stress, arousal or fear as synonymous with MPA (Bippus & Dally, 1999; Sternbach & Woody, 2008; Kesselring, 2006; Baker, 2005). Few researchers also rely on the more general term anxiety to describe MPA in a broader perspective (Lin, Chang, Zemon & Midlarsky, 2008). Powell (2004) stated that often the term *performance anxiety* is used interchangeably with MPA when it assesses with phenomenon among musicians. As reported by Kenny (2006), "performance anxiety is the general term for a group of disorders that affect individuals in a range of endeavours, from test-taking, mathematics performance, public speaking and sport, to the performing arts of dance, acting and music" (p. 52). In accordance with Kenny (2006), Nagel (1990) describes performance anxiety as a "constellation of attitudes, traits and unconscious conflicts that become activated in particular circumstances such as anticipating or giving a concert" (p. 38). Therefore, MPA is a type of performance anxiety specific to music.

Thurber (2006) reports another description from Salmon stating that MPA is "the product of interaction between fearful thought, autonomic arousal, and behavioural responses to a perceived threat" (p. 7). In accordance with Salmon's statement, Lederman (1999) explains that "performance anxiety consists of behavioural, cognitive, and physiologic symptoms and signs that may precede and/or accompany a performance or presentation and that seem out of proportion to the specific situation" (p. 117). Some researchers also support the use of a fourth component to describe MPA manifestations: the affective (Osborne & Kenny, 2008; Emmons & Thomas, 2008) or emotional symptoms (Stephenson & Quarrier, 2005; Brotons, 1994).

Kesselring (2006) suggests that MPA is "a state of arousal and anxiety occurring before or while a person is performing non-anonymously in front of an audience producing a valuable or evaluated task touching on his/her self-esteem" (p. 309). However, this definition does not take into account situations such as blind auditions (where musicians perform behind a screen, thus performing "anonymously" for a jury). Baker (2005) proposes a simple definition, although ignoring the positive aspect that may also come with MPA: "performance anxiety is the exaggerated and sometimes incapacitating fear of performing in public" (p. 1).

It has been demonstrated that musicians at all levels of training and expertise may be affected by MPA (Lehrer, 1987; Salmon, Schrodt, & Wright, 1989). In a survey of 302 students and faculty at the University of Iowa School of Music, 16.5% reported that performance was impaired, 21% experienced marked distress, and 16.1% said that performance anxiety had affected their careers adversely (Wesner et al., 1990).

Some form of anxiety exists any time a musician performs and experiences a physiological, mental and/or behavioural change. Because the word anxiety has received negative connotations in the past, many musicians resist admitting they experience MPA. In order to clarify what music performance anxiety is, and how it can affect performance, some definitions from anxiety research has been explored. Brotons (1994), a music therapist, describes MPA as a "...serious, debilitating problem which functionally impairs many musicians." When asked what MPA is, musicians often describe the numerous symptoms that may be felt before, during, and after a performance. These symptoms vary in type, number, and degree from person to person.

Judith (as cited in Brodsky, 1996; Osborne & Kenny, 2005) states that there is a dearth of MPA self-report scales with well-established psychometric properties, and MPA studies have used a variety of measures (Osborne & Kenny, 2005). Kenny and colleagues develop an MPA measure, the Kenny Music Performance Anxiety Inventory (K-MPAI) (Kenny et al., 2004), to help test her conceptualisation of MPA. Kenny's theory of the etiology and maintenance of MPA flows from Barlow's triple-vulnerability theory of anxiety disorders and his model of the process of anxious apprehension (Barlow, 2000; Kenny, 2006). She proposes that musicians with a biological vulnerability and a generalised psychological vulnerability based on early experience may develop MPA when classical and operant conditioning combine to produce learned "alarms" (Kenny, 2006). She posits that the original stressful event is nearly always an evaluated performance. The musician learns from experience to focus anxiety on specific objects or events associated with music performance.

Wolfe (1989) investigates the relationships between music performance anxiety and personal variables such as age, gender, experience, instrument, and type of ensemble. Participants, ranging in age from fourteen to eighty years, responded to questionnaires concerning adaptive anxiety (helpful), maladaptive anxiety (harmful), and music performance anxiety, which was divided into cognitive and emotional components. In general, musicians with professional experience reported more adaptive anxiety and less maladaptive, cognitive, and emotional anxiety than those identified as amateurs. Wolfe also found that string players exhibited higher levels of both positive and negative anxiety compared to other instrumentalists. He also states that age and gender did not appear to have a significant effect on any form of anxiety.

METHODOLOGY

Development of the Music Performance Anxiety Scale

A survey research design was incorporated in this study to determine whether a valid and reliable instrument could be developed to measure the music performance anxiety construct among students at four different universities in Malaysia which are Universiti Teknologi MARA (UiTM), Universiti Putra Malaysia (UPM), Universiti Malaya (UM) and Universiti Pendidikan Sultan Idris (UPSI). The research developed the Music Performance Anxiety Scale (MPAS) took place in some empirical phases: 1) develop a list of key components, 2) sending out the list of key components to supervisors for first validation, 3) examine the responses and editing the list of key components, 4) develop a list of statements according to the list of key components, 5) do a pretest, 6) examine the responses of pretest and edit the statement, 7) send the draft to the panel of experts for validation, 8) examine the responses and edit the statement, 9) develop a pilot instrument, 10) conduct a pilot study, and 11) test the internal consistency of the instrument. It

should be mentioned that in order to validate the newly developed scale, thirty six (36) music students in Faculty of Music, participated in the pilot study which were carried out during June to July 2013 at Universiti Teknologi MARA (UiTM), Malaysia. The process of development of the Music Performance Anxiety Scale (MPAS) are detailed in the following sections.

Develop a List of Key Component

The first step in designing a new instrument involved the development of a list of key components concerning the construct of music performance anxiety. For this purpose, various sources were utilised to elicit initial items for the questionnaire development as well as generate a list of potential key components considered relevant to the construct of performance anxiety:

- a) Extensive review of the literature in the areas of performance anxiety; types of anxiety such as stress, fear, arousal, social phobia, stage fright; music performance anxiety; anxiety components that fall into the seven categories of, causes/ situational factors, cognitive manifestations, temporal occurrence, affective manifestation, behavioural manifestations, somatic manifestations, and autonomic arousal; and prevalence of anxiety among classical and popular musicians. Knowledge of the studies which were conducted in the area of research, has allowed the researcher to decide how the study could potentially build on existing works in the field;
- b) Review of existing instruments from other researchers was also conducted. Some of these questionnaires which have been used in previous studies include: the Cox and Kenardy's *Performance Anxiety Questionnaire* (PAQ) (1993), Spielberger's 1980 *Test Anxiety Inventory, The Achievement Anxiety Test Scale* that was modified by Sweeny and Horan (1982) and by Wolfe (1989) from the *Adaptive-Maladaptive Anxiety Scale* (AAS-MAS), *Kenny Music Performance Anxiety Inventory* (K-MPAI) that was constructed to specifically address each of the components of Barlow's (2002) emotion-based theory of anxiety disorders, and the most recent scale, *Performance Anxiety Inventory for Musician (PerfAIM)* by Kristel Barbeau (2011).
- c) Feedback from the supervisor was also solicited in the development of the list of potential key components. As a result, a pool of fifty-eight (58) potential key components concerning the music performance anxiety construct and one (1) open-ended question was formulated by the researcher. These key components were categorised into seven (7) main construct, namely, causes/ situational factors, temporal occurrence, cognitive manifestations, affective manifestations, behavioural manifestations, somatic manifestations and autonomic arousal.

Sending out the List of Key Components to Supervisors for First Validation

After developing an initial list of potential key components, the list was sent to the supervisors for first validation. With the expertise they have in the area of academic-related anxiety, the dissertation supervisors then judged the list of key components of music performance anxiety. The list of key components have been analysed and checked together with the researcher in a short meeting to do the validation.

Examine the Responses and Editing the List of Key Components

This stage analysed the experts' (supervisors') responses and comments they made. Items that are found not relevant to the experts were removed from the list and any new item that was suggested by the experts was added to other potential components.

Development of a List of Statements According to the List of Key Components

In the next stage of the study and after the list of fifty-eight (58) key components and one (1) open-ended question had been examined and edited by experts, statements were written under each of this components. Most of the words used to describe anxiety were based on the Kenny Music Performance Anxiety Inventory (K-MPAI), and the most recent scale, Performance Anxiety Inventory for Musician (PerfAIM) by Barbeau (2011). Care was taken to ensure that each statement was brief, simple, clear, and addressed a particular issue.

Do a pretest

Pretest was done by five (5) respondents. They were given 10 minutes to respond to the list of statements and return their comments, and suggestions. A thank you message was given to the respondents after they returned the list of statements with their comments. Once the results of the respondents' were obtained, the researcher began the process of item clarification and elimination.

Examine the responses of pretest and edit the statement

Responses were received from five (5) respondents which incorporated several changes and modifications. Some of the statements were reconstructed to get a better understanding of the statements. None of the statements were deleted as the wording changes were adopted, similar items were combined, and items rated as irrelevant were changed. A final set of fifty-eight (58) statements and one (1) open-ended question were then presented to the supervisors for approval before sending to experts for validation.

Send the draft to a panel of experts for validation

Drafts were then sent to a panel of experts for validation. In this situation the researcher chose two lecturers from Faculty of Music, one musician from Radio Television Malaysia (RTM), and one musician from Universiti Kebangsaan Malaysia (UKM) who have experience in music performing. They were being interviewed one by one at a closed place on the time that has been set. Participants were given ample time to respond to the list of statements and return their comments, modifications and suggestions. According to Harvani (2009) it was important to ensure each participant had ample time for the interview in a closed place so that rapport could be establish. Once the results of the experts were obtained, the researcher, again, began the process of item clarification and elimination.

Examine the responses and edit the statement

Responses were received from both lecturers and musicians who incorporated several changes and modifications. None of the statements were deleted as they only stress on the grammar. A few of the wordings need to be changed and the rest of the statements were clear and easy to understand.

Develop a pilot instrument

A pilot instrument was developed in order to conduct a pilot study and to determine the potential validity of the instrument. The pilot instrument consisted of seven dimensions namely, (1) Causes/ Situational factors, (2) Temporal occurrence, (3) Cognitive manifestations, (4) Affective manifestations, (5) Behavioural manifestations, (6) Somatic manifestations, and (7) Autonomic Arousal. There were fifty-eight (58) statements under the dimensions that scored on a 7-point Likert-type scale ranging from one (1) to seven (7) (1= Strongly Disagree, 2= Disagree, 3= Moderately Disagree, 4= Quite Agree, 5= Moderately Agree, 6= Agree, 7= Strongly Agree). Also, a demographic information was generated particularly to collect the primary demographic information of the students. The following demographic information collected were: gender, race, university, current programme (performance, composition, or education), level of study (semester of degree), instrument played (piano, strings, brass, woodwinds, percussions, or vocal), performing experience on stage, types of music played (classical, jazz, popular or contemporary), and hours of practicing the instrument.

According to Sekaran (2000) the pilot studies are tools in determining, in a preliminary action for the potentialities and perils of almost any research. In addition, pilot trials according to Sekaran can sharpen the procedures and check the possibility of a larger study. Saunders, Lewis and Thornhill (2009) stated that before the real study, the questionnaire should be tested before using it to collect data.

The purpose of the pilot test is to define the questionnaire so that respondents will have no difficulties in answering the questions as well as recording the data. In addition, it enabled the researcher to obtain some assessment of the questions' validity and reliability of data collected. A pilot test had been carried out to check for its clarity after which it was modified. The information collected through a pilot study is believed to act as a supplementary hence, help the researcher in preparing the final questionnaire.

Conduct a pilot study

The pilot study was conducted in June 2013 at the Faculty of Music of Universiti Teknologi MARA (UiTM). The aim of this pilot study was to develop a final set of statements and later test the *Music Performance Anxiety Scale (MPAS)* in the real study. Participants were fifty (50) bachelor degree students in semester five (5) and six (6), and the final year students who played different instruments were selected for the pilot study using stratified sampling method. The instrument was self-administered to each participant. The students were informed that their participation was voluntary and that their responses would be used only for the research. They were asked to respond the pilot instrument which consisted of fifty-eight (58) statements and one

(1) open-ended question, and return it to the researcher. The pilot instrument was four (4) pages long and took about ten (10) minutes to complete. A cover letter was also attached to the questionnaire, which described the aims of the study, asked for cooperation, and provided some guidance for completing the questionnaire. In the end, thirty-six (36) participants manage to complete the pilot study.

Test for internal consistency

A sample of 36 students completed the pilot study with which the internal consistency of the scale using Cronbach's alpha test has been done. Cronbach's Alpha is designed as a measure of internal consistency. According to George and Mallery (2007), the closer the alpha is to 1.00, the greater the internal consistency of items in the measurement being assessed. The MPAS demonstrates that all the seven dimensions of anxiety construct are reliable (Cronbach's alpha = above 0.7) indicating good reliability. Distribution of data shows that data is normal (p>0.05) thus parametric method was applied to test the hypotheses. The next stage was the real study where the MPAS that has been developed was tested by distributing to all degree students at four different universities in Malaysia which are Universiti Teknologi MARA (UiTM), Universiti Putra Malaysia (UPM), Universiti Malaya (UM) and Universiti Pendidikan Sultan Idris (UPSI).

Table 1. Realibility Test Results		
Variables	Cronbach Alpha	Number of Items
Causes/ Situational factors	0.832	8
Temporal occurrence	0.847	7
Cognitive manifestations	0.783	4
Affective manifestations	0.741	8
Behavioural manifestations	0.864	12
Somatic manifestations	0.734	10
Autonomic Arousal	0.833	9

 Table 1: Realibility Test Results

CONCLUSIONS

The present study was conducted in order to develop the Music Performance Anxiety Scale (MPAS). It also contained a description of the steps followed to develop the scale (MPAS) and the researcher's experience throughout the whole process of gathering data was also mentioned. Considering the results of this chapter, fifty-eight (58) items of *Music Performance Anxiety Scale* (MPAS) were reported as valid and reliable instrument which may be used in future studies to measure music performance anxiety of degree students.

To determine the internal reliability test of all the variables, Cronbach's coefficient alpha was calculated. The reliability test of the seven dimensions which are causes/ situational factors, temporal occurrence, cognitive manifestations, affective manifestations, behavioural manifestations, somatic manifestations and autonomic arousal were 0.832, 0.847, 0.783, 0.741, 0.868, 0.734, and 0.833 respectively.

Results of the study indicated that the newly developed scale, Music Performance Anxiety Scale, had satisfactory face, content, as well as internal reliability. Accordingly, this instrument could be used in future studies to determine the music performance anxiety of undergraduate students.

Also, the Music Performance Anxiety Scale should be tested at universities in different countries to determine if the students share the same type of anxiety related to the music performance activities. Finally, additional research should be conducted to determine if the instrument is amenable in other music performance environments.

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