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Waiting for the Concert. Pre-Performance Emotions and the Performance Success of Teenage Music School Students

Abstract*: The major aim of the research is to analyse the type and complexity of emotions which adolescent musicians experience before giving a solo music performance. Another aim is to explore the function of these emotions for performance quality. Just before a school concert, students filled out The UWIST Mood Adjective Checklist (UMACL). Right after the performance, both the performing students and competent referees used The Performance Evaluation Scale. The results show that musicians' pre-performance emotional state is dominated by ambivalent emotions of hope and sadness, as well as joy and anxiety. As a result of a cluster analysis, six clusters were obtained which defined emotional states before the performance: high music performance anxiety, moderate music performance anxiety, calm, mixed emotions, joy with background fatigue, and excitement. The findings show the functional significance of positive emotions and mixed emotions for performance quality.*

Keywords*: emotions, music performance anxiety, musicians, performance quality*

Introduction

Performing music in public entails various emotions. The source of these emotions is the music itself, as well as the audience and its response to the performance, the expectations of success and failure rooted in self-esteem, self-efficacy, and the extent of preparedness for the performance (see Kenny, 2006, 2011; Steptoe, 2001). The present study focuses on the description of emotions experienced by performers while they are waiting to enter the stage (pre-performance emotions) and the analysis of the effects of these emotions on performance quality.

Psychological practice suggests that coping with emotions before and during performance is a common problem among musicians. Some of them report experiencing "balancing" between emotions of different valence and type (modality) before performance: anxiety may be combined with frustration, but also with hope, curiosity, and pride.[1] Research on motivation to perform music (Kaleńska-Rodzaj, 2014a) points to the poly-motivational nature of this activity and provides evidence for its poly-emotional character. In the study, musicians of different ages were asked the question "Why do you perform in public?" The analysis of their answers revealed six types of emotional attitude: orientation towards the listener, associated with a sense of mission; orientation towards an extraordinary experience, associated with courage, excitement, and willingness to take risk; orientation towards perfection, associated with dissatisfaction and anxiety; orientation towards self-presentation, associated with pride and the need for appreciation; orientation towards timeless values, associated with reflective attitude and assigning a deeper, "mystical" meaning to performing music; and finally, orientation towards fulfilling expectations, associated with feelings of coercion and discouragement.

Negative Pre-performance Emotions: Music Performance Anxiety and Performance Quality

When we take the sum of the results of research on the relation between pre-performance emotions and performance quality, we come to the conclusion that most studies focus on negative affective states which impair performance – *music performance anxiety* (MPA)

[1] Observations from my own psychological practice in Krakowski Ośrodek Doradztwa dla Artystów KODA, where I help musicians to cope with MPA.

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(Kenny, 2005, 2007; Kenny & Osborne, 2006; Papageorgi, Hallam, & Welch, 2007; Wilson, 2002). A number of theories relating anxiety and physiological arousal to performance efficiency have been developed on the basis of the Yerkes-Dodson law (Yerkes & Dodson, 1908). This law suggests that peak performance will take place under a moderate degree of arousal, whilst very low or very high arousal will result in poor performance (for a broader analysis see Teigen, 1994). Some findings (Papageorgi, Hallam, & Welch, 2007; Steptoe, 1983) support the inverted U relationship between the tension and musical performance of students and professional musicians – the best performance occurs with moderate levels of tension. More sophisticated models based on the Yerkes-Dodson law emphasise the interaction of factors facilitating successful performance. For example, a three-dimensional model of music performance anxiety (Wilson, 1997, 2002) proposes various interactions of the following variables: trait anxiety of the performer, task difficulty, and the degree of situational stress for achieving top performance. Some models of sport performance anxiety postulate two dimensions of anxiety – somatic and cognitive anxiety – and their dual effect on performance (a catastrophe model of anxiety and performance, Fazey & Hardy, 1988, cited by Hardy & Parfitt, 1991; multi-dimensional anxiety theory, Martens, Burton, Vealey, Bump, & Smith, 1990). Studies on musicians (Kenny & Osborne, 2006) and a meta-analysis of research on athletes (Kleine, 1990) have indicated that cognitive anxiety predicts a decrease in the quality of performance more precisely than somatic anxiety. This indicates that research on performance anxiety should take account of the performer's cognitive appraisal of arousal. It is also worth noting that the cited studies do not examine the content of MPA, focusing only on the dominant negative emotion – different levels of anxiety or arousal (low – medium – high).

Positive Pre-performance Emotions in Performing Music

Relatively few studies investigate the *flow* state in music – positive emotions related to peak performance, and feelings of intense pleasure and happiness (Gabrielsson & Lindström Wik, 2003; Lamont, 2012; Marin & Bhattacharya, 2013; O'Neill, 1999; Woody & McPherson, 2010). Some findings suggest that both listeners and performers can experience positive, negative, as well as mixed emotions during a strong experience with music (Gabrielsson, 2001; Gabrielsson & Lindström Wik, 2003; Lamont, 2012). The major contribution of Gabrielsson's qualitative research using the Strong Experience with Music descriptive system (SEM, Gabrielsson, 2001, see also Gabrielsson & Lindström Wik, 2003) is identifying a variety of positive and negative emotions associated with strong experiences with music. On the negative side, Gabrielsson does not consider the emotions of listeners and performers separately, and does not group them according to the point in time around the performance (before, during, after), which precludes a deeper understanding of the specifics of pre-performance emotions.

Lamont (2012) utilises the same method (SEM descriptive system, Gabrielsson, 2001) to analyse free reports of music students' strongest, most intense experiences of performing music. The emotions related to peak performance are labelled only as either positive or negative, and their content is not examined. The author presents a typology of four different pathways to the well-being of performers. Two types of performer experience strong positive emotions during performance, while the reports of the other two reflect a negative-to-positive emotional change: from performance anxiety before the performance to relaxation, enjoyment, and confidence during and after the performance. Lamont concludes that "performing often includes a high proportion of negative as well as positive emotions, sets a high level of challenge (either from the performers themselves or from audiences, critical or otherwise) and requires a high level of skill" (Lamont, 2012, p. 587). Similarly, Kenny, describing the case of a young actress, Anais Koivisto, remarks that "the flow experience and performance anxiety co-occur" (p. 6). These observations have also been confirmed by Steptoe (2001).

What emerges from the consideration of these studies is a dynamic and changeable structure of pre-performance emotions. Both positive and negative pre-performance emotions may lead to high performance quality. Interestingly, all of the behavioural symptoms of performance anxiety also appear in the SEM descriptive system (Gabrielsson, 2001; Gabrielsson & Lindström Wik, 2003): muscular tension/relaxation, trembling, shaking, heart palpitations, perspiration, stomach distress, feeling dizzy and sick. This allows a cognitive interpretation of these symptoms in terms of MPA or excitement, in line with the two-factor theory of emotion (Schachter & Singer, 1962). This interpretation also has therapeutic implications, an example of which is reappraising anxiety as excitement which might be an effective coping strategy for MPA (Brooks, 2014).

Only a few studies have examined the positive function of negative emotions. Wolfe (1989, 1990) distinguishes adaptive and maladaptive MPA depending on the facilitating or debilitating effects of anxiety on music performance quality. Adaptive anxiety may enhance performance by preparing a person for the task to be performed and by stimulating alertness and concentration on the task, instead of focusing on themselves (Gates & Montalbo, 1987; Hamann, 1982; Mor, Day, Flett, & Hewitt, 1995). However, there has been little research on the mobilising effect of MPA, and the results provide little insight into the emotional components of adaptive MPA, although we may assume that this emotional state combines both negative (e.g., anxiety, remorse, sadness) and positive (e.g., hope, curiosity, courage) emotions.

The review of the studies on pre-performance emotions leads to two conclusions. Firstly, the authors describe pre-performance emotions in terms of valence (positive/negative), intensity (low-medium-high), and arousal (high/low). However, they do not categorise them, which precludes identifying specific pre-performance affective states. Secondly, these works substantiate considering pre-

-performance emotions as mixed emotions and therefore justify looking for explanations in this area of research.

Pre-performance Emotions as Mixed Emotions

In 1980, Plutchik (Plutchik, 1982) created a wheel of emotions which illustrates how primary emotions form more complex, mixed emotional states. Mixed emotions that comprise negative and positive emotions appear in significant, subjectively engaging, difficult situations that are ambiguous in terms of profit and loss (Larsen, McGraw, & Cacioppo, 2001). Empirical data (Larsen & McGraw, 2011) and knowledge about neural processing (see a review by Norman, Norris, Golan, Ito, Hawkley, Larsen, Cacioppo, & Berntson, 2011) indicates that there are distinct neural substrates for positive and negative emotions, which allows for experiencing emotions of different valence, or even ambivalent emotions, simultaneously.

Considering the way in which emotions mix, researchers have identified four different patterns of mixed emotional experience. In subjectively significant situations, emotions may appear one after another (sequentially), simultaneously with one emotion of moderate or high intensity and the other of very low intensity (prevalence), or simultaneously with both emotions of moderate or high intensity (including ambivalent emotions) (Carrera & Oceja, 2007; Oceja & Carrera, 2009). Previous research has shown that mixed affective experiences are generally aversive unless people find a way to cope with the associated discomfort (Williams & Aaker, 2002). The tension caused by the co-occurrence of positive and negative emotions results in "approach-avoidance" conflict (Dollard & Miller, 1969), which increases the focus on the situation and informs of its importance. This, in turn, enhances coping skills (positive emotions defuse negative ones as they appear). A combination of positive and negative experiences helps to assign meaning to the situation. For people who are focused on the outcome or the ultimate goal of an experience, mixed affective experiences are enjoyable and can even provide more enjoyment than purely positive emotions (Mukherjee, Kramer, & Lau-Gesk, 2012).

Mixed emotional experiences have an impact on well--being (Fredrickson, 1998, 2001; Folkman, 1997; Folkman & Moskowitz, 2000; Folkman, 2008; Lyubomirsky, King, & Diener, 2005) and physical health outcomes (a 10-year longitudinal experience-sampling study across an adult life span, Hershfield, Scheibe, Sims, & Carstensen, 2013, see also the review by Larsen, Hemenover, Norris, & Cacioppo, 2003). Research provides evidence that the ability to recognise mixed emotions emerges at the age of 5–6 years and develops over time (see Larsen, To, & Fireman, 2007; Zajdel, Myerow-Bloom, Fireman, & Larsen, 2013).

Although research on mixed emotions in the domain of music performance is relatively new, it seems to have accurately determined the characteristics of affective states associated with performing. While waiting to enter the stage, performers are most likely to feel mixed emotions. In high MPA, anxiety could mix with anger with oneself, sadness, curiosity, pride, and hope. Recognising the diversity of these emotions and developing the ability to focus on positive affective states may have a therapeutic function (see Wolfe, 1990). On the other hand, focus on fear may lead to the conclusion that one has insufficient resources to cope and may result in heightened anxiety. To successfully manage their emotions, a musician needs to develop emotional skills (see the four-branch model of emotional intelligence by Salovey & Mayer, 1990), which are based on the ability to recognise (perceive and analyse) the components of emotional experience associated with performing on stage.

These considerations give rise to questions which cannot be answered on the basis of the present data. Thus far, few studies have addressed pre-performance emotions, therefore the current research is exploratory. It aims to answer the following questions:

1) What kinds of positive and/or negative emotions does a performer experience before a concert?
2) Are these emotions homogenous or mixed?
3) Which combination of emotions enhances performance most?

It is expected that the answers to these questions will allow identification of the modalities (categories), complexity, and functions of pre-performance emotions.

Method

Participants

The study comprised a total of 94 music college students, 79 women (84%) and 15 men, with an age range of 13 to 21 years ($M = 16.52$; $SD = 1.32$), the majority (92%) 15–18 years old. All of the participants were violinists and violists.

Measures

Pre-performance emotions were measured using the UWIST Mood Adjective Checklist (UMACL) by Matthews, Jones, and Chamberlain (1990) in a Polish adaptation by Goryńska (2005). UWIST consists of 29 adjectives, grouped into three subscales corresponding with three dimensions of mood (Matthews et al., 1990): hedonic tone (10 adjectives), tense arousal (9 adjectives), and energetic arousal (10 adjectives). Hedonic tone is characterised by feelings of pleasantness or unpleasantness. Tense arousal is identifiable through feelings that range from tension and anxiety to states of calmness and quietness. Energetic arousal is characterised by feelings ranging from energy and vigour to states of fatigue and tiredness. This three-dimensional model of mood is rarely used in research with musicians. The type of participants' pre-performance emotional state was determined through the analysis of their choice of the UMACL adjectives, and analysed with respect to the mood dimensions.

The respondent was asked to answer the question "Does this adjective describe your present mood?" on a four-point scale from "definitely not" to "definitely yes". The Polish adaptation of the UMACL was standardised on a national representative sample. The internal reliability scores are satisfactory (Cronbach alphas for hedonic tone, tense arousal, and energetic arousal were 0.89, 0.83, and 0.78, respectively).

Satisfaction with performing. To measure this variable, the participants were asked to answer a question "To what degree are you satisfied with your performance?" on a ten-point scale from "1 – very dissatisfied" to "10 – very satisfied".

Performance quality was measured using the Performance Evaluation Scale by Kaleńska-Rodzaj (2014b). The scale consists of 33 items grouped into four subscales corresponding with four dimensions of performance quality: performance expression, interpretation, technical skills, and psychological resilience. The respondent is asked to read each item carefully and decide to what degree each feature appeared in the performance, choosing one of four answers: "1 – not at all", "2 – to a small degree", "3 – to a moderate degree", and "4 – to a great degree". The quality of the performance is assessed in terms of the score obtained on each subscale and the overall score. The internal reliability scores are satisfactory (Cronbach alphas for all subscales are above 0.8). The criterion validity of the scale is high (the correlation coefficients with school grades are above 0.8).

Procedure and Data Collection

The data were collected during open school auditions, organised for the purpose of the study. Each student performed one piece chosen by themselves, solo or with accompaniment. Participation in the research was voluntary. When the subjects decided to take part in the study, they were informed that their performance would be recorded. The participants were asked for consent and they all gave it. At the beginning of the school year, 160 students were recruited, but at the end of the term only 59% of them agreed to perform in public.

Fifteen minutes before the performance, the participants completed the UWIST Mood Adjective Checklist to evaluate pre-performance emotions. Immediately after the performance, they were asked to determine to what degree they were satisfied with it. Then both the performing students and competent referees used The Performance Evaluation Scale (PES) to evaluate the performance quality. A jury consisting of three senior teachers with more than 10 years of experience in teaching the violin and viola rated 94 performance recordings on the PES scale in five evaluation sessions. In the trial/training session, the teachers received ten copies of the scale and used them to evaluate the performances of their own students. This way, two sets of results were obtained – the raters' (objective) evaluations and the students' (subjective) self-evaluations.

Data Analysis

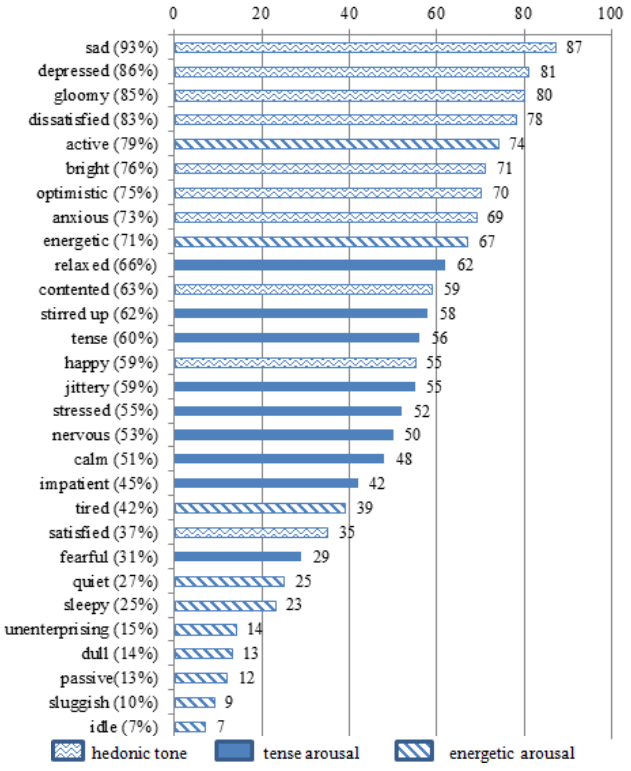
Data analysis was conducted in three phases. In order to assess how often each pre-performance emotion was reported, a frequency analysis was performed. To identify pre-performance emotion profiles, a cluster analysis was conducted, and to compare the profiles in terms of differences in performance quality, a one-way variance analysis (ANOVA) was performed.

Results

Modalities: Components of Pre-performance Emotional State

To measure the frequency of the occurrence of each pre-performance emotion, we examined the distribution of emotional adjectives marked by the students. In the analysis we incorporated adjectives scored as 3 (rather yes) and 4 (definitely yes). The results are shown in Figure 1.

Figure 1. Distribution of pre-performance emotional adjectives selected by young musicians (N = 94)



The findings suggest that while waiting to enter the stage, young musicians can experience both negative and positive emotions. The students' pre-performance emotional states are dominated by sadness (93% of the participants) and related emotions – depression and gloom (more than 80%). However, over 70% of the students marked adjectives describing positive emotions (bright and optimistic – the hedonic tone scale) and items from the energetic arousal scale (active and energetic), which indicates positive mood and energy. High levels of energy are also reflected in the considerably less frequent choice of adjectives describing low level of arousal and lack of activity (7–25% of the sample). More than 50% of the participants selected items from the tense arousal scale, suggesting stress and tension.

The results of the analysis show the prevalence of each pre-performance emotion and draw a picture of the pre-performance emotional state of the young musicians. However, the frequency analysis did not explain the relations between particular emotions which produce pre-

Table 1. Mood dimensions identified in principal component analysis (Varimax rotation) to conduct cluster analysis

UMACL scales	Original items	Input variable of PCA
Hedonic tone	*gloomy, *sad, *depressed	lack of sadness
	optimistic, bright	optimism
	*dissatisfied, happy, *anxious	happiness
	satisfied, pleased	satisfaction
Energetic arousal	energetic, active, *quiet	energy
	*tired, *sleepy	lack of fatigue
	*passive, *unenterprising, *idle	lack of passivity
	*sluggish, *dull	lack of dullness
Tense arousal	fearful, tense, jittery, stressed, *calm	anxiety
	*relaxed, restless, nervous	restlessness
	impatient	impatience

* Reversed items.

-performance emotional profiles. To identify them, a cluster analysis was conducted.

Complexity: Pre-performance Emotion Profiles

A hierarchical cluster analysis was performed to determine whether it was possible to distinguish different profiles of students on the basis of their choice of emotional descriptors. We determined the configurations using Ward's (1963) clustering algorithm (the variables were standardised before the analysis). IBM SPSS Statistics 21.0 software was used to compute the data.

The choice of the data computation procedure was based on two premises. Firstly, on the level of the scale items, information redundancy in data clustering would be unacceptable. Secondly, although the original structure of three UMACL subscales reproduces the correlation matrix of the variables accurately, it reduces the amount of input excessively. Therefore, an intermediate solution was adopted. For each subscale (hedonic tonus, tense arousal, and energetic arousal) a principal component analysis was performed, and a maximum interpretable number of components was imposed (after a Varimax rotation). The eleven input variables which were distinguished are shown in Table 1.

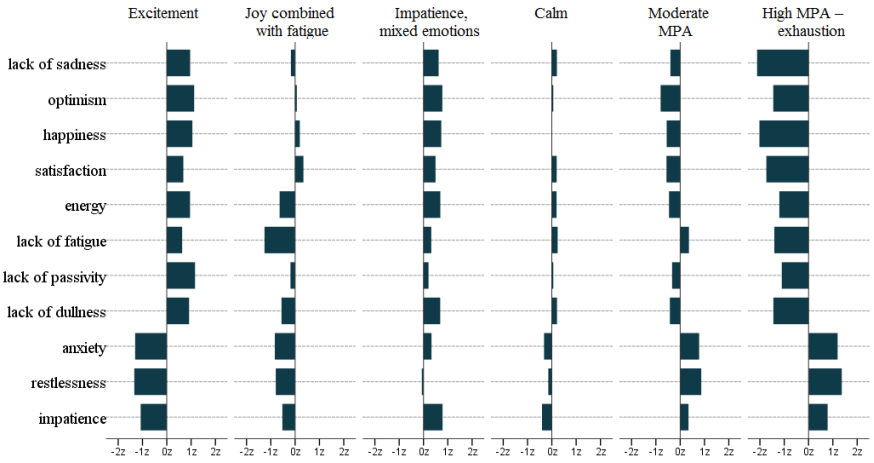
Using a dendrogram of a hierarchical cluster analysis, six emotional profiles were extracted. The cluster analysis was performed using the mean values of standardised input variables in a corresponding cluster. Positive values represent emotions typical for a given cluster, while negative values stand for emotions distributed in a given cluster below the sample mean level. The results are given in Table 2.

For more clarity, the results are also represented graphically in Figure 2.

Table 2. Results of cluster analysis: mean results standardised for each emotional component, forming six pre--performance emotion profiles

	Excitement		Joy combined with fatigue		Impatience, mixed emotions		Calm		Moderate MPA		High MPA – exhaustion	
	M	M_Z	*M*	M_Z	*M*	M_Z	*M*	M_Z	*M*	M_Z	*M*	M_Z
lack of sadness	11.8	**1.0**	9.6	-0.2	11.2	0.6	10.4	0.2	9.2	-0.4	5.9	**-2.1**
optimism	7.5	**1.1**	5.9	0.1	6.9	0.8	5.9	0.1	4.7	-0.8	3.7	**-1.5**
happiness	10.7	**1.1**	9.1	0.2	10.1	0.7	8.7	0.0	7.7	-0.6	4.9	**-2.0**
satisfaction	5.9	0.7	5.5	0.3	5.7	0.5	5.3	0.2	4.3	-0.6	2.7	**-1.7**
energy	10.5	**1.0**	7.7	-0.6	10.0	0.7	9.1	0.2	8.0	-0.5	6.7	**-1.2**
lack of fatigue	6.8	0.6	3.5	**-1.3**	6.3	0.3	6.1	0.2	6.3	0.4	3.3	**-1.4**
lack of passivity	11.5	**1.2**	9.4	-0.2	10.0	0.2	9.8	0.1	9.2	-0.3	8.0	**-1.1**
lack of dullness	7.9	0.9	6.0	-0.6	7.6	0.7	7.0	0.2	6.2	-0.4	4.9	**-1.4**
anxiety	8.3	**-1.3**	9.8	-0.8	13.8	0.3	11.6	-0.3	15.3	0.8	16.7	**1.2**
restlessness	5.3	**-1.3**	6.4	-0.8	7.9	-0.1	7.7	-0.1	9.8	0.9	10.9	**1.4**
impatience	1.4	**-1.1**	1.8	-0.5	3.0	0.8	2.0	-0.4	2.6	0.3	3.0	0.8
N	11		13		18		22		23		7	

Figure 2. Graphical representation of results of cluster analysis: loadings of emotions on six pre-performance emotion profiles



The pre-performance emotion profiles were labelled as follows:

1. *High MPA – exhaustion* – this configuration reflects extremely negative emotional states associated with anxiety, helplessness, and fatigue. The profile also includes emotions unrelated to anxiety – *sadness* and *impatience* – and is characterised by low hedonic tonus, low energetic arousal, and high tense arousal.
2. *Medium MPA* – this configuration reflects negative emotional states associated with anxiety (*anxiety*, *restlessness*) of considerably lower intensity than in the *High MPA* profile. These emotions, however, are not accompanied with fatigue. The character of this mood dimension is similar to the previous profile.
3. *Calm* – this configuration reflects low intensity of emotions, dominated by positive affective states (*satisfaction*, *optimism*, lack of *anxiety* and *restlessness*) and a low level of energetic and tense arousal.
4. *Impatience, mixed emotions* – this configuration reflects the prevalence of positive emotional states (lack of *sadness*, *optimism*, *happiness*, and *satisfaction*) and energetic arousal. It also includes groups of adjectives indicating tense arousal (*anxiety* and *impatience*).
5. *Joy with background fatigue* – this configuration reflects positive emotional states (*happiness*, *satisfaction*, and lack of *anxiety*) and a low level of energy – exhaustion. This profile is characterised by positive hedonic tonus, and a low level of energetic and tense arousal.
6. *Excitement* – this configuration reflects the prevalence of positive emotional states of high intensity (lack of *sadness*, *optimism*, *happiness*, and *satisfaction*), high energetic arousal, and a very low level of tense arousal (lack of *anxiety*, *restlessness* and *impatience*).

Function: Pre-performance Emotion Profiles and Performance Quality

The quality of students' performance was assessed using three measures: the questionnaire measuring their satisfaction with the performance ($M = 5.66$, $SD = 2.07$), the score on the PES scale obtained on the basis of their self-evaluation ($M = 87.36$, $SD = 12.45$), and the evaluations of the competent judges ($M = 97.29$, $SD = 10.59$).

A comparison of the assessments by the three teachers shows a high level of agreement among the raters (Kendall's $W = .76$, Chi-square $= 208.71$, $df = 92$, $p < .001$). A juxtaposition of the students' and judges' ratings also demonstrates a high level of agreement (Kendall's $W = .65$, $df = 92$, Chi-square $= 119.72$, $p < .05$). This allows the inclusion of students' self-evaluations in the analyses as a valid measure of the quality of the performance.

Table 3 presents descriptive statistics for the variables which were used to evaluate the quality of the performance in relation to the emotional profiles.

Table 3. Means of variables measuring quality of performance in relation to pre-performance emotion profiles

Pre-performance emotional profile	Student's quality rating		Teacher's quality rating		Student's satisfaction rating	
	M	*SD*	*M*	*SD*	*M*	*SD*
Excitement	96.54	11.73	104.09	9.60	6.55	1.97
Joy combined with fatigue	88.69	17.18	101.50	12.31	6.31	1.93
Impatience, mixed emotions	90.83	8.95	94.17	9.28	6.50	1.70
Calm	88.73	11.18	99.67	10.01	5.55	2.20
Moderate MPA	82.26	9.17	94.58	9.01	5.09	1.93
High MPA – exhaustion	74.00	9.97	88.30	9.68	3.57	1.62

To compare the profiles' effect on the indicators of the performance quality, a one-way analysis of variance was performed. Three one-way ANOVAs (induced pre-performance mood profile as a factor, and a degree of performance satisfaction, self-evaluation and the competent judges' rating as dependent variables) were significant for the dimensions of performance satisfaction: $F(5,83) = 3.25$, $p < .01$, $\eta^2 p = .16$, self-evaluation: $F(5,88) = 4.74$, $p < .001$, $\eta^2 p = .21$, and the judges' ratings: $F(5,88) = 3.61$, $p < .01$, $\eta^2 p = .17$. The Levene test for the equality of variances among the levels of the independent variable (pre-performance emotion profiles) indicated equal variances, so that a post-hoc test (Tukey test) could be used.

The post-hoc analyses using Tukey's HSD indicated that performance satisfaction was lower for participants with the *High MPA – exhaustion* profile than for participants with *Joy with background fatigue* ($p = .04$), *Impatience*, *mixed emotions* ($p = .02$) and *Excitement* ($p = .03$) profiles. The ratings in the self-evaluations were lower for the participants from the *High MPA – exhaustion* group than for the participants with *Joy with background fatigue* ($p = .07$), *Impatience*, *mixed emotions* ($p = .02$), *Excitement* ($p = .00$), and *Calm* ($p = .04$) profiles, as well as for the participants with a *Moderate MPA* profile as compared to the *Excitement* group ($p = .01$). The ratings of the teachers were lower for the participants with the *High MPA – exhaustion* profile than for the participants with the *Joy with background fatigue* ($p = .06$) and *Excitement* ($p = .02$) profiles. No statistically significant differences were found with regard to the remaining emotional profiles.

Discussion

The purpose of the present study was to identify emotions experienced by young musicians before entering the stage. The aims were to examine and describe the types (modalities) and combinations (complexity) of the emotions, as well as their effect on the quality of performance (function). A review of the literature on the affective states associated with performing has shown that little attention has been paid to the components of pre-performance emotional states. It also seems that no studies have examined pre-performance emotions (including MPA) considered as mixed emotions. The current study fills the gap in research, as it emphasises the diversity of pre-performance emotions and their influence on performance.

Confirming the results of studies using the descriptive system for Strong Experiences related to Music (SEM) (Gabrielsson, 2001; Gabrielsson & Lindström Wik, 2003; Lamont, 2012), our findings have provided evidence that emotional attitude to performance may involve both positive and negative emotions.

Surprisingly, the emotional approach of the young musicians was dominated by emotions connected with sadness (sad, depressed, and gloomy). Sadness is reactive, not anticipatory, and reflects either a sense of loss, or a failure to progress towards important goals (Ellsworth & Smith, 1988). It fosters feelings of helplessness, resignation, passivity, and self-focus (Lazarus, 1991). Depressed mood is associated with inability to regulate other mood dimensions, leading to increased anger, confusion, fatigue, and tension, and reduced vigour, which in the pre-performance phase may result in an anticipation of failure (see also Lane and Terry's model, 2000). There are, however, also benefits of being in a low mood: it promotes analytical thinking and a deeper level of processing with attention to the details of the problem, and is adaptive in a situation when a person faces a complex, difficult to solve, fitness-relevant task (Andrews & Thompson, 2009).

The second most frequently reported emotion in the study was hope (bright, optimistic). Several studies have acknowledged the positive influence of hope on goal attainment (see Snyder, 1994, 2000, 2002). Positive emotions broaden the scope of attention, cognition, and action, and help to cope with stress (Fredrickson, 1998, 2001). The ambivalence "hope for success – sadness caused by an anticipated failure", and, for more than a half of the participants, the ambivalence "anxiety – joy", suggests that performance might be perceived as an approach-avoidance goal. On the one hand, the resulting motivational conflict may impede goal attainment by decreasing goal commitment and goal-directed behaviour (Slocum, Cron, & Brown, 2002). On the other hand, experiencing mixed emotions (not only the negative ones) in a stressful situation facilitates coping with stress by directing attention to the positive outcomes of the task (Lazarus & Folkman, 1984; Folkman, 1997; Folkman & Moskowitz, 2000).

The results have revealed combinations of co-occurring emotions which constitute qualitatively distinct approaches to performance and influence its quality in different ways. We have found a range of pre-performance emotional states: from intense negative emotions combined with exhaustion (high MPA) and a mixture of positive and negative emotions of low intensity (calm) to intense positive emotions (excitement). The *High MPA – exhaustion* profile is especially worthy of note due to its professional and health implications: this combination of intensive feelings of sadness, anxiety, and low energy closely resembles depressive mood (compare the definition of mild depressive episode in ICD-10, WHO, 2011). In our study the depressive attitude impaired the performance considerably, resulting in the lowest ratings in the sample. The *Impatience*, *mixed emotions* profile was the only one which incorporated both positive and negative emotions of moderate intensity. Such a state might be associated with the previously mentioned feeling of "balancing" between qualitatively different emotional states. However, to examine this effect in detail, we would have to measure the alternation of emotions in time (process measurement).

Including indicators of the quality of performance helped in understanding the functions of the identified emotional profiles. The obtained results support findings by Frijda (1998) and the results of research on purposeful activity (Carver & Scheier, 1990), which suggests that positive emotions enhance performance while negative ones debilitate it, decreasing the outcomes and performance satisfaction. Although some studies have indicated greater functional benefits from experiencing mixed emotions than

only positive ones (see Mukherjee, Kramer, & Lau-Gesk, 2012), our findings show that the benefits are comparable – the indicators of performance quality were similar for participants who experienced mixed emotions and those who experienced positive emotions of moderate and great intensity. The most beneficial state is excitement, while the most detrimental in terms of performance quality is high MPA combined with exhaustion.

Strengths and Limitations

Our research has been exploratory, and as such has had many strengths (e.g. describing the subject, providing a basis for further research) as well as weaknesses (e.g. the lack of hypotheses, the impossibility to compare our results to the findings of others).

One of the most valuable contributions of our study is that we have widened the scope of the examined emotions from the most extreme, such as MPA or excitement (flow), to a range of other affective states. What is more, we have revealed the complexity and functions of particular pre-performance emotional states, including mixed emotions and MPA. Approaching MPA as a set of mixed-valence emotions could help elaborate on the differences between adaptive and maladaptive performance anxiety, as well as on individual differences in the way in which particular emotions influence performance (see *optimal emotions*, IZOF, Hanin, 1997, 2007).

The limitations of the study include the sample profile and the method of measurement of emotions. It could seem that the homogeneity of the sample comprising only violinists and violists limits the generalisability of the findings to all musicians. However, the reference group is quite large – according to reports on music colleges, violinists comprise 18% of all students, and the violin is the most frequently chosen instrument (Konaszkiewicz & Chmurzyńska, 2014).

There was an overrepresentation of females in the sample (84%), which might account for the obtained results. The findings of the research on general anxiety show that females are two to three times more vulnerable to anxiety than males (American Psychiatric Association, 1994; Lewinsohn, Gotlib, Lewinsohn, Seeley, & Allen, 1998). These results are in line with the findings from studies focusing on music performance anxiety (Rae & McCambridge, 2004; Osborne & Franklin, 2002). Further research should take this into account.

The vast majority of the participants were in early or late adolescence (Brzezińska, 2005). These transitional moments involve cognitive, emotional, and physical changes, as well as specific changes in values and identity (identity crisis, Erickson, 1968). The emergence of internal conflicts might produce tension, discomfort, and low mood (Oleszkowicz, 1995, 2006). Thus, the depressed mood of the participants might result not only from the subjects' appraisal of the challenge and their limited capacity to handle it, but also from the developmental changes which they are undergoing.

Another shortcoming of the study could be the methods of assessment which we adopted to measure pre-performance emotional states. One advantage of using the UWIST scale is that it measures three dimensions of mood comprising emotions of different valence and kind, and that it differentiates types of arousal (tense vs. energetic). Nevertheless, the scale lacks adjectives describing some intense pre-performance emotions, such as anger, courage, pride, and shame. For further investigation of this subject, a new scale accommodating the specifics of pre-performance emotions is needed.

Future studies should also consider the level of participants' abilities in self-perception, self-description and emotional self-regulation. Individual differences in this respect could have a considerable impact on the results.

Practical Implications

The implications of the study for performers are numerous. The results have revealed the significance of physical and mental condition, showing how passiveness and fatigue impair performance. To avoid exhaustion, a musician should learn to plan their training and to use the time before the performance effectively (compare pre-performance routine, Geeves, McIlwain, & Sutton, 2014). In addition, accepting increased arousal and interpreting it in terms of preparation for the challenge is more adaptive than hoping for calm and peace (Gardner & Moor, 2007).

The results of the present study show that MPA is a more complex emotional state than anxiety. In practice, the term "stage fright" is used by musicians to describe all types of pre-performance emotional states. Clinical observations imply that such labelling results in the interpretation of all kinds and degrees of arousal as threatening. To support musicians in regulating these affective states, we need to design programmes which teach them to recognise and label pre-performance emotions, and help them to elaborate individual strategies of emotional regulation.

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