PERFORMANCE ANXIETY AMONG PROFESSIONAL MUSICIANS IN SYMPHONIC ORCHESTRAS: A SELF-REPORT STUDY

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Summary.—155 of 650 professional musicians playing in symphonic orchestras in The Netherlands completed a self-report questionnaire concerning performance anxiety. 91 of the 155 respondents reported experiencing or having experienced performance anxiety seriously enough to affect their professional or personal lives. There appeared to be no difference in prevalence between men and women. Substantial percentages of the anxious musicians reported considerable anticipation anxiety days (36%), weeks (10%), or even months (5%) prior to a performance. The results indicate that performance anxiety is a significant professional problem. It is suggested that teaching explicit coping strategies should be incorporated in the curricula of schools of music.

Stage fright is a well-known phenomenon of which anxiety about public speaking seems to be the most documented form. Less research data are available about performance anxiety among professional musicians. For instance, the few authors of studies on prevalence of performance anxiety have used self-reports of music students predominantly (Abel & Larkin, 1990; Appel, 1976; Dews & Williams, 1989; Sweeney & Horan, 1982; Wesner, Noyes, & Davis, 1990). These studies indicate that 14 to 16% of the students report substantial performance anxiety.

Abel and Larkin (1990) assessed somatic and psychological parameters of 22 music students in two laboratory sessions. They found that the psychological arousal and the self-reported anxiety prior to a performance-before-a-jury of all students were increased compared to a baseline session and that the mean values differed significantly. This suggests that most musicians ex-

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perience some performance-related, anticipatory tension (anxiety). These data may have been positively biased, however, since the participants were offered either 5 dollars or treatment for enrolling in the research-program and 16 students did actually request treatment. We suspect, therefore, that performance-anxious students may have been overrepresented in that study. On the other hand, Steptoe and Fidler (1987) reported an even higher prevalence rate of self-reported performance anxiety among music students.

As compared to nonprofessionals, it is surprising that at least two self-report studies among professional musicians indicate high figures as well. In a survey among 2,212 symphonic musicians 24% of them mentioned stage fright as a 'problem' and 16% as a 'severe problem.' It was the most frequently mentioned severe problem in this survey of medical and psychological problems (Fishbein, Middlestadt, Ottati, Straus, & Ellis, 1988). Steptoe (1989) could distinguish 21 of 65 members of two British orchestras as highly performance-anxious in his survey of career-stress. In both studies the anxious musicians not only reported anxiety but they were quite occupied in anxiety-reducing activities prior to a performance as well.

Figures of this extent suggest a problem of a large, but somewhat uncertain prevalence and severity. To explore this situation in The Netherlands we have used a self-report survey among professional musicians in Dutch symphonic orchestras.

**Method**

**Subjects**

All 650 members of the main trade union for orchestral musicians were invited to participate in this project, that is, to complete a list of questions about their demographical characteristics and psychological characteristics and to return it by post anonymously. Within a month 163 professional musicians complied with our request (response rate 25.1%). Eight respondents were discarded because they did not answer key items. Therefore, the data of 155 respondents were analysed. However, since not all respondents answered all the questions, not all analyses are based on responses of 155 subjects.

The 155 musicians had a mean age of 42.0 (± 9.7) yr. and a mean professional career of 19.2 (± 9.9) yr. There were 91 men and 60 women (4 musicians did not indicate their sex), 34 singles and 115 living with a partner (6 musicians did not report on their marital status).

The description of the musical activities of the 155 musicians is complicated by the fact that most of them have been performing two or more kinds of musical activity. Originally we distinguished seven musical domains, namely, (1) a symphonic orchestra, (2) a chamber-music ensemble, (3) soloist, (4) a choir, (5) a chamber-choir, (6) teaching of music, and (7) other musical activities. Because we found that Categories 4, 5, and 7 were not f-
sequently mentioned we confine ourselves to the four main categories. The resulting constellation is described by a Venn diagram in Fig. 1.

The demographic characteristics of respondents and nonrespondents did not differ as indicated by the fact that the characteristics of the 650 members of the union match those of the respondents quite well.

![Venn diagram](image)

**Fig. 1.** Venn diagram showing the constellation of categories and the numbers of persons in each

**Material**

The subjects received a list comprising 124 questions, divided in three divisions of demographic characteristics, performance anxiety, and general psychological health. For a full description of the questionnaire we refer to Appendix 1 (p. 560-562).

**Results**

**Prevalence**

Of the 155 musicians 91 or 58.7% knew performance anxiety from
their own experience. In this respect there appeared to be no sex difference \( (\chi^2 = 1.42, p = .32) \). No relation could be detected between age and performance anxiety or between the length of the professional life and performance anxiety. In addition, the ages and years as professionals did not differ between the anxious and nonanxious respondents.

Proportionally more musicians in a symphonic orchestra (82 of 131; 62.5%) reported performance anxiety than other musicians (9 of 24; 37.5%; \( \chi^2 = 4.29, p = .04 \)). Fifteen of the 24 nonsymphonic orchestra musicians reported being members of a choir or a chamber-choir. There was no overlap between choir-membership and symphonic orchestra membership. The choir-members appeared to have less performance anxiety (4 of 15; 27%; \( \chi^2 = 5.77, p = .02 \)) than members of a symphonic orchestra.

Musicians who knew performance anxiety from their own experience and answered the question on this issue \( (n = 78) \) estimated the prevalence of performance anxiety among their colleagues to be higher than did nonanxious musicians \( (n = 24) \). Anxious musicians estimated the prevalence to be 65% and nonanxious musicians estimated it to be 19% \( (t = -8.89, p < .001) \).

The 91 musicians who were acquainted with performance anxiety did not experience the same intensity of anxiety. Eighty-eight of them answered this question. Twenty-eight (31.8%) of them reported a slight intensity, 28 (31.8%) a moderate intensity, 24 (27.3%) a very distinct intensity, and 8 (9.1%) a strong intensity of performance anxiety.

The estimation of influence of performance anxiety upon the quality of performance appeared to be related to the intensity of performance anxiety. Highly anxious musicians reported more negative influence (Kruskal-Wallis: \( H_3 = 28.1, p < .001 \)) than musicians low in anxiety. And, very importantly, those reporting low anxiety indicated a more positive influence of performance anxiety upon the quality of their performance \( (H_3 = 15.7, p = .001) \) than highly anxious musicians.

The correlations of rated performance anxiety and the estimated negative or positive influence upon the quality of performance underscore this finding. The Spearman rank correlation of performance anxiety and negative influence was .57 and the rank-correlation of performance anxiety and positive influence -.29.

**Conditions of Performance Anxiety**

No one specific situation elicits performance anxiety in the group of anxious musicians; however, ‘performing at an audition’ is fairly often mentioned \( (n = 18) \) among many others such as onset of the season, a poor physical condition, a poor general psychological state, performing with specific conductors or colleagues, level of difficulty of the performance, and so on.
The anxiety occurs mainly just before and during the onset of the performance in, respectively, 82% (61 of 74) and 91% (68 of 75) of the anxious musicians. For 32% (22 of 68) of the anxious musicians the anxiety continues during the whole performance. Five percent (4 of 72) of the anxious respondents reported anticipation anxiety months before the performance, 10% (7 of 72) weeks, and 21% (15 of 71) days before the performance. Forty-five percent (32 of 71) of the anxious musicians experienced anxiety hours before the performance.

**Personal Consequences of Performance Anxiety**

Of the 86 anxious musicians 47 or 55% who responded to the question about personal consequences had experienced some time in their lives a negative influence of performance anxiety upon their professional career. Eighteen of them specified that notably auditions had been the obstacle. They avoided auditions or performed below their standard during auditions. Twenty-four musicians replied that they were less active playing in public performances than they should or would without performance anxiety.

Moreover, 63% (52 of 82) of the anxious musicians think that their lives without performance anxiety would have been different. Some of them state that the performance anxiety motivates them to better performances. A vast majority, however, hold the opinion that their lives would have been merrier, happier, more relaxed and less stressed, and more satisfying had anxiety about performance been absent.

**Discussion**

Among the respondents the prevalence of performance anxiety appears to be about 60% of whom 55% report that the anxiety considerably hampered their professional lives. If we consider the possible bias from relatively more anxious musicians participating in this study, then the most conservative estimate is that at least 14% of the 650 potential respondents experienced performance anxiety regularly and that at least 8% of the potential 650 respondents feel that such anxiety hampered their professional careers, and about as many report that their personal lives would have been different if they had had anxiety-free lives.

In our study the prevalence of reported distinct and severe performance anxiety of 36% is comparable to estimates of past studies, even if we reckon with our conservative estimate of 14% [although Fishbein, et al. (1988) and Steptoe and Fidler (1987) did not distinguish between slight or moderate anxiety and distinct or strong anxiety]. Even the lower estimate, however, indicates the existence of a problem if one takes into account that nearly all of the respondents have acquired steady professional positions in a symphonic orchestra and that they represent a population of successful musicians. What
may be said about musicians who did not reach this level because of their performance anxiety?

Since almost half of the anxious musicians report that they have suffered from performance anxiety throughout their entire lives, in music schools teaching better methods of coping with such anxiety is obviously desirable. As several behavioral therapy procedures have been found effective in dealing with stage fright (Scholing, 1993), this problem seems remediable for many musicians.

REFERENCES


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**APPENDIX 1**

**Questionnaire on Performance Anxiety and General Complaints**

**A. Demographic Information**

Male/female; age in years; civil status: single/married or living with someone/other; active in profession in years; working in one or more of the following areas: symphony orchestra/chamber music ensemble/soloist/choir/ chamber choir/education of music/other, namely . . .

Please underscore the appropriate answers.
B. The Phenomenon of Performance Anxiety

* Are you acquainted with performance anxiety by your own experience? yes/no
* If yes, go on with the next question; if no, proceed to the section 'general.'
* To what degree do you have performance anxiety if it occurs? slight/you can feel it/distinct/strong
* What do you feel when you have performance anxiety? (open end)
* What do you think when you have it? (open end)
* What do you do when you experience it? (open end)
* Which bodily sensations do you experience when you experience it? (open end)
* Does the anxiety influence your performance negatively? slight/your somewhat/distinct/totally
* Does the anxiety influence your performance positively? not at all/somewhat/distinct/strong
* Do you have performance anxiety at an audition? slight/your somewhat/distinct/strong
* Do you at each performance have performance anxiety? strong/distinct/somewhat/slightly
* Does the degree of anxiety differ with the kind of performance? yes/no + open-end explanation
* Is the anxiety in certain seasons stronger than in other seasons? yes/no + open-end explanation
* When do you experience performance anxiety?
  just before the performance? yes/no
  in the beginning of the performance? yes/no
  during the entire performance? yes/no
  months/weeks/days/hours before the performance? yes/no + underscore appropriate time-word(s)
* Did you always have performance anxiety? yes/no
* How did it evolve in your life? (open end)

C. What Do You Do When You Experience Performance Anxiety?

* Are you trying to repress the performance anxiety when you have it? yes/no
* What do you do then?
  body-relaxation? yes/no
  think/concentrate about something else? yes/no
  breathe deeply? yes/no
  run away? yes/no
  talk with others? yes/no
  other?, namely . . . yes/no
* Are you trying to prevent experience of performance anxiety? yes/no
  * What do you do then?
    - extra preparations? yes/no
    - use of medicines? yes/no, namely . . .
    - resting well? yes/no
    - do other work? yes/no
    - having (psycho-) therapy? yes/no
    - relaxation? yes/no
    - meditation? yes/no
    - performing reassuring rituals? yes/no
    - not performing/avoiding musical engagements? yes/no
    - otherwise?, namely . . . yes/no

* Were your methods to prevent or to deal with your performance anxiety successful? yes/no + open-end explanation

* If you have performance anxiety have you ever considered asking for professional help? yes/no + open-end explanation

* Do you think medication is useful against performance anxiety? yes/ no + open-end explanation

* Do you think psychotherapy is useful against performance anxiety? yes/ no + open-end explanation

D. Consequences of Performance Anxiety

* When you experience performance anxiety again, what influence does it have on you? (open end)

* Did performance anxiety influence your career? yes/no. If yes, how did it . . . (open end)

* Would your life have been different without performance anxiety? yes/no. If yes, how . . . (open end)

E. Explanations For Performance Anxiety

* What do you think is the cause of performance anxiety? (open end)

* Do you think something should be done at a larger scale against it? yes/ no. If yes, what . . . (open end)

F. General

* What percentage of your colleagues experience performance anxiety?

* If you have any remarks or questions elicited by those questions, please present them.

[Those questions were followed by the Symptom Check List (Arrindell & Ettema, 1986; Derogatis & Cleary, 1977; Derogatis, Lipman, & Covi, 1973).]