

# Occupational Stress and Coping in a Sample of Professional Rock Musicians

(First of Two Parts)

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Despite the longstanding fascination of the American public and media with the lives, loves—and deaths—of its performers and artists, serious attention has only recently been paid to the medical and psychological status of these occupational groups. This seems surprising given the cultural images associated with artists and the long list of popular musicians who have died prematurely due to drug and alcohol misuse and accidents. Whereas academic studies on occupational stress abound for corporate executives, air traffic controllers, factory workers, health professionals, and white collar workers, to name a few, such work has been sparse for artistic occupations. Efforts to acknowledge and identify risks and develop interventions in the performing arts have been left largely to private practitioners and individual organizations operating without the benefit of shared information or an organized field akin to sports medicine.

Fortunately this state of benign neglect has begun to shift. Recent conferences on the special needs of performing artists (i.e., in Colorado and New York) have focused attention and facilitated the development of a new field of performing arts medicine. *The New York Times* reported that “Making Music Can Be Harmful to One’s Health” (May 5, 1985) and recognized that while the problems are not new, the willingness of artists to acknowledge them may be.<sup>1</sup>

Prior to these recent developments, sociologists were largely responsible for highlighting the lack of serious research on musicians. In a 1981 overview of the state of music research, Denisoff and Bridges referred to popular music research as a “battered and neglected orphan . . . in the world of scholarship.” They note (p. 50):

If archaeologists from the 21st century were to examine the current literature—especially as it exists in books—they would probably conclude Elvis invented rock music; the only artists popular in the 1960’s were the Stones, Dylan and some others; and popular music disappeared in the 1970’s.<sup>2</sup>

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Few scholars or serious writers approached popular music in earnest “prior to the advent of the Woodstock Nation”<sup>2</sup> and major gaps are evident thereafter.

Previous treatments of popular music were generally negative or concerned with the music’s potential use as a method of “mass persuasion” during and after World War II. The work of the German Marxist, Theodor Adorno,<sup>3</sup> focused on the subordination of the aesthetics of music to its increasingly commercial nature as a “product” and was particularly influential in promoting the idea of popular music as the “new opiate of the people.”<sup>2</sup> While the mass culture argument continued, a small number of American sociologists during the 1950’s wrote on music and musical life as a vehicle for studying other sociological themes such as “deviance,”<sup>4</sup> with jazz music the usual focus.<sup>5</sup>

The rise of rock music in the 1950’s went virtually unnoticed by scholars, although parents of teenagers, journalists and musicologists condemned it as either a “threat to youth” or as an unpleasant, noisy fad. Scholars did pay some attention to the folk music revival of the late 1950’s—early 1960’s, however, probably because of its popularity on college campuses and because the themes were sometimes politically significant (e.g., the protest songs of the 1963–1964 years).<sup>2</sup> The “Beatlemania” phenomena beginning in 1964 also drew some interest from social scientists, but the focus was limited to the impact of the music on teenagers (e.g., mob behavior, emotional contagion) rather than dealing more broadly with the music or the musicians.

The growing social significance, influence and sophistication of rock music (e.g., by The Beatles and Bob Dylan) in the context of the late 1960’s “counter-culture” resulted in increased scholarly interest in popular music. In addition, the “rock press” was born. By 1968, scholarly books and papers on popular music began to appear as well as mass market treatments, loaded with photos and geared to rock fans who were usually considered “non-readers” by book publishers.<sup>2</sup> Academics continued to write about popular

music as a backdrop for other interests and social trends and, thus, the better popular music studies tended to come from nonacademicians, often journalists, and industry-oriented publications were prominent.

Until recently, then, the only attention paid to musicians themselves tended to be in the form of biographies, and these were typically "fan oriented quickies" on "superstars."

Solid epidemiological data on the health status of musicians remain limited, but the information that is available points to specific, often stress-related, health problems. A study of occupational mortality in Washington State<sup>6</sup> indicated that musicians had significant PMR (age standardized proportionate mortality ratio) increases for diseases of the arteries and cirrhosis of the liver between 1950 and 1960. Holland<sup>1</sup> cites another study of both classical and popular musicians based on musicians' union death records between 1959 and 1967 showing that the average age of death for musicians was 54 years as compared to a nationwide mean of 69 years.

Aside from mortality data, there has been a growing awareness of physical problems of musicians from hearing loss to muscular and nerve dysfunctions.<sup>7-11</sup> Furthermore, a study of community mental health admissions by occupation in Tennessee in 1972-1974 showed musicians to rank fifth out of 130 occupational groups with an admission rate of 19.14 per 1000 population.<sup>12</sup> Finally, recurring headlines of the untimely deaths of young rock musicians since 1959<sup>14</sup> suggest that alcohol and drug abuse as well as accidents (which are related to alcohol and drug use in a large percentage of cases<sup>15</sup>) constitute serious health concerns. While the representativeness of these samples may be questioned, the results are in accord with cultural images, biographical treatments, and self-reports of musicians.

The purpose of this research is to describe common sources of occupational stress for professional rock musicians, an occupational group virtually ignored in the literature (even that within the growing body of performing arts medicine, which has been focused to date on classical music and dance) and to explore how members of this profession cope with and view some of these stressors over time. The use of alcohol, drugs and social support in coping is highlighted. A related purpose, given the multifaceted nature of the stress and coping process, is to describe relevant individual characteristics and coping resources of this population. Finally an implicit purpose is to test the relevance of current occupational stress approaches to popular music occupations.

The present article, part one, will provide the rationale and methodological context for the study as well as the findings on individual characteristics and coping resources of musicians. Part two in the next issue of this journal will present findings on sources of occupational stress, coping processes, the discussion of the findings and suggestions for future directions.

Professional rock musicians were specifically chosen for study as the author believes their occupational environment to be highly stressful and their group culture to reinforce health risk-taking behavior, thus placing them at high risk of premature morbidity and mortality. This research begins, too, with the assumption that professional rock musicians exist as one "subsystem" or special segment of a popular music industry system<sup>16</sup> which itself exists in an uncertain

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and often turbulent environment due to the nature of its purpose—"to create and satisfy consumer demands for new fads and fashions."<sup>17</sup>

The climate and pressures inherent within the popular music industry may be suggested by the following:

Rock music accounts for more than 80 percent of all records and tapes sold and is the core of a \$2 billion business that dwarfs all other entertainment industries. From the mid-fifties through the seventies, the music industry has grown at an annual rate that is far in excess of that of most other American industries.<sup>18</sup>

Between the turbulent nature of its purpose and the huge financial stakes involved, the recording industry often creates a high-pressure occupational climate for those musicians successful enough to obtain recording contracts. For the others, one may suspect job insecurity and unemployment to exist as stressors related to the occupation and the pressures associated with trying to "make it."<sup>5</sup>

Another component of the occupational context that may place musicians at emotional and physical health risk involves the nature of the group culture and image. This has been described as "deviant" and "non-conforming," with wide acceptance of use and more importantly, abuse, of illicit drugs and alcohol,<sup>4,20,21</sup> implying a low priority on health. From a health risk perspective, one may view this group influence with concern. Taken to the extreme, the "rock myth" includes the idea that the true rock artist gives his or her all to the audience, that the rock star should "live fast, burn out, and die young."<sup>22</sup>

The excitement, prestige and power surrounding rock musicians are extremely attractive to millions of young people, of course, who are unlikely to think much about chronic disease or premature death. Instead young people dream about what Hirschberg calls:

... the rock star fantasy—that combines passion, easy money for comparatively little work, an exciting career and a life filled with meaning. It is impossible to imagine how many people take this dream to bed with them each night. In 1978, the *San Francisco Chronicle* estimated that there were approximately 5000 bands in the greater Bay Area. Almost everyone I know, whether they're doing something about it or not, fantasizes about becoming a rock star. . . .<sup>23</sup>

Rock musicians have indeed become cultural heroes and role models for countless adolescents and young adults all over the world. In a study of prestige effects and English adolescents' reactions to music, Chapman and Williams<sup>24</sup> concluded, for example, that music is an important means of social identification for this group. The degree of identification of one group of English fans with the rock star, David Bowie, during his "thin white Duke" phase is described by Dick Hebdige and provides a more immediate understanding of the impact of rock artists on some people:

Every Bowie concert performed in drab provincial cinemas and Victorian town attracted a host of startling Bowie look-alikes, self-consciously cool under gangster hats which concealed . . . hair rinsed a luminous Vermillion, orange, or scarlet streaked with gold and silver. (p. 60)<sup>25</sup>

Like professional athletes, rock musicians have become potential influences on the health habits and risk-taking behavior of millions of young people<sup>21</sup> and are thus worthy of study.

### Stress and Coping

Stress is viewed here as a mutually influential transaction between the person and the environment rather than as a property of either the environment itself or as a state of the person.<sup>27,28</sup> This view is compatible with a general systems theory approach,<sup>29,30</sup> the concept of the "Person-Environment Fit,"<sup>31,32</sup> accepted occupational stress models,<sup>33</sup> and the transactional, cognitive-phenomenological model of stress and coping advocated by Richard Lazarus and colleagues at the University of California, Berkeley. Stress is defined as "a general rubric for somewhat different though related processes of person-environment transaction in which demands tax or exceed the resources of the person."<sup>34</sup>

As researchers have come to recognize stress as a normal part of everyday living as well as of extreme crisis situations, their attention has increasingly turned to concepts of coping and cognitive appraisal. A representative definition of coping is provided by Lazarus and Launier as follows: "Coping consists of efforts, both action-oriented and intrapsychic, to manage (i.e., master, tolerate, reduce, minimize) environmental and internal demands, and conflicts among them which tax or exceed a person's resources."<sup>34</sup> A widely accepted view is that coping involves nonroutine, nonautomatic efforts to master conditions of harm, threat or challenge.<sup>37,40,41</sup> The two main functions of coping most widely studied have been (1) the alteration of the person-environment situation (i.e., problem-focused) and (2) the regulation of emotions (i.e., emotion-focused). The concept of cognitive appraisal<sup>27,42</sup> has been used to describe the "person's continually re-evaluated judgment about demands and constraints in ongoing transactions with the environment and his/her resources and options for managing them."<sup>44</sup> These evaluative processes are seen to influence a person's stress reactions, the accompanying emotions and adaptational outcomes.

Four principles of Lazarus' stress and coping model<sup>42</sup> influenced the method of the research presented here. First, the emphasis is on process, i.e., what happens over time or across encounters in addition to what is stable in the person-environment relationship. Second, stress and coping encounters take place simultaneously at three separate but partly interdependent levels of analysis—the social, psychological and physiological. Third, understanding stress and coping requires an intraindividual perspective, comparing the same person with him or herself at different times or under different conditions. Lazarus states

. . . we will never be able to examine the ongoing processes underlying the causation of various adaptational outcomes, including somatic health and illness, morale and social functioning, unless we study these processes as they occur across a wide variety of occasions and within persons. To do

so requires that we sacrifice the large numbers of (normative) cases needed for statistical significance when the source of variance studied is weak and one of many causal factors in favor of more intensive examination of the same persons across occasions or over time.<sup>42</sup>

Lazarus and Folkman conclude further that: "An ideal alternative is to observe persons repeatedly intraindividually and do interindividual comparisons."<sup>43</sup>

Finally, a naturalistic emphasis is needed, recognizing the limitations of laboratory research in studying stress and coping.<sup>34,42,44</sup> This approach suggests collecting descriptive data that are specifically relevant to the culture of the group being studied on sources of stress, coping processes and adaptational outcomes as a preliminary to studying more precise deterministic questions in experimental studies.<sup>44</sup>

### Occupational Stress

Occupational stress is defined as negative environmental factors associated with a particular job.<sup>33</sup> Individual reactions to factors in the environment will, of course, vary, but a factor may be considered negative to the extent that a person appraises the situation as one involving harm or loss, threat or challenge to his or her well-being.<sup>34,44</sup> The emphasis is on what Selye<sup>45</sup> has distinguished as "distress" (i.e., resulting in harmful consequences) rather than on "eustress" (i.e., resulting in fulfillment). This distinction seems especially relevant in the culture of the performing arts, as some artists view their creativity or productivity as requiring a high level of stress.

Following an extensive review of the occupational stress literature related to coronary heart disease and mental ill health, Cooper and Marshall<sup>33</sup> described five general categories of sources of stress at work across a variety of occupations. These begin with factors intrinsic to the job. Typically this category includes physical working conditions and workload (e.g., shiftwork, work overload and underload). A second stressor category is role in the organization, referring to such elements as role ambiguity (a lack of clarity about job demands), role conflict (conflicting job demands), responsibility for people, and job status (i.e., pecking order) in the organization. Career development represents a third group of stressors including such issues as lack of job security, and over- and under-promotion. A fourth category addresses the nature of relationships at work—with subordinates, colleagues and the boss. The final stressor category relates to the organizational structure and working climate, which includes elements such as office politics, lack of participation in the decision-making process, restrictions on behavior, and lack of effective consultation or resources.

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Identification of stressor categories provides only one piece of the occupational stress puzzle. Non-occupational elements impacting on the individual (such as life events, family life, health and finances) may contribute either positively or negatively to the work situation. Cooper and Marshall<sup>33</sup> emphasize the role of extra-organizational sources of stress, stating: "These are important potential stressors since they act in a feedback loop between work and the outside environment: problems outside work . . . affect [the] individual at work [and] exacerbate . . . problems outside work." Likewise the mediating role of individual personal characteristics in the occupational quotient must be recognized. These individual characteristics may be psychological (e.g., beliefs, generalized expectations of control, intelligence, degree of neurosis), behavioral (e.g., coping strategies, skills level, behavioral practices), or physiological (e.g., genetics, health status) and social (e.g., degree of social support, material resources, and environmental factors). The interrelationships of all these elements must ultimately be considered in addressing the problem of occupational stress. As such an understanding is rarely attempted in the occupational stress literature, less ambitious goals seem indicated in the meantime, akin to Coyne and Lazarus' emphasis on basic, ecological information.<sup>44</sup> The study reported here represents such a starting point in understanding the stressors faced by professional rock musicians.

## Methods

### Sample

The sample consisted of 10 professional rock musicians (6 males, 4 females; average age of 29.6 years, with a range of 23–34 years) living in the San Francisco Bay Area, who participated in a total of 30 interviews over a six-month period. Each interview was approximately two hours in duration. The definition of professional was adopted from Sanders as one who is "economically supported by his or her skill . . . and acknowledged as a professional by members of the society of which he or she is a part."<sup>46</sup> The definition of "rock" musician followed Bennett as the label perceived "to be most used in self-descriptions by the musicians . . . studied . . . and the media category most appropriate to the commercial features of their performances."<sup>45</sup> Eighty percent of the subjects were single, divorced or separated and had no children. Ninety percent were Caucasian. Seventy percent of the sample were from families in which at least one parent was employed as a professional (e.g., doctors, teachers, engineers). Half of the subjects had attended some college and an additional 20% were college graduates.

With regard to their family living arrangements, these subjects were fairly typical of the artist population according to a National Endowment of the Arts report based on the 1970 census. The report indicated that musicians and composers along with other artist subgroups were living in families at a lower rate than the rate for all persons in the United States of a similar age range. Notably musicians and composers were among the least likely of artist groups to be married, with 36% remaining single in 1970. This is probably due, however, to the fact that in 1970 nearly half of all musicians were under the age of 30.

### Procedure

This descriptive study sought to balance the richness, sensitivity and flexibility of a clinical interview, case-study approach with the guiding structure and practicality of standardized instruments where these were particularly appropriate. The exploratory nature of this research suggested its predominantly qualitative strategy and a goal, which Prather has called Principle 1 of qualitative analysis, "to understand social behavior from the point of view of the participants engaged in that behavior."<sup>47</sup> The nature of the stress and coping process itself suggested the repeated measurement design, whereas practical constraints necessitated a limited time frame and small sample size.

In a series of three semi-structured interviews over a six-month period, the following areas were examined: (1) individual characteristics and coping resources (first interview only), including demographics, occupational characteristics such as income and job satisfaction, career history and goals, health risk appraisal and psychological resources; (2) monthly job tasks and workload; (3) monthly sources of job stress based on Cooper and Marshall's occupational stress categories; and (4) coping patterns specific to the "most stressful" occupational episode during the preceding month. The use of drugs, alcohol, cigarettes and social support in the coping process was assessed.

The guiding strategy on the data analysis was (1) to organize and clarify the data (i.e., frequency distributions on standardized instruments, content analysis of open-ended questions, use of reliability checks with a second reader, use of physician consultation on the health risk appraisal data, and classification of data by ranks, high/low and so forth), and (2) as Prather suggests, "search for the common linkages between classes."<sup>47</sup> Given the small sample size, few qualitative analyses of the data were undertaken apart from descriptive statistics. The only statistical tests undertaken (t-tests for differences between means) were on pooled data, and when indicated, on the relationship between individual characteristics, coping resources, and cumulative scores for frequency/intensity of stress experienced within subjects. Detailed information on data analysis for each content area and instruments used is available by request from the author.

The following standardized instruments were used: (1) The Health Risk Appraisal form developed by the Center for Disease Control, Public Health Service, Department of Health and Human Services, inclusive of blood pressure measurement; (2) the State-Trait Anxiety Inventory (STAI)-Trait version<sup>50</sup> (3) self-report on self-denigration, self-esteem and mastery/locus of control using 17 items from Pearlman and Schooler<sup>51</sup> (4) the Sources of Stress at Work Checklist, developed by the investigator on the basis of the occupational categories outlined by Cooper and Marshall<sup>33</sup> and pilot interviews with musicians; and (5) The Ways of Coping Checklist,<sup>48</sup> measuring both problem and emotion-focused coping strategies in response to a specific stressful episode.

## Results

### Individual Characteristics and Coping Resources

**Occupational Characteristics.** Subjects were asked about job satisfaction, career history and goals, and workload each

TABLE 1. Individual Characteristics/Coping Resources: Job Demands—Activities and Workload<sup>1</sup>

(N = 10)	Month 1	Month 2	Month 3	Mean Workload
Subject	Hours Per Week Activities (Music Only)	Hours Per Week Activities (Music Only)	Hours Per Week Activities (Music Only)	Hours Per Week
A	30 —recording —performing —doing business —promotion/publicity —interviews	18 —recording —performing —publicity	29 —performing —recording —business —publicity	26
B	18 (+ 40) —rehearsing —practicing guitar —performing	20 (+ 40) —practicing guitar —performing —business	12 (+ 40) —rehearsing —practicing guitar —planning a tour	17 (+ 40)
C	38 —teaching guitar —performing —rehearsing —writing	52 —teaching —performing —business —writing —tuning pianos	37 —performing —teaching —business —rehearsing —recording	42
D	20 (+ 40) —writing —rehearsing —recording	15 (+ 40) —writing —doing business	20 (+ 40) —rehearsing —recording —prioritizing material —business	18 (+ 40)
E	10 —doing business —solo project development —rehearsing —performing —writing	35 —rehearsing new material —writing lyrics —band meetings	35 —rehearsing —writing —voice lessons —business —performing	27
F	60 —rehearsing —practicing guitar —writing	98 —rehearsing —recording LP in the studio	15 —performing —recording	58
G	30 —practicing —rehearsing —performing —business meetings	50 —rehearsing —performing —writing —business-tour plans —traveling (London)	30 —arranging tour —arranging & rehearsing music —practicing	37
H	40 (+ 40) —business —rehearsing —recording —solo act development	30 (+ 40) —performing —rehearsing —photo session —business —recording	40 (+ 40) —rehearsing —performing —traveling (LA) —writing —business	37 (+ 40)
I	58 —performing (bar act) —performing band —writing —rehearsing —business	38 —performing —writing —business	30 —performing —recording —tapes to publisher —rehearsing —finding a new guitar player	42
J	20 —auditioning a new guitar player —working on a video —performing (traveling to LA) —business	20 —rehearsing —writing new material and breaking in a new guitar player —writing —business-promotion	15 —rehearsal —business —interviews	18

<sup>1</sup>Data from 3 interviews per subject over a 6-month period.

month. To begin, subjects were only moderately satisfied with their jobs as musicians (60% reported "somewhat satisfied;" 30% were "very satisfied;" and one subject felt "dissatisfied"). Subjects had been in the music business for an average of 9.3 years with a range of 2–15 years. The average age of entry into the profession was 20 years with a range

of 13–25 years. Half of the subjects had current record contracts, whereas another 30% had self-produced LP's or singles with independent producers. One subject had been on contract with a major label as a member of a popular group for years but having left the band did not have a current contract.

TABLE 2. Individual Characteristics/Coping Resources: Social Support Availability and Use in Coping

Subject	Strength of Ties With Family	Strength of Ties With Friends	Strength of Ties With Colleagues	Overall Strength* Social Support		Use of Social Support† in Coping—3 Monthly Episodes and Total Use	
				Points	Category		
A	Very strong (1)	Average (2)	Average (2)	5	Average	3/3; 3/3; 3/3	9/9
B	Average (2)	Very strong (1)	Very strong (1)	4	Very strong	1/3; 1/3; 2/3	4/9
C	Very strong (1)	Very strong (1)	Very strong (1)	3	Very strong	3/3; 3/3; 3/3	9/9
D	Very strong (1)	Average (2)	Very strong (1)	4	Very strong	2/3; 3/3; 2/3	7/9
E	Very strong (1)	Weak (3)	Average (2)	6	Average	1/3; 3/3; 3/3	7/9
F	Average (2)	Very strong (1)	Average (2)	5	Average	1/3; 3/3; 2/3	6/9
G	Average (2)	Weak (1)	Average (2)	7	Average	0/3; 0/3; 0/3	0/9
H	Very strong (1)	Very strong (1)	Very strong (1)	3	Very strong	3/3; 3/3; 2/3	8/9
I	Very strong (1)	Very strong (1)	Very strong (1)	3	Very strong	3/3; 2/3; 3/3	8/9
J	Average (2)	Very strong (1)	Average (2)	5	Average	3/3; 3/3; 3/3	9/9
(N = 10)	6 = Very strong 4 = Average	6 = Very strong 2 = Average 2 = Weak	5 = Very strong 5 = Average	$\bar{x} = 4.5$	5 = Very strong 5 = Average	$\frac{\# \text{ items used}}{\# \text{ items possible}}$ each month	$\bar{x} = 7/9$

\*Overall categories:  
3-4 points = Very strong  
5-7 points = Average  
8-9 points = Weak

†Use of Factor 6—"Seek Social Support" on *Ways of Coping Checklist* for 3 monthly episodes. Maximum use of social support = 3 items/3 items per month, or 9/9 for all months.

When asked to describe their career goals, subjects uniformly indicated a desire to grow and develop musically, to communicate and gain some recognition in the context of making a predictably decent living. The specific details of this basic theme varied depending upon each subject's current status and level of industry support. Whatever their current status, these musicians desired to have more control over their fortunes than the nature of the music industry tends to permit. Average annual salary from all sources was \$11,000, although most subjects reported that their monthly incomes from music often fluctuated widely and usually unpredictably.

Table 1 presents data on musician workload and job tasks for each of the three interview months. Like income, workload and activities often varied widely from week to week and month to month. While average hours per week were estimated for each subject for comparison purposes, note that these averages sometimes result, for example, from two weeks of long hours per day then two "off" weeks of minimal activity. This pattern was often described as the "feast or famine" syndrome. Subjects reported that workload increased most dramatically in the context of touring or recording. The average workload from subjects' estimates was

32.2 hours per week for music only and 44.2 hours per week for all jobs. Thirty percent had full-time, non-music day jobs in addition to their professional activities.

#### Health Risk Appraisal

Subjects were assessed as to behavioral practices, physical status indices and attitudinal indices. Musicians were generally characterized as being at a moderate health risk overall, with their behavioral practices representing the greatest potential problem area, particularly when environmental influences resulted in increased alcohol, drug and cigarette use, decreased sleep, increased time in cars, increased risk-taking behaviors, and intensification of Type A behaviors. Half of the subjects smoked cigarettes; 80% drank alcohol regularly (with 20% describing themselves as "problem drinkers"); 30% used drugs every day; and another 50% used drugs on occasion. The two subjects who did not drink or use drugs reported themselves as former drug or alcohol abusers. Subjects uniformly reported that their use of substances increased considerably when performance schedules increased, due to greater time duration spent in bars and clubs.

When not traveling to perform, sleep patterns and time spent driving in automobiles tended towards the low risk category. Some subjects were physically active, but few could be rated as aerobically fit. The majority of musicians were placed at some risk of violent episodes due to frequenting high crime areas. And, the majority of subjects demonstrated moderate (40%) to high (50%) levels of type A characteristics. While only 30% of the subjects were actually classified as being at high health risk due to their current behavioral practices, others on the moderate range would clearly benefit from lifestyle changes as a preventive strategy.

Physical status indices such as height/weight ratios, blood pressure levels, personal and family history of disease were generally good. Twenty percent of the subjects were greater than 20% above standardized weight norms and an additional 20% had elevated blood pressure readings (in the range of 125/90 to 150/80). Although overall physical status risks of the subjects were low, these subjects were young, and one may assume that the health insurance afforded by physical status to have its limits over time in the face of problematic behavioral practices.

Musicians were considered to be at a moderate attitudinal risk by virtue of their health-related beliefs and attitudes, social support and personal losses in the preceding year. The majority of musicians (70%) described themselves as "partly satisfied" with their lives; 60% reported serious loss in the previous year (e.g., divorce or death); 40% considered their health to be "very important" relative to other areas in life or "important" (50%), although they reported these attitudes to be relatively recent; and 60% disagreed with what has been called the "rock myth"—the idea that artists should "live fast, burn out, and die young." All subjects agreed ("strongly" = 40%; "somewhat" = 60%) with the idea that being "emotionally or physically upset contributes to their creativity." Social support (family, friends, and colleagues) was rated very strong overall (50%) or average (50%), and this was reflected in their consistently high use of seeking social support in coping with stressful episodes (see Table 2).

#### Psychological Resources

Pearlin and Schooler<sup>51</sup> described psychological resources as "the personality characteristics that people draw upon to help them withstand threats posed by events and objects in their environment." The following psychological resources were examined in this study: trait anxiety (i.e., a "relatively stable individual difference in anxiety proneness"<sup>50</sup>), self-denigration, self-esteem, and mastery (akin to locus of control).

Ninety percent of the musicians studied were characterized by high levels of trait anxiety, falling into the 70th to 90th percentiles on Spielberger's norms for college freshmen and undergraduates by sex.<sup>50</sup> All subjects reported moderate levels of self-denigration (i.e., lowest score = 4; highest = 16; moderate range = 8–12). Concurrently, 50% of the subjects had moderate levels of self-esteem (lowest = 6; highest = 24; moderate range = 12–18), with the remaining half showing high levels. Sixty percent of the subjects demonstrated moderate feelings of mastery (lowest = 28; highest = 7; moderate range = 14–21), with the

remaining 40% reporting high feelings of mastery. The highest psychological risk would theoretically be characterized by a person with high trait anxiety, high self-denigration, low self-esteem, and low feelings of mastery over his or her fate. The most common pattern for the subjects in this study was high trait anxiety, moderate levels of self-denigration, moderate to high levels of self-esteem, and moderate levels of mastery. On the basis of their psychological characteristics, therefore, these musicians possessed inconsistent coping resources. Assessment of the specific mediating role of the individual characteristics and coping resources presented (i.e., demographic, occupational, health status and psychological) in the subjects' experience of stress and coping with stress was severely limited by the small sample size and resulting narrow distribution of characteristics and resources in the current study. Part two of this report further addresses this issue as an important area for future research.

Findings have now been presented on occupational characteristics/workload, health risk (behavioral, attitudinal and physical status), and psychological resources of the musicians in this study. From the base of individual characteristics and coping resources, part two of this work will present repeated measurement data on occupational sources of stress and coping processes used in response to some of these stressors. Discussion of the overall findings and suggested directions for future research will then be presented.

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