

Work Context and OHS

Studies and Research Projects

REPORT R-607



Occupational Risks in the Performing Arts An Exploratory Study

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SUMMARY

The present exploratory study originates with a request made by the *Table de concertation paritaire en santé et sécurité du travail du domaine des arts de la scène*. This joint table on occupational health and safety in the performing arts derives from Measure Five of the *Plan d'action pour l'amélioration des conditions socioéconomiques des artistes, "Pour mieux vivre de son art"* (Action plan to improve the socioeconomic conditions of artists – Living better from art), released in 2004. To act on this measure, a study on occupational health and safety risks was planned. Ever since the work of Michel Perreault (1988), very few surveys and studies have been conducted in Québec to produce this type of OHS profile among artists and artisans in the performing arts.

The present report is meant to be an assessment of OHS in the performing arts. Four main objectives underlie the research efforts: knowledge of producers' OHS needs; assessment and analysis of employment injuries; causes of accidents; and the health paths of artists and artisans. This document is the culmination of a convergence analysis of different data sources: literature review; focus group interviews and individual interviews with artists, artisans and producers in the field; analysis of documents or databases; and observation of different productions. The research team studied the work of artists and artisans in the theatre, music/variety, dance and circus fields.

The results made it possible to develop an analytical model of the determinants of prevention and OHS in the performing arts. The model will allow stakeholders to discern the microscopic and macroscopic issues that have an impact on prevention. Among organizational conditions taken into account in this model are: the importance of planning all the activities of cultural enterprises; the stability of teams and crews despite the presence of a high rate of freelancers and self-employed workers; and training programs. To complete the report, a set of recommendations is provided to guide discussion among the members of the *Table de concertation paritaire en santé et sécurité du travail du domaine des arts de la scène* so that they may produce an action plan.

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1. INTRODUCTION

In June 2004, the Ministère de la Culture et des Communications released the *Plan d'action pour l'amélioration des conditions socio-économiques des artistes - Pour mieux vivre de l'art* (Action plan to improve the socioeconomic conditions of artists – Living better from art). The upshot of a consultation with the cultural milieu, this plan includes twelve concrete measures, one particularly concerning the fields of occupational health and safety.

In Measure 5 of this action plan, regarding injury prevention, the CSST undertakes to create joint issues tables, particularly in the performing arts field¹, to study the problems, improve knowledge and determine adequate preventive measures. In relation to this measure, a study was planned on occupational health and safety risks in the performing arts.

The CSST called on the expertise of IRSSST researchers to delineate OHS issues in the performing arts based on interviews with stakeholders in the field, observations during productions and a literature review of scientific writings and means of prevention developed elsewhere. The IRSSST, the partners in the performing arts sector and the Ministère de la Culture et des Communications contributed financially to this study.

More specifically, this exploratory study is intended to:

- 1- Obtain a better understanding of the production context, and the producers' difficulties and needs in OHS management, depending on this context;
- 2- Profile the risks during preparation of a production;
- 3- Identify the main causes of accidents during preparation of a production;
- 4- Obtain a better understanding of the artists' career paths and health paths.

The results of this exploratory study fuelled the work of the *Table de concertation paritaire en santé et sécurité du travail du domaine des arts de la scène*, headed by the CSST. As the study progressed, preliminary results were presented and discussed with the Table's members. These results can now serve to develop an action plan and intervention strategies in this sector, such as awareness, information, training and technical assistance programs. They will also allow formulation of new research questions to be developed according to the priorities that will be adopted by the members of the *Table de concertation paritaire en santé et sécurité du travail du domaine des arts de la scène*.

This report is divided into nine sections. Section 2 briefly presents the state of the knowledge on the question of occupational health and safety among performing arts workers. Section 3 explores the methodology developed to meet this study's specific objectives. In Section 4, we profile the performing arts sector in two stages: a profile of the enterprises and occupations (number, status, income, etc.) and a profile of the employment injuries emerging from the data on cases accepted by the CSST.

¹ The performing arts occupations include set designers and directors, choreographers, show producers, presenters, performing arts festival and event organizers, performing arts establishments, author-composers, performers (actors, singers, musicians, dancers, artists, other cast members), lyricists, composers and music publishers.

The subsequent sections more specifically concern the question of OHS risks present in the performing arts occupations and the different causes of accidents (Section 5), the artists' professional and health paths (Section 6), and the determinants of health and safety of artisans and artists in the performing arts. From this, it was possible to construct an analytical model specific to the performing arts, which is presented in Section 7. Following our discussion (Section 8), recommendations are proposed in Section 9 to guide the preventive actions of the members of the *Table de concertation paritaire en santé et sécurité du travail du domaine des arts de la scène* and of the sector's stakeholders.

2. STATE OF KNOWLEDGE

In this section, we present some of the studies carried out in the field of health and OHS on problems experienced by performing arts personnel. In particular, we discuss the question of the specific working conditions of artists and artisans, such as employment status and work schedules. The question of health and injuries is examined in the second part. In the third and last section, we discuss the theme of prevention in this sector.

2.1 Special conditions of occupational practice and their effects on OHS

The socioeconomic profile of artists, released on February 24, 2004, demonstrated that some artists and creators live in an *economically precarious conditions* and that some of them lead a “double life” to have an adequate income. The data presented in this document confirm that the culture sector is a non-traditional sector in terms of the organization of work, as noted in the *Plan d'action pour l'amélioration des conditions socioéconomiques des artistes* (Action plan for improvement of the socioeconomic conditions of artists). This form of organization of work is characterized, in particular, by an irregular work rhythm, alternating between extremely active and intense periods and periods of forced inactivity. Thus, intermittent projects and temporary work are the plight of numerous workers in this sector.

The problem of *workers in non-traditional situations* is the focus of increased attention on the part of governments, service agencies and researchers. For example, there is the Bernier report on “*Les besoins de protection sociale des personnes en situation de travail non traditionnel*” (Bernier et coll., 2003), published by the Ministère du Travail, and the report of the committee mandated to study the impact of the new forms of employment on the application of the *Act respecting industrial accidents and occupational diseases* (Bich et coll., 1997) of the CSST.

It is thus legitimate to consider whether the employment status of performing arts workers also weakens their occupational health and safety. Quinlan, Mayhew and Bohle answer the question in part in a landmark summary article (Quinlan et coll., 2001). After closely examining the methodology and the results of nearly a hundred studies published since 1984 regarding the effects of precarious employment on health and safety in the industrialized countries, they conclude that these effects are increasingly numerous and evident. Of the 93 articles, monographs and book chapters reviewed, 76 indicate that precarious employment is associated with a deterioration in occupational health and safety, be it injury rate, risks of disease, exposure to risks or workers' or managers' knowledge of their specific responsibilities for prevention or legal supervision.

Although the legislation on the professional status of artists defines them as self-employed workers, the Act respecting occupational health and safety (AOHS), which governs the question of prevention of employment injuries, likens performing artists (whether contractual or salaried) to “employees”, to the extent that it recognizes the existence of an employer-employee relationship between the producers and the artist. Thus, dancers, actors/comedians and musicians are protected against the risks of injury during the occupational activities stipulated in their engagement contract. However, it is known that temporary contractual workers must constantly

find work and thus have no interest in taking time to care for themselves or to complain about problems. Underreporting of industrial accidents and occupational diseases by workers with precarious status is a major phenomenon, which is now well documented (Lippel, 2001; Quinlan and Mayhew, 1999).

Moreover, in a context of population aging and demographic slowdown, the intensity of work, the precariousness associated with the performing arts sector and the risks of deterioration of health also raise the issue of retaining the sector's artists and workers. A study of the motion picture industry and OHS reveals that only 8% of technicians are still working in film by the time they turn 50 years of age. Physical and time constraints, accidents and injuries, mental load, demanding schedules and pressures cannot be endured over many years. In the long run, all these factors take a heavy toll (Bourdouxhe et coll., 2003). We can attempt to establish a parallel with the performing arts occupations, because workers age 55 and over represent less than 8% of this sector's headcount (Statistics Canada, 2001 Census²). However, other factors also come into play, such as "image", which has been a subject of debate in the past few months in the artistic community.

2.2 Health of performing arts workers

The health of artists and artisans has been the focus of several research projects over the past 20 years. The development of knowledge on this theme is the main mandate adopted by performing arts medical associations, such as PAMA in the United States, BAPAM in England and *Médecine des arts* in Continental Europe. However, not all occupations are studied with the same intensity. In an article published in 2003, Dawson presents a retrospective of the articles published in the performing arts field for the period covering 1997 to 2001. A total of 1366 articles are listed. With 972 articles, music is by far the art form that recurs the most frequently (71%), followed by dance with 361 (22%). Meinke (2004) recalls that arts medicine is still a young discipline and that it will have to open up to cover all performing arts occupations and to work on the development of knowledge in prevention of health problems.

Concerning dancers, Perreault conducted a major survey in 1988, which showed that 94% of dancers are injured at least once in a 16-month period; four injuries occur for every thousand hours worked, which is comparable to the frequencies observed in professional sports. The injuries suffered mainly affect the back and the lower limbs; they are mainly sprains and muscle injuries. Repetitive stress injuries are five times more numerous than accidental injuries. Younger artists (under age 30) and those with the most performance hours accumulate the most injuries. Late evening work and learning new movements are high-risk situations.

Moreover, in recent years several studies have been performed on dancers' health, particularly in Québec, Europe and the United States, (Byhring, 2002; Greer, 1994; Nilsson, 2001). A substantial part of this literature emphasizes the effect of individual characteristics (preparation and physical condition, fatigue, performances, etc.) on dancers' occupational health (Fortin, 2002; Garrick, 2001; Kelman, 2000; Koutedakis, 2004; Luke, 2002; Noh and Morris, 2004; Turner, 2003). An interesting study deals with the sociocultural issues specific to contemporary dance and likely to influence health discourses and practices in dance (Trudelle et coll., (2007)).

² Compilation: Institut de la statistique du Québec, Observatoire de la culture et des communications du Québec

This study sheds light on the contradictory demands made daily on performers, who must reconcile the requirements of a healthy, functional and balanced body with those of a poetic body, capable of abandon and invention, all without the existence of an adequate safety net in the form of working conditions. Finally, another facet of the literature deals with the context of practice as a source of injury for dancers, and includes aspects such as instruction, fitness training and layouts (Evans, 2003; Hevia and Bassi, 2002; Weigert, 2005). This opens up the discussion on the causes of the health problems encountered and possible targets for prevention.

Musicians also form a widely studied group. Musicians' health problems are a major focus of study and several literature reviews on this topic are available (Bejjani, 1996; Gambichler, 2004; Hoppmann, 2001; Lederman, 2003; Schuele, 2004; Zuskin, 2005). On the whole, the problems identified concern musculoskeletal, neuromuscular and hearing disorders. Although some studies raise the connection between work organization and musicians' health (Bragge, 2006; Harper, 2002; Kahari, 2003), most of the studies, as in the case of dancers, focus on individual characteristics as the primary health factor (Ackermann, 2004; Brandfonbrener, 1997; Davis, 2002; Lederman, 2004). The question of the importance of training in good playing techniques and control of sound levels is highlighted by some authors (Groothof, 1999; Schwartz, 2006; Zaza, 2006), who indicate avenues of prevention in musical practice.

In the case of circus artists, Goudard (2004), himself a circus artist and physician, specifies that the repercussions of exertion and physical activity on the limits of individual physical capacities are frequently the cause of accidents. The pathologies most often reported are mostly osteoarticular and affect the knee, shoulder, wrist, spinal column and back. In addition, there are also musculoskeletal injuries, such as strains, elongations, contusions and sprains. The accidents that endanger artists' lives are essentially falls that occur in all aerial disciplines (Voisemenbert, 2004). Safety issues in circus arts are a major concern in that milieu and were the focus of a national forum on circus arts organized by En PISTE in 2005. The risk factors in performance, discussed at this forum, are multiple: the "absolute" trust between a show's participants, the frenzied pace of a new production, non-observance of predetermined safety protocols, limited access to adequate equipment and skilled technicians, the lack of communication between technician, artistic, creative and administrative stakeholders, the lack of professional competence, staff turnover, etc. The forum highlighted the lack of information related, among other factors, to the existing occupational references, rigging, new technologies and new materials, accidents that occur and the solutions applied to prevent them. The artists and technicians want the accidents that occur to be analyzed and explained to learn from experience and improve prevention.

Very few studies have focused on actors' health and safety. A few epidemiological studies have attempted to produce a picture of the health problems of this specific population (Davidson, 2001; Depue, 1985; Evans, 1998). On the whole, actors are victims of injuries to the lower limbs, back and neck. These studies emphasize the difficulty of action on prevention and propose the development of a greater number of health specialists for this type of professional.

The studies regarding artisans and technicians in the performing arts (Duvall and Hinkamp, 2001) mainly deal with the effects of the work environment (chemical substances and products, noise, etc.) and certain practices (elevated work, use of certain equipment, etc.) on the workers' health and safety. Reference works exist on this subject. In particular, we should mention the

works by Rossol, “The artist's complete health and safety guide” (3rd edition in 2001) and Moss, “Costumes and chemistry: A comprehensive guide to materials and applications” (2001). However, for this occupational group, very few studies deal with the specific relationship between employment injuries and work organization.

2.3 Prevention in the performing arts

Manchester (2006) emphasizes the degree of underdevelopment of arts medicine and discusses the question of prevention in the performing arts. Based on a reflection on musicians’ practice, he points out that, though knowledge of the injuries themselves is present (description, frequency and risk factors), there has been very little progress in knowledge of injury development mechanisms and especially regarding prevention strategies. Nonetheless, a number of studies have focused on experiments aimed at preventing injuries by action on OHS and work organization.

A first series of studies concerns the development of management tools, which facilitate injury and burnout prevention. Bragge (2006) raises the importance of external pressure (work and colleagues) and internal pressure (working while suffering, the way they portray the state of their health) in pianists, which is why it is important to develop management tools that can reduce these various sources of stress. Bronner (2006) proposes the development of a standardized accident and incident register, to facilitate understanding of incidence and risk factors and thus increase the effectiveness of prevention and rehabilitation interventions with injured dancers. This is an interesting tool, because it can shed light on the contextual factors of the accident, such as the place of the accident and the style of dance. Hamilton (2004) relates the efforts made by the Pittsburgh Ballet Theatre to reduce the problems of dancers by means of a pre-season evaluation and personalized fitness-training program.

The question of training comes up regularly when prevention is discussed. Duvall and Hinkamp (2001) raise the importance of OHS training in art and theatre schools, for both artists and artisans. Other studies (Evans, 2003; Psihoyos, 2004; Spahn et coll., 2002) recall that the development of knowledge on the effects of dance techniques on dancers’ health is a key prevention factor, which should be taught in training schools.

Reliance to ergonomics is mentioned in some studies as an approach allowing prevention of certain health problems at the source. This is particularly true of Fournier et coll. (1998), who rely on ergonomics to reduce visual stresses in musicians.

To summarize, there have been several studies of artists’ health and safety in the past ten years. The groups that most often receive attention are musicians and dancers. In general, the symptomatology and the etiology of health problems are fairly well known. However, attention is largely focused on the individual characteristics explaining the occurrence of these problems. The upshot of these studies is an increasing belief that artists should assume responsibility for prevention. Although several organizational aspects are identified in these studies, very few focus on primary prevention mechanisms.

Regarding stage technicians, few studies are interested in their occupational health problems. OHS prevention is discussed by way of the safety of the facilities and equipment and control of

certain risks such as elevated work. To our knowledge, there has rarely been any research on the impact of the organizational mode of a production on technicians' OHS.

3. METHODOLOGY

A systemic perspective was employed to delimit OHS issues in the performing arts sector. The performing arts occupations are practiced in a specific context determined in part by the organizational mode of the cultural sector of the business and the production itself, and by the individual and collective history of the people involved and the relationships they maintain. It is therefore crucial to apply an analytical and methodological approach in order to understand the formal and informal connections between these different categories of OHS determinants. For this purpose, we have favoured a convergence analysis (Bourdhoux et coll., 97). This type of analysis uses several data sources and various types of analyses specific to complementary disciplines in order to document, describe and, if possible, attempt the beginnings of an explanation of the phenomenon or phenomena studied. The diversity of points of view, tools, data and research methods is indispensable in the context of this type of exploratory study. Thus, the question of OHS issues in the performing arts was studied through a multi-field approach employing ergonomic, sociological, ethnographic and statistical methods and models. In studies that are primarily descriptive, a single data source, employing a single type of analysis, is often insufficient to establish “evidence”. However, when several data sources and the viewpoints of various disciplines converge on the same observation, then the demonstration becomes much more solid. This is the power of convergence analysis.

Our preference, therefore, was to draw on a variety of data sources: literature review, focus group interviews and individual interviews with the stakeholders in the field and CSST inspectors, observation of productions and analyses of documents or databases. Table 3.1 summarizes the data sources to which we gave preference in documenting each of the specific objectives. Data gathering extended from February to November 2006.

Table 3.1 : Type of data gathering method and total duration per field

| Field | Data gathering | Total duration |
|------------------------------|----------------------------------|-----------------------|
| Circus | 1 group interview (5 persons) | 2h00 |
| | 6 individual interviews | 6h00 |
| | 1 production observed | 38h00 |
| Dance | 1 group interview (5 persons) | 2h00 |
| | 7 individual interviews | 7h00 |
| Music and variety | 2 group interviews (9 persons) | 4h00 |
| | 7 individual interviews | 7h00 |
| | 3 productions observed | 31h00 |
| Theatre | 3 group interviews (24 persons) | 4h30 |
| | 6 individual interviews | 6h00 |
| | 1 production observed | 34h00 |
| Technical³ | 2 group interviews (9 persons) | 5h00 |
| CSST | 1 group interview (2 inspectors) | 1h30 |
| Grand total | 10 group interviews (54 persons) | 19h00 |
| | 26 individual interviews | 26h00 |
| | 5 productions observed | 103h00 |

³ Observations of productions in the different fields also made it possible to document the technicians' work.

3.1 Group interviews or focus groups

Group interviews were conducted with producers and managers (artistic, technical and production), to document the production context and the difficulties encountered in OHS management. For some sectors, representatives of the presenters were also present, which enriched the profile of needs. The persons present at the interviews were selected by the members of the *Table de concertation* on the basis of their representativeness of their respective fields. They came from different regions of the province, but mainly from Montréal and Québec City. The interview grid is presented in Appendix 3. The interviews were analyzed using the open content method proposed by l'Écuyer (1987). This method develops the discursive themes of the persons interviewed.

3.2 Individual interviews

Individual interviews were conducted with artists and a CSST inspector to complete the data gathered in the group interviews, particularly on the question of the risks and their causes. The list of interview participants was transmitted to us by the members of the *Table de concertation* for each of their respective artistic fields. Given the recruiting difficulties, it was impossible to produce a representative sample of the different artistic genres in each field.

Moreover, the individual interviews conducted with the artists served to explore the interactions between the development of repetitive stress injuries, the career paths and the production context. The information collected in this way made it possible to document the history of the injuries and its connection to the training path and the career path of artists, with a view to obtaining a better understanding of the dynamics. The interview method is based on that developed by Cloutier and his colleagues (2005) to document occupational exhaustion in nurses working for private nursing agencies. The interview grid is presented in Appendix 3. The content analyses of the verbatim transcripts of these interviews were performed with Atlas.ti software.

3.3 Observations

To document the risks related to production of a performing arts show, we made direct observations. These observations were made at different states of production: production meetings, setup, rehearsal, presentation (show) and takedown. In particular, this allowed us to document the interactions among the different crews working on production of a show, such as the design, artistic, technical and touring crews, and the effects of work organization and planning on work activity.

Depending on the type of production, observations covered periods of a few hours to several weeks, between May and October 2006. Given the difficulties associated with entering the productions, it was not always possible to follow them from beginning to end and to make observations in every field. This particularly explains why no dance production could be observed, since requests made to the producers in question could not be met before data gathering ended.

The observation data were analyzed on the basis of ergonomic analysis of the work (Guérin et coll., 1997).

3.4 Documentary research and literature review

Documentary research was performed with the resources of the IRSSST inquiry centre. Two data sources were consulted: 1) the main documentary databases accessible via the IRSSST inquiry service, and 2) computer monitoring of the main websites on the subject.

The main themes that guided the documentary research are:

- Accidents and performing arts;
- Safety in theatres (layouts, equipment, accessories, etc.);
- Health of performing artists;
- Injuries among dancers, musicians, actors/comedians, circus artists;
- Perception / representation of OHS by performing arts stakeholders;
- Preventive approaches (concerning training, artistic techniques, facilities, work organization, etc.);
- Design and management of an artistic production; and
- Characteristics of the organizational mode of the cultural sector in Québec.

3.5 Other useful data sources

For structural reasons related to the organizational mode of the cultural sector, the data available on employment injuries, particularly from the CSST, does not allow us to establish a complete assessment of the injuries. To enrich our portrait, over the course of the study we explored other possible data sources with member associations of the *Table de concertation paritaire en santé et sécurité du travail du domaine des arts de la scène*. Our attention focused on accident/incident “registers” and the health insurance claim databases of some cultural enterprises.

4. BASIC DATA ON PERFORMING ARTS WORKERS AND CULTURAL ESTABLISHMENTS

The data concerning the performing arts sector, particularly the workers, the establishments and the audiences, are taken from the statistics and publications of the *Observatoire de la Culture et des Communications du Québec* (OCCQ). The employment injury data come from the statistics provided by the *Commission de la santé et de la sécurité du travail du Québec* (CSST). These data will be presented in three major parts: a) profile of the workers by occupational group, b) cultural enterprises in the performing arts sector; and c) employment injuries by occupational group and activity code.

4.1 Databases and cross-referencing difficulties

The different statistics agencies compiling data on cultural occupations and establishments in Québec, such as Statistics Canada (STATCAN), the *Institut de la statistique du Québec* (ISQ) and the OCCQ, as well as the CSST, for employment injury data, use different classification systems. This makes cross-references and comparison of the data complicated. Table 4.1 presents the different classification systems used by each agency. For the occupational groups, the OCCQ relies on the STATCAN data from the 2001 Census, grouped around the National Occupational Classification for Statistics (NOC-S). The CSST still uses the Canadian Classification and Dictionary of Occupations (CCDO) of 1971. In the case of activity code classification systems, the three agencies rely on systems adapted to their needs, but which offer the possibility of cross-referencing on the basis of the North American Industry Classification System (NAICS) of 2002. However, the CSST and the OCCQ do not seem to use the NAICS according to the same criteria, for example in the case of NAICS codes corresponding to producers in the performing arts. Thus, understanding the employment injury statistics for a given sector of activity or a specific occupational group, and consequently the evolution of these statistics over time, proved complex.

Table 4.1 : Classification systems for occupational groups and establishments by agency

| Agencies \ Classifications | Occupational Groups | Establishments by Activity |
|----------------------------|-----------------------|------------------------------------|
| OCCQ | NOC-S (2001) | SCACCQ (with link to the NAICS) |
| STATCAN | NOC and NOC -S (2001) | NAICS |
| CSST | CCDO (1971) | In-house (with links to the NAICS) |

Finally, the codes used for the occasional groups or activities include entities that are not necessarily related to the performing arts sectors. For example, the CSST classification unit, which includes the performing arts (60020 for the period before 2006), also includes movie theatres and television stations. The same is true of the occupational groups at the OCCQ, which sometimes include workers from several fields in the arts, and even from shows in general, as in the case of circus acrobats, who are grouped with Santa Clauses and strippers. These factors represent a major limitation of the statistics presented in this section.

4.2 Profile of the performing arts sector

The data largely come from the 2004, 2005 and 2006 editions of the documents “*Statistiques principales de la culture ET des communications au Québec*” and the OCCQ statistics. For the purposes of the analysis and the writing of this report, we retained only the data on the occupations and enterprises that included the performing arts, but were not necessarily exclusive to this sector.

We should note that the average expenditures of Québec households on cultural recreation increased by 17%, from \$1075 to \$1258, in the period from 1999 to 2003. For outings to indoor shows alone, this increase was around 28%, representing average expenditures of \$58 in 1999 and \$74 in 2003. Moreover, cultural expenditures as a share of total recreational expenditures for the same period decreased by only one percentage point (OCCQ, 2006). Taking inflation into account, we can conclude that household cultural expenditures, especially for indoor shows, increased during the reference period.

4.2.1 Cultural enterprises

For the 2002-2003 season, the Observatoire (2006) counted 242 *not-for-profit performing arts companies* in Québec, 16 more than in the 1998-1999 season. These statistics exclude singing, popular music, circus and variety. The breakdown is as follows: 138 in theatre, 61 in music, 37 in dance and 6 in opera. The strongest increases were in dance (28% variation) and music (11%), while the number of companies in the other disciplines remained stable.

Between 2004 and 2006, it was observed that the number of performances and shows remained relatively stable despite a dip in 2005. Moreover, the number of halls used to present performing arts shows increased significantly for the same period, from 502 in 2004 to 560 in 2006, an increase of 12%. This increase was also observed by the show producers interviewed, who reported an intensification of work, particularly related to the fragmentation of tour routes.

Regarding average box office revenue per paying spectator, 2005 showed a 7% increase compared to 2004, with revenue of \$32.25 compared to \$30.13 in the previous year. Box office revenue rose for most disciplines, with the strongest increases in French singing (45%), dance (29%) and music (24%). English singing and variety decreased by 15% and 11% respectively.

Shows intended for children and young audiences, accounting for about 10% of all shows, decreased significantly in terms of the number of performances between 2004 and 2005, or 21%, from 1,670 to 1,309. This had an impact on total attendance, which dropped 33% in one year, and on revenue, which decreased around 48%. Employee pressure tactics in the education sector had an impact on these trends.

In short, even though the number of performances in the 2004-2006 period did not vary significantly, the increase in the number of halls visited may be a sign of an increase in work intensity, as mentioned by several industry stakeholders and which eventually will have an impact on workload and OHS.

4.2.2 Performing arts occupations

Cultural and communications occupations include nearly forty codes based on the NOC-S⁴. We have retained ten occupational categories, preponderantly performing arts occupations (Appendix 1).

The total workforce for all occupational groups involved in the performing arts was 27,650 persons in 2001, an increase of nearly 25% compared to 1991 (22,160). Of note among the groups with the largest workforce are musicians and singers (5,600), producers, directors, choreographers and related occupations (5,210), and technical and support personnel (4,985 by combining the two classes, F126 and F127). The occupations marked by the strongest increases in workforce between 1991 and 2001 are: technical and support personnel (+70%), actors and comedians (+67%) and dancers (+33%). Only the group of conductors, composers and arrangers saw its workforce decrease during this period, a loss of 1% from 505 to 500.

Regarding the breakdown by gender, 54% of workers in the performing arts sector are men and 46% are women. There are a greater proportion of men in management and supervisory positions, such as directors (60%), producers and choreographers (62%), and conductors (80%) and among technical and support personnel (62%). Women are in the majority among the designers (68%), dancers (74%) and circus artists (55.5%).

Workers in the performing arts are a relatively young group. Overall, nearly 42% of them are under 35. Only 8.2% are over 55. Some groups are younger than the average. This is the case for circus artists, over 65% of whom are under 35, and dancers (60%). Technical and support personnel, actors and comedians have 50% of their workforce under age 35.

The majority (65%) of workers in the performing arts sector are salaried workers, although this proportion is lower than the average of Québec workers. The most heavily salaried groups are technical and support personnel (90%), directors (76%), producers and choreographers (69%) and dancers (65%). Among the groups with the most self-employed workers are conductors (66%), circus artists (65%) and musicians and singers (55%). It must be noted that the data do not specify cases of combined salary and self-employment income.

Finally, the average income of cultural and communications workers falls within the Québec average, \$29,561 for the year 2000. The best-paid persons are managers (\$47,841) and producers (\$41,395); at the other extreme are dancers (\$13,826) and musicians and singers (\$15,548). In general, women have an 18% lower average income than men, except in the case of actresses and female comedians, where the gap favours women by nearly 9%.

4.3 Profile of employment injuries

The employment injury data presented here come from the CSST statistics for the years 2003 to 2005. The Commission groups the data for employers in the performing arts sector within a

⁴ For more information, the reader is invited to consult the OCCQ website at www.stat.gouv.qc.ca/observatoire/default.htm.

broader classification unit (60020⁵), which includes radio station operators, drive-in theatre operators, show producers and presenters and hall owners. To pinpoint the employers whose main activity is production in the performing arts, it was necessary to extract the data only concerning activity “D” (NAICS 711321) of unit 60020, which covers operators. Moreover, to develop a profile of the injuries for artists and artisans in the performing arts, we cross-referenced the data from activity “D” with occupation code 333, which includes actors, dancers, musicians, directors, stage technicians and other artists not otherwise classified. Thus, out of the 1,799 accepted injury cases in classification unit 60020, 618 concern professionals in the artistic field for operating activities. Remember that it is impossible with the statistical data available to the CSST to produce a precise picture by occupation. This limits the conclusions we can derive from these data to guide prevention actions.

Indeed, during the 2003-2005 period, 618 cases were accepted for employment injuries (accidents, relapses and illness) affecting different occupational groups, an average of 206 cases per year. Considering the number of workers in these occupations, around 20,000 persons (2001 data), an average of 1 out of 100 workers is compensated for an employment injury each year. As Figure 4.1 shows, an increase of around 25% in the number of cases is observed between 2003 and 2005, growing from 178 cases to 225.

Figure 4.1 : Breakdown of cases accepted by the CSST (2003-2005)

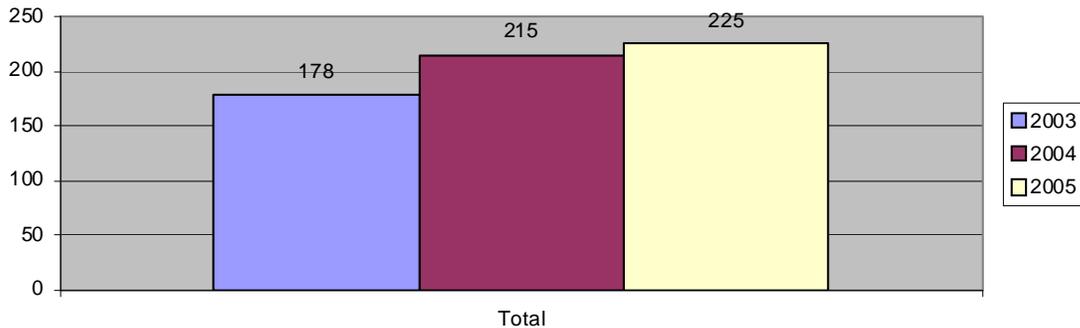
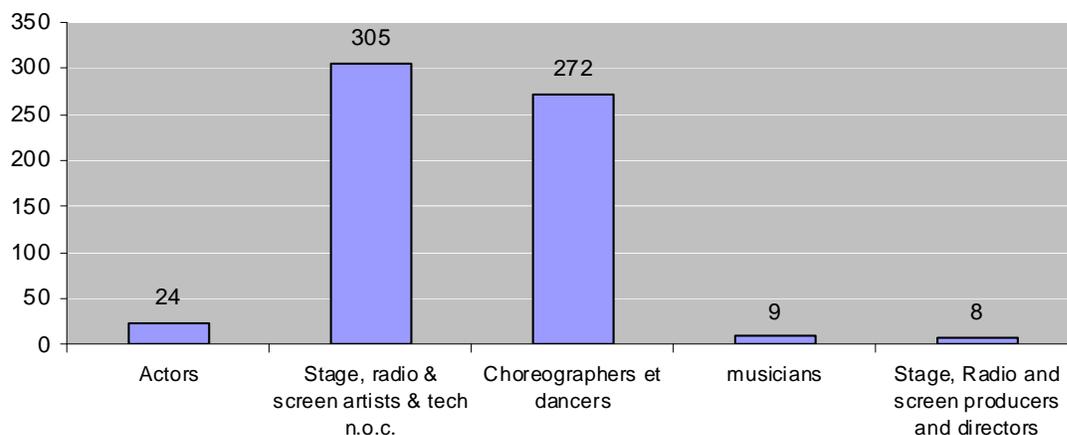


Figure 4.2 presents the breakdown of accepted cases by occupation for the 2003-2005 period. It shows that technicians and other artists not otherwise classified, as well as dancers and choreographers, are the groups with the greatest number of cases, 305 and 272 respectively. The other three groups combined represent only a little more than 6.5% of the accepted cases, although actors and musicians represent nearly 45% of the workforce and these artists are subject to major OHS risks. Only dancers and choreographers showed a growing reduction in the number of accidents accepted during that period, at 5%. Technicians and other artists saw the number of accepted cases increase by 5%.

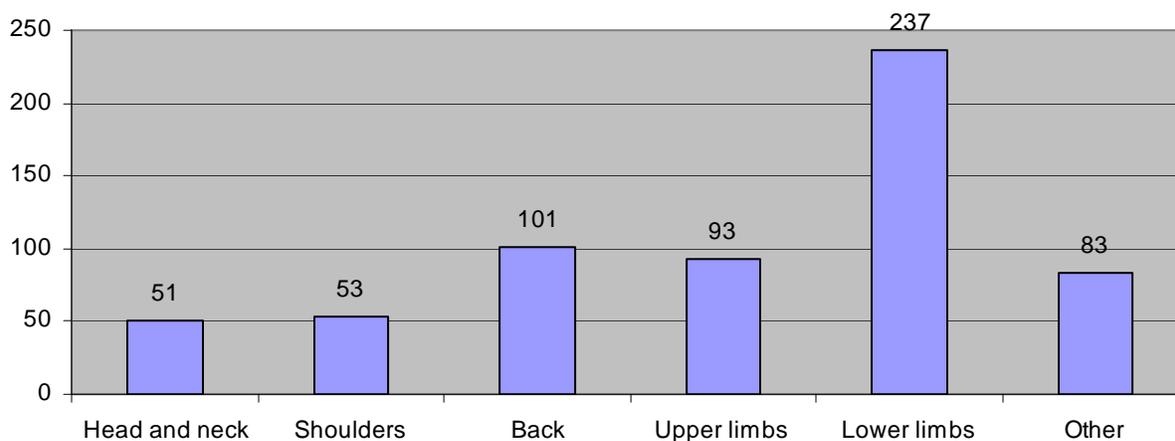
⁵ Since 2006, unit 60020 has been closed and divided into several new codes. The main code for the performing arts is 57210.

Figure 4.2 : Breakdown of the number of cases accepted by the CSST by occupation (2003-2005)



Concerning the location of the lesion (Figure 4.3), the lower limbs are the most affected with 237 cases, nearly 40% of the total. Of this number, 111 are associated with the leg only, which is the location most often reported, followed by the back (101), the feet (65), the ankles (55) and the shoulders (53). The profiles are similar from one occupation to another, except for musicians, who are most affected in the shoulders and arms.

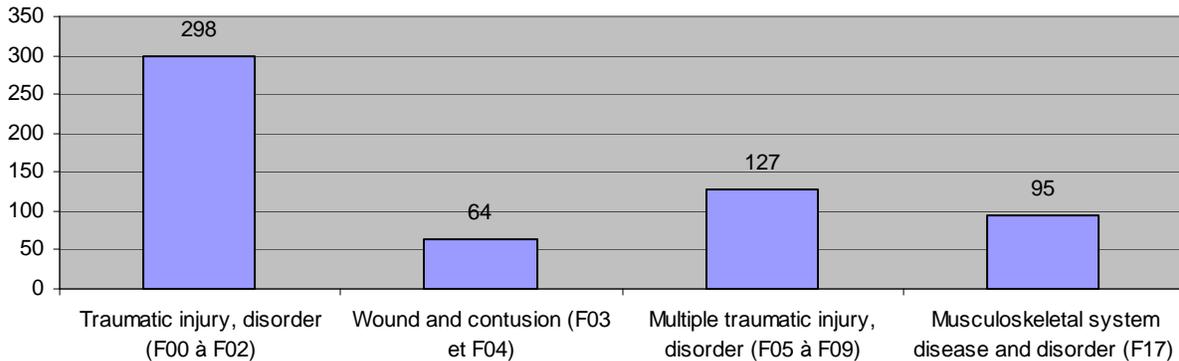
Figure 4.3 : Breakdown of the number of cases accepted by the CSST, by location of the lesion (2003-2005)



Regarding the nature of the lesions suffered by performing arts workers (Figure 4.4), we observed that in the majority of cases, they take the form of injuries (dislocation, fracture, sprain, etc.) or simple traumatic disorders. In fact, this group accounts for nearly half the accepted cases (298 cases). This is followed by cases for which the nature of the lesion is related to pain or a multiple traumatic injury (20%). We must mention the significant presence of cases of

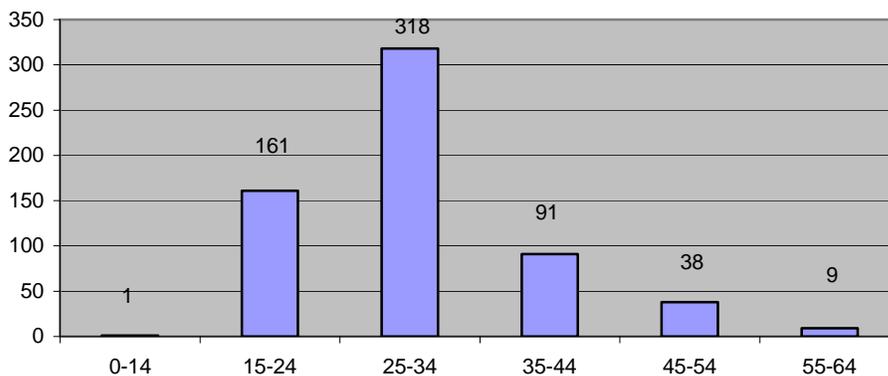
musculoskeletal system diseases and disorders, with 95 cases. Only three of these cases were the object of an occupational disease claim and three others were cases of relapse following an accident.

Figure 4.4 : Breakdown of cases accepted, by nature of the lesion (2003-2005)

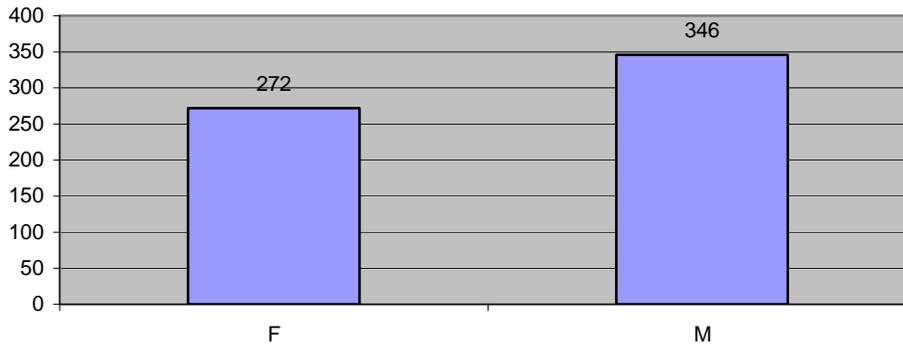


The breakdown of the injury cases by age (Figure 4.5) shows that of 479 cases, a large majority, involve persons under 35. Although this age group accounts for 42% of the performing arts workforce, it generates 78% of the accepted cases. This is particularly true of technicians and other artists, who account for 82% of the accepted cases, while they represent 50% of their group. We note a 26% increase in the number of accepted cases for persons under 35 during the 2003-2005 period, for this group as a whole. In the specific case of technicians and other artists, this is a 57% increase for the under-35 age group and a 500% increase for actors (despite the small number of cases).

Figure 4.5 : Breakdown of cases accepted by the CSST, by applicant age group (2003-2005)



Finally, as Figure 4.6 shows, the breakdown of employment injury cases between men and women is very similar to the breakdown of the workforce between the sexes, around 45% women and 55% men.

Figure 4.6 : Breakdown of cases accepted by the CSST by gender of applicants (2003-2005)

Highlights

- The databases serving to produce the profile of the sector (OCCQ, STATCAN and CSST) rely on different classification systems, which make it complicated to cross-reference between sociodemographic data and employment injuries. Longitudinal monitoring and evolution of trends are thus more difficult.

The following descriptive statistics concern the years 2001 to 2005, as the case may be:

- For the 1999-2003 period, average Québec household expenditures on cultural recreation increased by 17%, to \$2,883 per year.
- The OCCQ had 242 not-for-profit companies in 2002-03, an 8% increase compared to 1998-99. Between 2004 and 2006, the number of performances and the number of spectators per performance remained stable, unlike the number of halls used, which increased by 12%.
- For the cultural occupations, the latest available data (2001) shows a total workforce of 27,650 persons, grouped into 10 occupational categories. In general, they are predominantly male, except for the dancer, choreographer and circus artist categories.
- Performing arts workers are a young population, with 42% under age 35 and only 8.2% over age 55.
- 65% of them are salaried (with a high rate of freelancers), a lower proportion than in the general population. Although the average annual income is within the Québec average at \$29,561, there is high variability by category.
- In the case of employment injuries for the years 2003-2005, there were 618 cases -- an average of 206 injury cases accepted by the CSST per year. The occupational categories most affected are technicians and other artists not otherwise classified (305 over the

three-year period) and choreographers and dancers (272). These two categories account for 93.5% of the cases.

- Remember that the statistical data available at the CSST do not allow us to produce a precise profile of employment injuries by occupation.
- The location of lesions most frequently identified is in the lower limbs (40%). However, musicians are more likely to suffer from lesions in the upper limbs. Nearly 75% of lesions, 425 cases, are related to simple or multiple traumatic injuries or disorders.
- The youngest workers, those under age 35, account for 78% of the injury cases, even though they constitute only 42% of the workforce. Some categories are particularly affected by this phenomenon, such as technicians and circus artists.

5. OCCUPATIONAL RISKS AND CAUSES OF EMPLOYMENT INJURIES

This section presents the principal occupational health and safety risks for artists and artisans in the performing arts and possible explanations for accidents. The data used in the analysis come from three main sources – CSST statistical data on accepted injury cases, data from cultural enterprise accident registers and interviews with stakeholders in the field. The objective is to shed light on the most important risks and document their causes.

5.1 CSST data

The statistics from cases accepted by the CSST are informative on the basic data concerning employment injuries (see Section 4), such as the nature of the injury, the body region affected, the length of absence, etc. They also provide indexed information on the causes of the injury. These data are very factual and general, in that they provide few indications of the context of the accident. Moreover, since these are only accepted cases, it is likely that a great many situations are not covered.

The type of accident, defined by the CSST as the manner in which the injury or the disease was produced or inflicted by the causal agent of the injury, may be associated in 99% of the cases (610 cases) with only three categories: contact with an object or equipment, falls or bodily reaction and exertion (Figure 5.1). Dancers and choreographers are mainly victims of a bodily reaction or exertion, since 204 of the 272 cases (75%) involve this type of accident. This is also true of musicians, which account for 78% of the cases.

Figure 5.1 : Breakdown of cases accepted by the CSST, by type of accident (2003-2005)

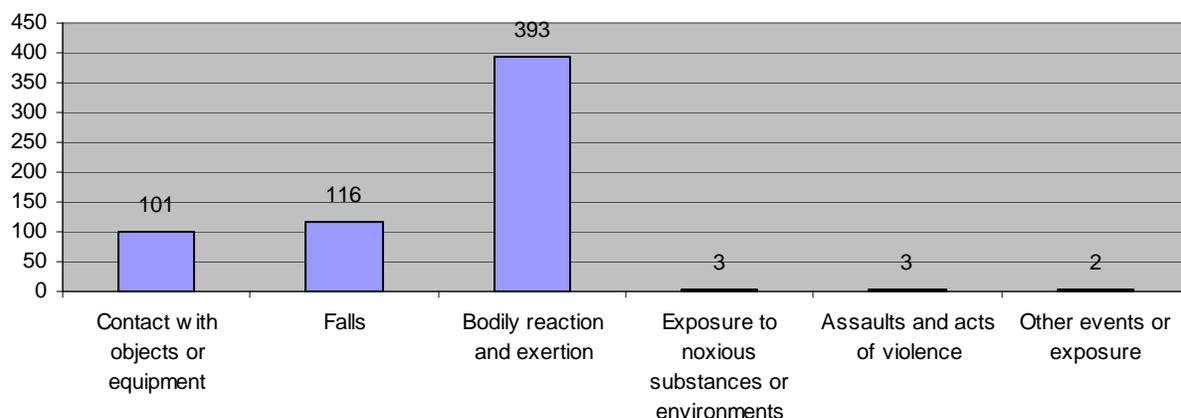
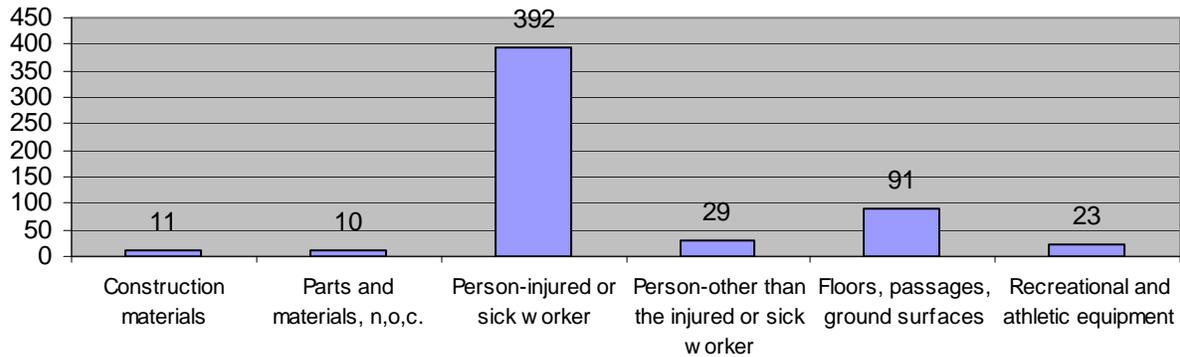


Figure 5.2 presents the main causal agents (primary causes) of accidents, defined by the CSST as the object, substance, exposure or body movement that directly produced or inflicted the previously identified injury or disease. These six categories account for 90% of the accepted cases, a total of 556 cases. In over 70% of cases, the artists themselves, especially the “dancer and choreographer group”, bear the primary responsibility for the accidents. Next come “floors,

passages, ground surfaces” (91 cases), 33% of which are reported by actors. For other artists and technicians, the cases are broken down into a wider variety of categories.

Figure 5.2 : Breakdown of cases accepted by the CSST, by causal agent (2003-2005)



5.2 Accident registers of cultural enterprises

An employer’s accident register is a very useful accident inventory and prevention tool. Although it is compulsory for all employers in Québec, it is underdeveloped and little used in cultural enterprises in the performing arts. Within the context of this project, we have analyzed three registers in detail in three different sectors (circus, theatre and dance). In two of the three cases, the data were not collected in a database, and in this case, special software (*Disability Management Worksheet*) served as an information management tool. Overall, the information retained concerns the data available on the accident report forms of the worker and the employer, and on the different administrative documents involved in processing the compensation claim (physician’s report, CSST documentation, etc.).

These accident cases add to the information provided by the CSST. Depending on how precisely the event is described, the information obtained facilitates a better understanding of the context and identification of the risk factors and the causes of the accident. Unfortunately, these descriptions do not follow any specific rules; thus, the degree of precision can be highly variable. However, these cases allow new variables to be targeted: the position held, the time of the event, the number of hours worked during the week, etc. All these factors can be useful to initiate implementation of a prevention action plan.

The risk profile resulting from these cases and accident registers complements the CSST data: the type of accident is described in relation to the specific environment and the causal agent is identified, but not classified in the categories predetermined by the CSST. For example, it is noted that artists are victims of incidents during rehearsals more often than during the shows themselves, while technicians are injured when handling objects (exertion and posture) more often than during elevated work. Also, new risks have been observed, such as fatigue and stress, and new causes, such as poor design of an unloading dock, tour fatigue, a fitness training schedule poorly adjusted to the requirements of a work, etc.

5.3 Data from interviews with artists and artisans and observations

To deepen our knowledge of the employment injury risks in the performing arts, we specifically raised this question with the artisans and artists, during the interviews and observations. Table 5.1 presents a profile of the principal risks we were able to derive from the analyses.

Table 5.1 : Principal OHS risks in the performing arts identified by the artisans and artists

| <i>Risk</i> | <i>Examples of high-risk situations</i> |
|---|--|
| Contact | Object falling from a catwalk or grid: tools, scenic elements, protective equipment, etc. |
| | Collision with an element of the set or the layout: flies, lights, etc. |
| | Being struck by a stage prop: foil, sword, etc. |
| | Being struck by a technical element during its handling: lighting, speaker, flies, etc. |
| | Being caught between two elements: hoisting system, sets, etc. |
| | Being struck by a moving vehicle: forklift, elevating work platform, transport truck, etc. |
| Falls | While using a stepladder or a ladder |
| | During movements on stage or backstage in the dark |
| | During setup or takedown or during a performance when there are a lot of scenic elements |
| | Walking on surfaces, sloping or not |
| | Falling when receiving a leap or executing an aerial manoeuvre |
| Exertion and stressful postures | While handling sets or scenic elements |
| | While receiving a partner, mainly in dance and circus |
| | Maintaining a posture for a short or long period, particularly in music |
| | Driving during long tours |
| | Adoption of a posture at the limits of the joints or at repeated or rapid frequencies |
| | Inadequate postures and exertions in confined spaces |
| Exposure to high-risk substances or a high-risk environment | Heat stresses: outdoor setup and takedown in summer and winter |
| | Humidity rate too high or not high enough: voice problems |
| | Toxic products used in manufacturing sets and costumes |
| | Sanitation and cleanliness problems at certain sites |
| | Danger of electrocution during setup/takedown |
| | High sound level during a sound test or in an orchestra pit |
| | Pyrotechnics and fire on stage |
| Act of violence | Violent behaviour by spectators |
| | Violent behaviour between workers |
| | Intimidation or harassment between people at different levels in the hierarchy, etc. |

During the interviews, the artists and technicians, based on the account of an accident they had experienced, identified factors determining the presence of these high-risk situations. Together with them, we were able to identify three levels of interpretation:

- First they identified the factors directly related to the accident: equipment failure, inadequate handling techniques, props or tools improperly used or fastened, exertion during a movement, etc.
- Digging deeper with them into the factors that could explain the presence of these risks, they mentioned: absence of inspection, materials unavailable, inexperienced department head, difficult access, lack of training, inadequate design, high intensity, etc.
- Finally, in seeking to relate these different factors to the organizational context, they mentioned: lack of concern for OHS of the different stakeholders, availability of workforce, lack of compliance with the contracts between the different stakeholders, precarious employment, etc.

The following example, involving a circus acrobat during an aerial number, illustrates these different levels of interpretation. The risk of falling from a height was clearly present and identified. She suffered major contusions to the shoulder and hip, a torn shoulder ligament and pains at several locations in the back and pelvis. From her point of view, the accident was attributable to a series of factors, originating at different levels of the production's organization.

First level:

- Failure of a component of the cable holding the artist to the structure

Second level:

- Use of an inadequate material in manufacturing the cable, giving the tools available on the part of the rigger
- Absence of inspection by the head rigger
- Lack of experience in acrobatic rigging of the rigger responsible

Third level:

- Absence of a head rigger with experience in acrobatic rigging
- Absence of an OHS concern on the part of the producer, who did not consider it relevant to hire such a rigger

While the first-level factors are generally associated with the workers' practices, in this instance the fact that the artist is empowered regarding the way she must be attached, the situation is different from the other two levels. Those levels refer to dimensions that include management, work organization, organization of production, training or the specific context in which the work is performed. It then becomes important to understand the interaction between these different levels and OHS (see Section 7).

5.4 Point of view of the CSST inspectors

The CSST has been interested in the performing arts for about ten years. The arrival of major festivals in the Montréal region, with the establishment of temporary outdoor structures and setups, shed light on the existence of problematic work methods, particularly for elevated work.

At that time, the inspectors only intervened as needed, without receiving any real guidelines for the performing arts.

Subsequently, the *Direction de la Prévention et de l'Inspection* (DPI – Prevention and Inspection Division) of the CSST focused on the possibility of a broader investigation of this question of elevated work in the performing arts sectors. Based on the work of inspectors with a good knowledge of the sector, an action plan was proposed in 2001. This plan mainly concerned stage technicians and elevated work. A meeting with about thirty principal stakeholders – producers and performance hall owners in the Montréal region – was organized to launch this action plan.

Based on this plan, a tour of the presentation sites in the Montréal region was carried out to inform the stakeholders of their obligations and the CSST's position in this regard. For the CSST, it was clear at that time that it was the producers who had to take primary responsibility for prevention, even if they hired self-employed or freelance technicians.

Over a two-year period, several visits were made to theatres and festival sites and recommendations were issued regarding safe design of the facilities. Since 2003, following a redefinition of the inspectors' assignments, there are no longer any inspectors specializing in the performing arts sector. As a result, the number and frequency of interventions in this sector have decreased significantly.

The inspectors interviewed within the context of this study consider that the CSST's work, via its inspectors, should be expanded to include the work of artists, even though the regulatory and legal tools at their disposal are not always appropriate for this clientele. In their opinion, awareness still needs to be raised on the importance of the producers' role in OHS and prevention.

5.5 Point of view of performing arts producers

A precise representation of their roles and responsibilities regarding prevention and OHS in general was obtained from interviews with persons with management responsibilities in cultural enterprises (general managers, artistic, production and technical directors, hall owners and managers, personnel agencies, etc.). Analysis of this representation is important, in that the actions taken in OHS largely results from how we perceive the risks, the means of reducing them or our degree of responsibility.

For managers, the risks are mainly associated with elevated work, falls, extreme activities and scenic elements (human flight, pyrotechnics, fight scenes, etc.) and handling. In their opinion, the factors that most contribute to the presence of these risks are technical conditions, layout of work areas and the practices of artists and artisans. They consider that the means of prevention depend on reliance on personal protective equipment, compliance with the standards prescribed by bodies like the CSST and the fire prevention services, and empowerment of the workers themselves. The managers anticipate that the organizational choices they make regarding the operation of the enterprise or the production have very little impact on the presence of these risks. For example, they note the significant effects of fatigue as an incident risk factor, but do not anticipate the impact of adequate planning of production steps or the absence of leeway.

The idea of shared responsibility for prevention and OHS is conveyed widely in the cultural sector. Sometimes it is a question of the “artistic deal” or the “intrinsic reality of the practice”, which refers to the obligation of the artist or the artisan to assume some of the risks. While it is true that some work situations cannot be completely risk-free, it can be dangerous if this observation leads to management’s disengagement from prevention. Moreover, the idea of transfer of responsibility also plays out significantly among the different managers, particularly among producers, presenters, placement agencies and hall owners. In a field like the performing arts, characterized by the presence of numerous and sometimes complex interrelations, the vagueness regarding each stakeholder’s responsibility leads to a form of disengagement, and even a transfer of responsibility to the workers.

Another claim widely conveyed in the field and which has a direct impact on the assumption of responsibility for prevention is that OHS hinders creation. In the view of the stakeholders, by adding costs and an additional level of restrictions, OHS would put them in a position of having to choose between prevention and the artistic development of a work. This representation of prevention as a hindrance to creation, added to the primarily technical representation of the reasons risks occur, can again lead to some disengagement on the part of the managers or the transfer to the artists and artisans of the responsibility for protecting themselves against risks and dangers.

Highlights:

- To identify the principal risks related to work in the performing arts, three sources of information were favoured – CSST data on injuries, the accident registers of cultural enterprises, and interviews and observations during preparation of a show.
- The study of CSST injury cases (2003 to 2005) sheds light on the type of accident most often reported. Out of the 556 cases studied, bodily reactions and exertion (393), falls (116) and contact with an object (101) account for the main types of accidents. In fact, 99% of the cases fall into these three groups. The person himself/herself is the causal agent in 63% of the cases, while the floor or the ground surface accounts for 17% of the cases. This information provides a summary picture of the risks encountered by artists and artisans.
- Accident registers, though very underdeveloped in cultural enterprises, provide a modest degree of information on the context of the accident. Their data are limited to the information required by the CSST forms and are non-standardized. However, issues of fatigue, stress, interaction between crews or layout of premises are sometimes raised in the description of the accidental events.
- The interviews with the workers and the observations made regarding their work activity during preparation of a show enrich our understanding not only of the risks but of the causes of the injuries and the factors that determine the presence of risks. For each accident documented with these methods, three categories of determinants emerge from the analyses. This makes it possible to develop a basic understanding of the relationship between the presence of certain organizational factors and the presence of risks, and even of accidents.
- Performing arts managers (producers, theatre directors, etc.) share a representation of prevention and OHS, which is mainly based on the responsibility of artists and artisans to protect themselves against risks, given that it seems difficult for them to carry out both the

creative process and prevention. In their view, the risks essentially arising from the material and technical conditions of the work should be the focus of an “artistic deal”. This results in persistent vagueness regarding the sharing of each party’s responsibilities when means have to be put in place to ensure OHS prevention.

- As for the CSST, in 2001 an Action plan for the performing arts sector was established. Initially, this plan only concerned stage technicians and mainly targeted the problem of elevated work. After a presentation of the Plan to the sector’s leading stakeholders, a small team of inspectors began touring the Montréal performance sites. Although the CSST is pursuing its interventions in the performing arts field, there has not been a team dedicated to this sector since 2003.

6. ARTISTS' CAREER PATH AND HEALTH PATH

Twenty-five artists (dancers, musicians, circus artists and actors) participated in individual interviews to document their career path and their health path. A summary table of the sociodemographic, employment and health path characteristics of these artists is available in Appendix 2. In this section, we attempt to pinpoint the special characteristics distinguishing the career path of these artists, to put them in perspective with their health path. We emphasize the similarities that emerge for the different fields, as well as some particularities.

6.1 Career paths

Almost all the artists encountered in this exploratory study began to practice their art at a very young age or in adolescence. This is particularly true of classical musicians, dancers and circus artists. By the time they turn thirty, they often have accumulated over 20 years of experience in the craft.

Throughout their career, they have all had more than one job at a time, alternating between regular jobs and freelance contracts in performance, teaching and other fields. For example, actors regularly accumulate multiple engagements of all types: theatre, dubbing, advertising, television, and teaching. Some emphasize the necessity, at the beginning of a career, to “*accept everything on offer*” and avoid missing an opportunity, not only to make themselves known but also to have a decent income. Employment status varies from one group to another. Classical musicians and dancers most often have regular status, while the actors interviewed mainly have freelance status. Other circus artists, dancers and musicians have mixed or alternating employment status. The intensity of the work is also variable. Freelancers often have to deal, during a given year, with very intense work periods in which they accumulate multiple engagements, followed by calmer periods that result in occupational and financial insecurity for some of them.

Career paths are characterized by the search for new challenges, a need to explore new works, to work with a variety of directors, choreographers and composers, and to diversify professional experiences. Some dancers, musicians and circus artists who hold regular jobs decide, at a given time in their career path, to become freelancers so that they can vary their artistic experiences, explore new ways of creating, etc.

The question of their durability in the craft is raised in a different way from one group to another. It seems that circus artists, at least those encountered in this exploratory study, anticipate, despite their young age, that their body will wear out and are already thinking about reorienting their career. All have developed varied competencies and pursued parallel studies in preparation for another career. They expect to stop between the ages of 30 and 40 and prepare their transition many years in advance.

For dancers, turning thirty is often accompanied by existential questioning on the possibility of lasting longer in the craft. They report a certain exhaustion related to management of busy schedules, especially in the case of freelancers, and precarious finances. The competition and pressure in the milieu, the not always easy relationships with the choreographers, the lack of recognition and the presence of chronic pain are all mentioned as reasons for considering a

career transition. Some freelancers specify that if they could choose their contracts and dance at their own rhythm, while receiving greater recognition, they would stay in the craft longer. The persistent presence of chronic pain is also mentioned by musicians as one of the reasons that leads them to consider retiring from the craft. Actors do not raise many questions about the possibility of lasting in the craft. Instead they mention the choices they will need to make as they grow older, namely, choosing roles that are “*less physical*”, “*cutting down on their acting*” and learning to “*set limits*” concerning certain physical requirements of a role.

The account of the artists’ career paths shows that there is an interconnection with their health paths. These paths intersect and influence each other.

6.2 Health paths

In general, the appearance of the first physical symptoms occurs among dancers, circus artists and musicians, about 5 to 15 years after they enter the craft. Training injuries are frequent in dancers and circus artists, while the musicians’ health path is punctuated by musculoskeletal symptoms that reveal the presence of physical wear of the body, with gradual onset over time, but that rarely translate into an accident. Finally, none of the actors encountered reported a repetitive stress injury related to their occupation, but rather several accidents.

The evolving process of artists’ occupational health is observed to various degrees, depending on the occupational group to which the artist belongs, seniority in the craft, the conditions of practicing their craft (precarious status, pressure from the milieu, etc.), exposure to risk factors and, finally, the person’s individual characteristics (experience, individual strategies, health history, etc.).

6.2.1 *Physical wear and occupational diseases*

Physical wear, which in some cases evolves into a chronic pain or occupational disease syndrome, follows two types of scenarios. In the first case, an accident at the beginning of a career results in a traumatic injury, which is sometimes difficult to diagnose. It is not always treated adequately, with a shortened or delayed work stoppage or treatment time, thus limiting complete recovery from the injury. In this case, the conditions of practice of the craft often lead to pressures for greater personal responsibility for the injury and the gradual onset of sporadic or persistent pain, which will follow the artist throughout his career. Other accidents with injuries then punctuate the career path. This scenario was mainly mentioned by circus artists and dancers. Here is an example of this scenario, mentioned in the individual interviews.

- A young circus artist, 27 years of age, had few signs of wear before a rigging accident on tour. This accident was due to a problem with replacement of a technician and defective equipment. The fall caused a lumbar sprain and contusions in the thighs and legs. She underwent physiotherapy. She returned to work after two weeks, but had difficulty performing certain numbers because some movements (torsion) were painful to her back. Subsequently, her claim for compensation for the physiotherapy treatments was rejected by the CSST because she had returned to work. She stayed at the same job for another 3 months, even though she had submitted her resignation, long enough to train her replacement.

She continued to have discomfort for one year, while continuing to practice her craft. Her discomfort was also revealed when she returned to her former activities (this required more exertion from her body, which was no longer trained for these activities). One year after her accident, she had shoulder pains when she was working on another physically demanding show (3 shows a day, 4 times a week). She consulted an osteopath at her own expense. These treatments also helped her restore her back. Nearly two years after her accident, she still has some back limitations, particularly difficulty doing a crab, but she finds ways to modify her numbers accordingly.

The second scenario, more often reported by musicians, is the gradual onset of pains and musculoskeletal disorders over time, resulting from continuous exposure to the same risk factors (stressful posture, intensive practice, rehearsal, exertion, stress). These symptoms evolve in some cases into chronicity, which influences both the career path and activities of daily living. Here is an example of this type of scenario.

A 44-year-old musician, playing his instrument for 40 years, suffered from tendonitis in the wrists and one epicondylitis after another: when they appeared (at age 18), he associated them with curling (sport), but said that he also practiced his playing a lot in university. In his early thirties, he started to have tingling in his fingertips. After assessing his injuries, he associated them with moments of intense preparation, auditions and stress, and thus with work. He had his first work stoppage in 1997 for cervical problems (hernia) and a second in 2004. Since then, he has returned to work, but still alleges fragility in this regard and plays despite the presence of pain. He reports psychological difficulties related to the pain experience and the related insecurity, both regarding his health and professional future.

When actors mentioned the presence of a certain physical wear, most associated it with a sports injury occurring during their career. The symptoms are managed by regular exercise and modulation of exertion. Some brought up voice problems as the major health problem affecting actors. Thus, the situation was very different from that of the other groups of artists, for whom physical wear was directly related to practicing the craft, often for many years.

Finally, in the four groups of artists, wear was also discussed in terms of a decrease, with age, in physical capacity and endurance. An actor then has to choose roles that involve less physically demanding scenes (fight scenes, stunts, etc.) so that he clearly sets “*his limits*” concerning the physical requirements of a role and stays in shape as much as possible so that he lasts in the craft.

6.2.2 Psychological health in the workplace

While half of the musicians and some of the dancers and circus artists interviewed say they had experienced or were experiencing general anxiety, few actors automatically raised this subject. Some mentioned the stress related to their precarious employment, busy schedules and auditions, but few, contrary to the other groups of artists interviewed, mentioned stress and anxiety related to performance, the requirements of the craft, or competition.

Thus, more than half of the musicians interviewed say they had experienced anxiety. Some mentioned stress at work, particularly related to performance, the requirements of the craft and

double employment. Two female musicians experienced a burnout episode when they were freelancers beginning their career. Both had young children and reported that reconciliation of work and family life was difficult. One of them associated this episode (“panic attack”) with sudden changes introduced by the conductor, which created a very tense climate within the group.

Musicians who had suffered from a musculoskeletal disorder also said they have experienced anxiety regarding their health and their professional future: fear of not playing as well; fear that colleagues or their superior will notice this; uncertainty regarding their professional and financial future. Several classical musicians also mentioned the necessity of an emotional investment to play a piece brilliantly, while having difficulty putting limits on this investment, which drains their energy.

Three of four circus aerialists reported that they had experienced great anxiety regarding the reliability of the rigging, whether in the corporate environment or on tour with a circus. One of them also reported a period of anxiety attacks, necessitating a 3-month work stoppage, which she associates in part with performance and occupational requirements.

Dancers reported stress and anxiety over their precarious financial status and the fear that they will not have enough contracts to meet their needs. Over the year, accumulation of several contracts at a time resulted in burnout, leading some of them to question their ability to stay in the craft. They mentioned the high level of requirements, pressure and competition among dancers, which weakens work collectives and sometimes results in a difficult relationship with choreographers. In this relationship, the dancers did not always feel recognized at their fair value.

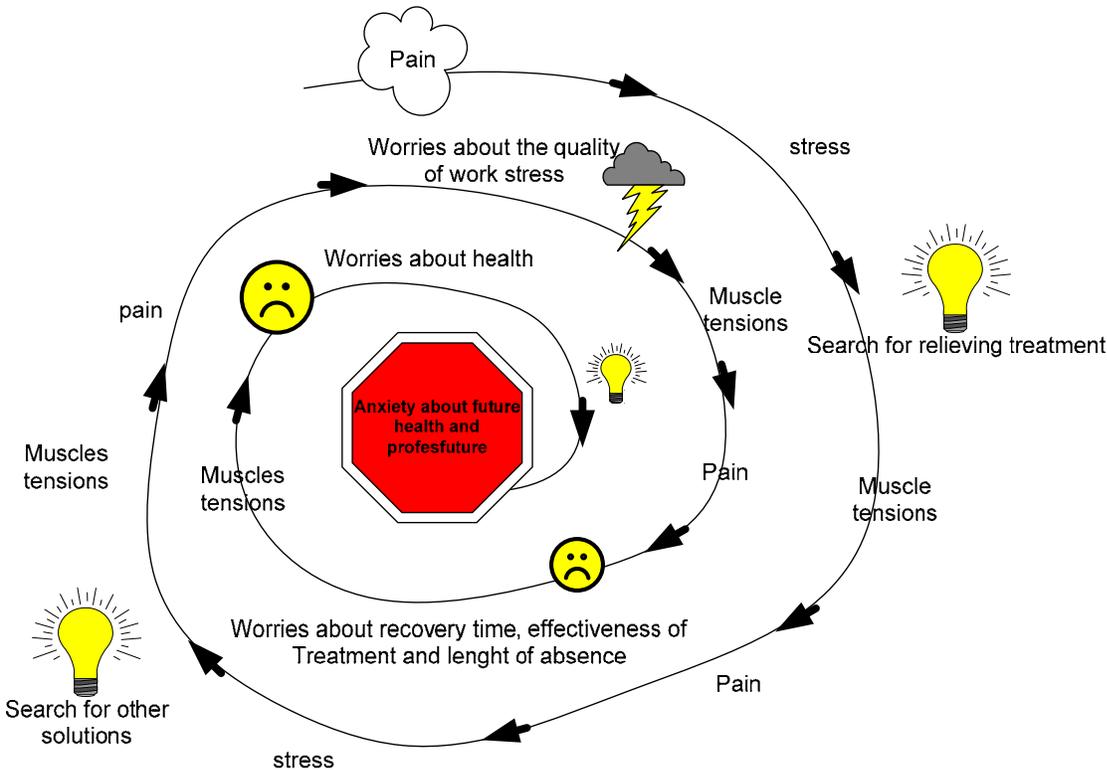
Although none of the actors we met raised this issue, a radio interview with an actor broadcast a few months ago raised the question of emotional overinvestment in acting, which can have an influence on psychological health. Some roles are emotionally demanding; actors have to draw on their “*inner resources*”. Playing these roles for a long period (e.g., television series) can even lead to fatigue or burnout. This is what the actor reported he experienced after taping a television series. He said he was exhausted and did not have the energy to read scripts or proposals that otherwise would have greatly interested him: he was completely “*drained*”.

6.2.3 The pain and anxiety spiral: a vicious circle

Several musicians and a few dancers described the effects of the presence of a pain syndrome on their psychological health and the “rebound” in pain caused by stress. This is a vicious circle (Figure 6.1). Aware that they have less control over their movements and that they risk making errors, they start to be anxious about the situation, and focus so much on their playing and their movements that they are no longer able to manage their stress. This is apart from the fact that the experience of physical pain generally aggravates the existing muscle tensions and the pain, which is accentuated as stress increases. For these interviewees, stress management is part the process of relearning a new technique and occupational rehabilitation. Thus, many artists stay on the job or come to work despite the presence of major pain, making every effort not to show it. This increases their level of anxiety about the quality of their performance and their ability to last

in the craft. At the same time, they look for treatments, fitness training methods and new playing techniques that could allow them to escape this circle.

Figure 6.1 : Vicious circle of pain transformed into an anxiety spiral



Artists have provided several arguments to explain this situation. They mention the importance of honouring their commitments to the employer and the work collective. “*They rely on us*” and they feel responsible for the quality of their performance. This respect for commitments is especially important, given that most of them are faced with precarious employment and that it looks bad to refuse a contract or be absent. Moreover, saying that they hurt can undermine producers’ confidence, with the result that they are not called back. Some also report apprehensions regarding possible peer prejudices concerning illness or injuries.

It is sometimes difficult for artists, even those who are suffering, to admit that the pain symptoms or injuries are caused by work, since their art is a passion and the centre of their personal identity. Some then identify external causes to explain the appearance of these pains, such as certain individual characteristics (little finger too short, neck too long, hyperlaxity, etc.). They also tend to blame themselves, believing that they have not kept themselves in good enough shape or trained enough, or that they didn’t do enough warm-up exercises. This creates additional pressure: in addition to succeeding at work, they must maintain their physical and psychological capabilities, so that they maintain their level of “performance” at work.

Finally, all the difficulties that result from the presence of a pain syndrome have repercussions on the artists’ perception of their professional future, even going so far as to reconsider it. This reconsideration of their craft finds an echo not only on the occupational level but also on the

personal level. Indeed, the professional identity is rooted in the artist's personal identity, because he puts a lot of effort into his work, often from a very young age. Such a reconsideration is often very painful from a psychological point of view.

“It’s a way of living physically that is often disrupted and that makes us extremely psychologically vulnerable and fragile as well..., we’ve become afraid of doing anything because we don’t know how it will impact on the way we are as artists. And when this is something that has been a part of me since I was very young, it makes me very panicky... to think that some day I would have to stop (being a musician).”

6.2.4 Strategies to protect personal health

The artists interviewed developed a variety of strategies in an attempt to reduce the risk of injury and stay in their occupation, despite the often very demanding conditions of practice. These strategies are mainly individual, are developed with experience and pose few challenges to the conditions of organization of the productions. The main strategies mentioned by the artists are presented below:

➤ “Staying fit”

All the artists interviewed emphasized the importance of staying in shape and developing a good lifestyle. It was also noted that most of the artist who suffered a significant injury (hernia, polytraumatism), developed a strategy of regular exercise to stay fit. They took action, obtained information and were more aware.

➤ Alternative preventive treatments

For preventive reasons, all the dancers and circus artists, and a majority of the musicians, relied on physiotherapy, osteopathy or massage on a regular basis. The costs of these treatments were often covered by the artists themselves, particularly freelancers. The lack of time resulting from the accumulation of several contracts simultaneously often thwarted this prevention strategy.

➤ Fitness training and warm-ups

The circus artists, dancers and musicians emphasized the importance of fitness training and warm-ups to avoid injuries. The dancers emphasized the importance of adapting the warm-up classes to the requirements of the work and the interest, in principle, of progressive fitness training during the week instead of always having to give 100% at each rehearsal. They also stressed the fact that ballet class cannot always prepare the body for the requirements of the work, particularly in contemporary dance creations. One experienced dancer suggested beginning the warm-up class gradually *“like a massage, to wake up the joints quietly”*

➤ Changing their modus operandi and getting to know their limits

Changing their modus operandi was a strategy reported by the musicians, circus artists and dancers. The musicians, like the circus artists, used this strategy to limit or module their efforts so that they could avoid a painful movement, for example. This may mean singing or playing a note less intensely or regulating their efforts over a day or a week, depending on the requirements of the work. Experienced dancers emphasized the importance of learning to preserve their energy so that they could work five shows in a row without injuring themselves.

They were also able to modulate the exertion and amplitude of movements in the process of creating a new work, so that they can repeat this movement several times.

Changing their *modus operandi* and modulating their efforts did not have the same importance for actors: these practices are not associated with physical discomfort, but with advancing age and experience. At age 20, “*you push your acting*”, while at 40 or 50, “*you economize*”, with the same result. As they grow older, they choose “*less physical*” roles, do less “*stunts*” and attach more importance to their health and good physical fitness.

➤ *Walking the stage, checking the props*

This strategy is widely used by actors and circus artists. When incidents occur, some even tend to blame themselves, even if certain factors were not under their control.

For circus artists performing aerial numbers, knowledge of the rigging is an important issue, especially in a corporate environment where clients have little awareness of the risks of this occupation. First of all, they must be able to judge whether a situation is high-risk and have basic knowledge that lets them adapt the equipment in certain critical situations. They also emphasize the importance of good communication with the department heads and the artistic management, so that they can report situations that seem high-risk to them. However, this communication is not always that simple.

➤ *Choices and partial exclusion from the craft*

Faced with dissatisfaction regarding the requirements of certain work environments, too much pressure and excessive workload, some artists decided to stop working with certain producers and refuse contracts even when the employment situation is precarious. They have also made this choice, at their expense, when they were feeling pain. The conditions of practicing their occupation (precariousness, pressure, competition) and the persistence of pain are often the reasons mentioned for retiring completely from the craft.

➤ *Transmission of strategies between colleagues and collective strategies*

Very few collective strategies have been developed by work collectives to reduce stress. Similarly, there seem to be few exchanges between colleagues about strategies or tricks of the trade developed to reduce exertion or facilitate performance. According to some interviewees, the discussions more often concerned medical resources. This can be explained in part by the fact that work environments are fragmented and that productions often are short runs. The collective did not always have the time to form or bond. However, the situation could be different for long-run productions.

Some actors reported that when interaction in a scene involves risks, particularly during fight scenes, they sometimes hesitate to review the incident with the colleague, out of fear of hurting the work climate.

The situation seems to be a little different for circus artists. The artists interviewed in the exploratory study showed a willingness to transmit their experience. They emphasized the importance of exchanging views about fitness training, learning methods and technical knowledge of safety. They also stressed the importance of guidance so that new artists become

aware of the risks and respect their limits. Finally, they encouraged a review with the entire technical and artistic team after an accident or an incident.

➤ *Injury to get out of an untenable context*

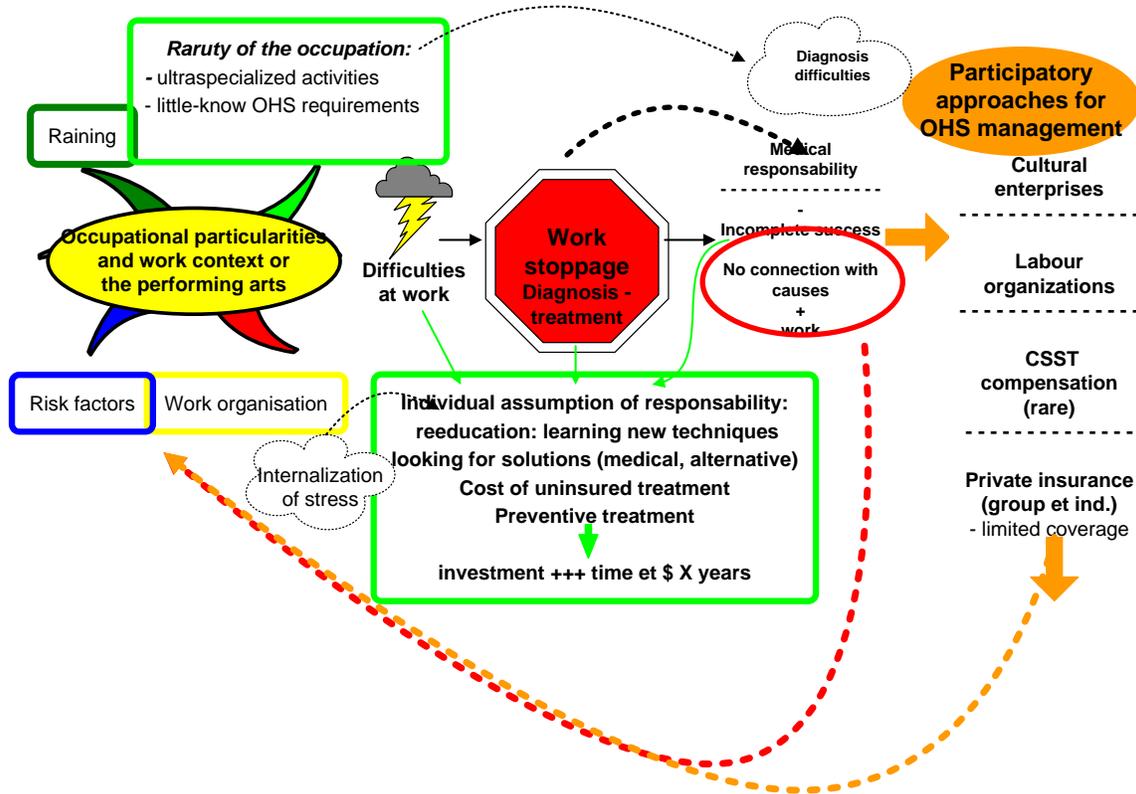
Without talking about a deliberate strategy, some circus artists and dancers mentioned accident and injury as unconscious ways of getting out of an untenable situation.

“Quite honestly, with all the injuries I had, I strongly believe that most physical injuries happen because at a given time people mentally can’t take it any more. In that kind of context the only way out -- so that you can breathe and stay at home by yourself -- is to get sick or get injured.” (circus artist)

6.3 Artists and participatory approaches for OHS management

When protective strategies fail, artists may take responsibility for their injuries. They essentially assume this responsibility as individuals. Injury reporting is not systematic. Few artists report an accident to the CSST (except for a few artists who had regular status at the time of the accident); many artists either do not have group or individual health insurance or have to settle for limited coverage. Some also encounter difficulties getting the CSST to recognize an injury, especially chronic injuries. Figure 6.2 presents a diagram on artists assuming responsibility for their OHS and participatory approaches for OHS management.

Figure 6.2 : Artists assuming responsibility for their OHS



All the musicians, dancers and circus artists interviewed consulted various health professionals, though with varying success, obtaining incomplete and often temporary relief. Some of them believed that the medical personnel they met are poorly informed about the problems of artists, given the uncommonness of the occupation. They often had the impression that the diagnosis was imprecise, because no investigation was carried out on their work activities and the actions they performed daily. Some described the curative, piecemeal and non-preventive approach taken by conventional medicine, which does not look for the causes of the problems. According to them, few or no medical specialists they encountered (orthopedists, neurologists, etc.) were informed their occupation's real requirements in terms of OHS and risk factors.

All the dancers (and only the dancers) refer to the same medical resource/personnel specializing in dancer pathologies, who provides them with effective coaching and medical treatment so that they can return to work.

Most of the artists were able to identify risk factors, at least after the fact, and were often capable of identifying the specific painful movement. They then attempted to correct the problem, by modifying their playing or the way they performed a specific movement. However, producers and cultural enterprises were very rarely approached to act on the risk factors pertaining to the organizational methods of the production or of the cultural enterprise. The few examples cited in this regard mainly concerned the agreements on the maximum number of performances per week during tours, to limit fatigue and injury risks, as well as the possibility of using understudies on tour, when the schedule of performances were very intense. Finally, few artists turned to their professional or union associations to develop participatory approaches for OHS management.

Highlights:

- A career generally begins very young (age 5 to 10), resulting in physical wear at around 30, except for actors.
- Employment status varies from one group to another: regular (musicians, dancers), freelancer (actors), mixed or alternating (circus artists, dancers, musicians).
- Double employment is widespread.
- The vast majority suffer from health problems (wear) related to work or have suffered accidents. Two main physical wear scenarios emerge.
- Although work stoppages are necessary, very few are compensated by the CSST (rejection or absence of claim).
- Certain groups (especially musicians, dancers and circus artists) resort to alternative healthcare, even if they have to seek and pay for it themselves.
- Health problems are sometimes marginalized, and even trivialized, so as to not “*risk losing a job opportunity*”.
- Work-related mental health remains a very strong taboo.

- Several, mainly individual, strategies have been developed to try to reduce the impact of occupational conditions on the artist's health and ability to stay in the craft. Depending on the context, these strategies are sometimes difficult to implement (limited leeway).

7. THE PRODUCTION CONTEXT AND OHS

Analysis of the data from the interviews (individual and group), observations and accident registers revealed many determinants of workers’ practices and their OHS. Determinants of OHS mean the conditions in which people work that may have an impact on the health and safety of a group of workers or an individual. In the previous survey conducted by the members of the research team (Cloutier, 2005), an analytical model was developed to identify and understand the influence of the determinants of work activity and occupational practices on the health and safety of workers in the healthcare network. The data collected in that exploratory study revealed the interest and utility of adapting this model to the performing arts sector (Figure 6.1). This is a sector of activity marked by variability, both of the practices themselves and of the organization of productions, of cultural enterprises and of the cultural sector as a whole. This model presents the organization of these determinants in major categories, according to their level of influence on practices, and ultimately on OHS.

Figure 7.1 : Analytical model of determinants of OHS of artists and artisans in the performing arts



This model presents health and safety as the outcome of the interactions among different determinants on the microscopic and macroscopic level and the effects on workers’ practices. In other words, accidents and injuries are the result of work practices developed on the basis of the various determinants present.

Four categories of determinants are directly associated with production of the work itself – layout, equipment, the worker and his team, and finally, work organization. They form the first

tier of determinants that have an impact on the workers' practices and that characterize a production's organizational mode.

We then end up with a series of determinants affecting the organization of the cultural enterprise. We have broadened the notion of enterprise to include institutionalized companies, creative troupes and independent contractors, all of which account for a significant part of cultural entrepreneurship. This tier is characterized by the presence of structural and organizational factors underlying the development of productions, while pertaining to an entity specific to the performing arts sector.

Finally, we get a series of determinants characterizing the organizational mode of the cultural sector. At this level, the influences are more muted but deep-rooted, because they dictate the major parameters within which performing arts enterprises and workers must make choices to carry out their ventures in accordance with OHS commitments.

In this section, we present the different determinants obtained from the analysis of the data gathered for this exploratory study. We begin with a brief presentation of a special case exposing the different elements of the analytical model. We then present a more exhaustive enumeration of the determinants.

7.1 A look at an artistic production from the perspective of determinants of OHS

To illustrate the different determinants and the links between them, we will use the case of a production observed during the project. It was chosen, among other reasons, because it illustrates a production providing several positive elements for the OHS of artists and technicians and, in this sense, it is a situation that is much less common than usual in the current context of the performing arts. It has the advantage of showing that such a situation is possible.

During the setup and takedown periods, we followed a technical crew assigned to the preparation of a theatre production. The crew was composed of a project manager, department heads (sound, lighting and machinist) and six stage technicians. Two designers (sound and lighting) also participated in the setup stage. Setup extended over a period of nine non-consecutive days, six days out of seven, from 9 a.m. to 11 p.m. Takedown lasted eight hours.

Between the beginning of setup and the first performance, a period of eleven days elapsed, during which we observed no accident. Some incidents were observed, such as tripping on a set element, striking an element fastened to the booms, etc., but none led to injuries. During certain more physically intensive phases, such as unloading and assembling sets, some individuals mentioned pains in the arms and back, but this did not affect their work or require the worker to be absent. Finally, at the end of the setup period, the workers who participated in most of the steps said they were not very tired.

On the whole, the health and safety assessment was very positive. The first perspective on this situation comes from the analysis of the *work practices* observed among the workers. Despite the intensity of the work and the relatively heavy schedules characteristic of setup, we observed that the work was performed calmly, was marked by effective communication, optimum teamwork

based on well established and integrated formal and informal rules of operation, and appropriate and safe use of equipment. These practices were based largely on a good knowledge of the premises, development of informal work strategies and an ethic of “fine and well done” work, as the workers put it.

The work environment contributes directly to the development, maintenance and use of safe work practices and strategies. The first aspect of this environment is related to the *layout* of the workplace and the *equipment*. In the first case, the performance hall in which the setup took place was well laid out: medium-sized, renovated in the last decade in compliance with safety standards (particular for access to the catwalks and the grid), an on-site workshop for repairs and last-minute adjustments, etc. As for the equipment, its good condition (despite the age of some items) and the availability of spare parts, and even of resources for replacements, contributed to its safe use. Nonetheless, the work was not free from physical stresses: major exertion in handling set elements, stressful postures related to installation of scenic elements, confined spaces, etc.

The *crew* is an element of the environment that is essential to safe practices. In this present case, the crew was composed of a mix of experienced workers and novices, most of whom had a good knowledge of the hall. Since they were used to working together, they formed a true work collective, in which “*there’s no need to discuss every detail for things to move ahead*”, based on shared and internalized rules of the craft. Thus, the tricks of the trade were discussed through optimum, direct and precise communication. The presence of the designers during a large part of the setup process also helped resolve difficulties that are inevitable in the transition from the drawing board to the stage.

These elements cannot be detached from the *work organization*, and which refers to management and corporate decisions. Detailed, orderly and flexible planning of setup work allows room for a form of leeway essential to the expression of safe work strategies. It also helps reduce workload pressures. A clear division of responsibilities and a precise distribution of the roles and tasks to be accomplished reduces the risks of interference in the instructions provided. The decision to stabilize the crew as much as possible by recalling a nucleus of technicians, especially department heads, favours coordinated work. Finally, the assumption of responsibility for prevention during the presentation of a show is encouraged by including a concern for issues related to the difficulties encountered on tour. Such concern must begin at the design phase, and includes aspects such as travel, setup and takedown of sets over a short period of time -- sometimes on premises that are poorly laid out.

These four elements of the work context (equipment, layout, crew and organization) are directly dependent on the organizational mode of the cultural enterprise itself. Here, the production observed is part of a program that alternated a production involving a high level of technical complexity with a production that was less demanding in this regard, thus allowing distribution of the workload for the production crew. Efficient financial management also made it possible to offer optimum salary and working conditions (appropriate and sufficient equipment, full crew, etc.) while ensuring a balanced budget and long-term projection of operations. The fact of owning the hall and the rehearsal rooms for the actors also reduced the risks associated with changing premises. These are a few examples of organizational choices that influence the context of the production and ensure safe practice of the craft of artisan in the performing arts.

The organizational decisions of cultural enterprises are in turn related to the organizational mode of the cultural sector on a regional and even a provincial scale. Thus, the policies adopted by the Ministère de la Culture et des Communications, the fellowships offered by the Conseil des arts du Québec, the permits given by the training schools or the orientations of college or university programs of higher education are all forces that influence these decisions. For example, reduced funding for tours will generate pressure on productions to economize or add extra performances. This in turn will compress the production schedules, resulting in overwork and fatigue in technical and artistic personnel.

7.2 Determinants of the practices of artists and artisans in the performing arts

The following pages discuss the different determinants of OHS and prevention in the performing arts, based on analysis of the data gathered for this exploratory study.

7.2.1 *Organizational mode of the production*

The main objective of any performing arts enterprise is to establish an artistic production. This phase of the work monopolizes a set of human, technical, financial and logistical resources. This is why the decisions made concerning this phase are crucial, for they will have a direct impact on the practices of the artists and artisans in the performing arts, and on the presence of risk factors for health and for the enterprise itself: a production that achieves “public” success is, first and foremost, an artistic and organizational success marked by a successful collective effort. Here, positive OHS assessment can only be the positive outcome of the process as a whole.

7.2.1.1 The worker and his crew

The determinants associated with the worker and his crew mainly concern the individual’s sociodemographic situation, health status, knowledge and skills, teamwork and the presence of a work collective or a community of affiliation, and finally his craft culture. While the employer may find some of these factors difficult for to change (age, presence of a family), others are influenced more directly by organizational choices, such as the knowledge acquired on the job and the presence of a collective. In all cases, taking their presence and effect into consideration will contribute to the establishment of protection factors.

- **Sociodemographic variables:** age, gender, family obligations, income level, etc. are all factors that come into play when workers make occupational choices, such increasing the number of contracts they are willing to take on to ensure an adequate income, or refusing an evening rehearsal in order to spend time with their children.
- **Health status:** the presence of injuries, body wear, fatigue, maintenance of optimum physical and psychological capacity to keep pace with aging.
- **Knowledge and skills:** refers to the qualifications obtained through academic training and on the job, and pertains to a complex body of craft- and job-related knowledge that is continuously being improved. They prepare for the reality of work, particularly with regard to OHS. The presence of a generation of “senior” artists and artisans and the many places of

exchange with new generations favour the development of competencies and the transmission of knowledge.

- **Teamwork and the work collective:** refers to all of the dynamics of relationships among individuals of the same group. The presence of a work collective and informal craft rules shared by a group (rules of mutual aid, knowledge sharing, other forms of sharing, etc.) favours the development of safe work practices. It also contributes to the processes of creation and production and ensures cohesion in work situations involving interactions among different crews.
- **The craft culture:** concerns the different ways in which workers portray their work, health, risks and OHS, and even of their art or craft. While the “rock and roll” culture is now giving way to a greater awareness of risks and responsibility in OHS, it remains present in the background.

7.2.1.2 Layout of the premises

Layouts, like equipment, are at the top of the list of factors that have the greatest impact on OHS, according to the stakeholders interviewed. When it comes to prevention, these are elements of the work over which cultural enterprises have the most control. The principal determinants related to layouts involve: the condition of the premises (cleanliness), their adequacy for the real requirements of the work (rigging system not conforming to the equipment, non-resilient floor), variability between halls (backstage exit between different legs), availability (rehearsal room), etc.

- The **layouts** cited as potentially presenting problems for OHS: the hall itself (acoustics, access, workshop, boxes, rehearsal room, administrative offices, etc.), the stage (floor, set, fixed lighting, catwalks and accesses, pits, traps, clearances, hoisting systems, etc.), the loading and unloading docks, and finally the big tops and other outdoor facilities.

7.2.1.3 Equipment and products

In the performing arts, there are many craft-specific pieces of equipment and technical components present. These often belong to a long tradition (counterweight system, stage traps, stage dressing, etc.) or from more recent developments (self-tethers, sound system, etc.), related to the production of artistic works (set, costumes, accessories, etc.) or to OHS (harness, shoes, etc.). Knowledge of how they work and are used form part of the workers’ training and skills. The following factors have to be taken into account in workers’ OHS: the specific characteristics of the equipment, such as weight, volume, manageability, prehension, solidity, and equipment condition and maintenance, and the availability of spare equipment and material and, finally, the clarity of the guidelines on use.

7.2.1.4 Work organization

Organizational determinants have a major impact on workers’ practices, constituting the framework in which they will take place and influencing the presence of OHS risk factors. In particular, they define the roles and powers of each worker, the forms of hierarchical relationships, the tasks to be performed and their sequence. The organization of the production itself proved to be the most important aspect in comments made by many interviewees and in an

analysis of observations made regarding certain productions. Among these determinants, we should mention:

- **Roles and responsibilities:** This concerns the definition of the roles, mandates and responsibilities of all stakeholders involved in the production and its related themes. It involves the various facets of the work (artistic, budgetary, technical), including OHS. We are referring here to the importance of specifying who is responsible for enforcing the work and safety rules on the sets or clarifying who enforces the design specifications and the transition from one stage of implementation to another.
- **Communication:** This particularly concerns the mechanisms for communication and circulation of information, both formal and informal, among the different organizational structures involved in the production. These mechanisms allow us to make best use of information collected on possible problems with the persons in charge, especially during the transition between stages. They can involve different production crews who face common challenges.
- **Needs:** Establishing the needs and requirements of the production in terms of human, technical, financial and other resources. By pooling knowledge of the production, artistic and technical crews, the budgetary, layout, equipment and design dimensions will be evaluated simultaneously. This stage avoids encroachments or cost overruns that force choices, which could jeopardize OHS.
- **Planning:** Planning of schedules and tasks is a central determinant of OHS risk factors. In particular, the clarity and realism of planning are crucial factors in prevention. This especially includes deadline and budget compliance, flexibility, taking into consideration recovery periods between two demanding phases of the production, and taking into consideration each stakeholder's expertise.
- **Incorporating prevention:** We are referring to the mechanisms that foster information exchange on prevention at the different stages of the production, for example during the creation stage, by incorporating technical authorities into the production to ensure the feasibility of an artistic choice and its impact on the OHS of the artists and artisans.
- **Organization of crews:** The presence of a work collective is a determinant related to the worker and his crew. However, conditions favouring the creation of the collective pertain to the organization of the production and, in particular, the organization of the crew. These factors include (for both artists and artisans) the stability of workers in the entire production, the balance between experienced people and novices to maximize exchange of knowledge, the right match among the forms of knowledge, skills and work requirements, etc.
- **Training:** During an artistic production, new and innovative knowledge is often required. Thus, everyone's level of knowledge and preparation must be adapted to the production's requirements. Examples include preparing for special aspects of the work being produced, special acting techniques such as fight scenes or stunts, new technologies or special practices.
- **External relations:** Most productions are part of a process involving external partners, such as designers, creation workshops, labour and equipment suppliers, and lessors and presenters. The establishment and observance of the contracts between the different stakeholders determine whether or not a number of risk factors will be present. An example would include

the agreements between the producers and the presenter during a tour, providing for the number of technicians necessary, their training, the technical requirements, etc.

7.2.2 *Organizational mode of the cultural enterprise*

Aside from artistic production, cultural enterprises bring into play several determinants of OHS risk factors. The results of the analysis show that the determinants related to the cultural enterprise also apply to self-employed workers, who account for a significant proportion of the sector's personnel -- designers, choreographers, circus artists and self-produced actors who manage their careers like business managers.

- **Programming:** The issues of programming and the scheduling of activities concern the nature, number and duration of works that will be produced in a period of one or more years. Thus, it is important for the programming to take into account the nature of the work and its limits, for example, whether it is possible to produce two successive works. The programming must be realistic in terms of the funding received (or to come) and include flexibility, allowing the individuals involved to meet the demand if something positive yet unexpected crops up (extra performances) or if there are negative contingencies (loss of a principal artist).
- **Organization of crews:** Like the organizational mode of the production, crew stability is a key determinant of OHS. This is especially the case for permanent crews working on an administrative, artistic or technical level. The presence of a touring crew and a replacement crew is also a protective factor, particularly to mitigate high-risk situations that may arise outside of the major metropolises. In the biggest companies, the presence of senior trainers and coaches provides guidance and support to young artists.
- **Organizational structure of the cultural enterprise:** This dimension encompasses the fixed assets specific to the culture enterprise (performance hall and rehearsal room, workshops, administrative offices, storage facilities, etc.) and the basic services allowing the enterprise to operate, such as internal and external communication and exchange structures. In the latter, the infrastructure includes all of the business relationships between a producer and the sector's other stakeholders: presenters, lessors, artists' agents, etc. To this list we can add internal policies and rules, such as safety rules, understandings or collective agreements, etc. Lastly, we refer to the organization chart and the definition of the roles and responsibilities of the enterprise's principal stakeholders, especially the management team and the permanent employees.
- **Management of prevention and OHS:** A component of a company's organizational structure, managing OHS and prevention involves several factors, more or less developed in cultural enterprises, particularly the accident register, follow-up and investigation of accidental events, prevention action plans, specialized medical teams, etc. The use of these mechanisms as means of prevention reduces the risk factors.
- **Funding:** Financial health and funding modes are key determinants in a company. More specifically, there is the funding mode (subsidized or self-sufficient), development and observance of financial frameworks, the balance between the artistic and financial aspects, etc.

- **Corporate culture:** In terms of how it is portrayed, the corporate culture intersects with the ways work and OHS are perceived and carried out, the commitment of senior executives to prevention, everyone's motivation regarding the company's success, etc. Thus, "the show must go on" can be seen as a motivating factor, but it is also a tension and risk factor if it is in opposition to OHS.

7.2.3 *Organizational mode of the cultural sector*

The organizational mode of the cultural sector refers to its macroscopic determinants, which have an impact on the context in which cultural enterprises operate. By establishing a backdrop against which they must organize, these determinants help set limits on the scope of action by performing arts enterprises.

- **Legislation:** Various legislation directly or indirectly concerns prevention and OHS in the performing arts. We need only think of the CSST, minimum labour standards, the Building Code or *Société de l'assurance automobile du Québec*. This legislation underlies programs that both govern and assist enterprises in their prevention efforts. This is particularly true of the CSST program providing coverage for dancers in training.
- **Funding programs:** In Québec, most cultural enterprises need public funding to develop an artistic program. Different funding programs exist depending on the artistic sector or the phase to be funded (operation, creation, touring, capital expenditures, etc.).
- **The job market:** Concerns the availability of labour by region, the salaries offered, the employment structure (freelancer, self-employed), the presence of labour placement agencies or other middlemen creating competition, etc. This also concerns competition for artists and artisans on the part of the television and film industries.
- **Training programs:** For several years, the vast majority of workers in the performing arts have been trained through specialized teaching programs in performance and production. We consider the structure and level of development of these programs to be determinants of OHS, as are these workers' level of preparation for OHS issues in their future job.
- **Associations and umbrella organizations:** We should note the impact of associations or umbrella organizations, both for workers and employers, on the level of organization of cultural enterprises and the support (information, collective activities, group insurance, etc.) they can provide to them. We should also mention the impact of the level of development of umbrella organizations of specialized presenters in each field, which increase visibility and knowledge of the producers' specific needs.
- **Regional organization:** The question of the regions remains a subject of concern for the performing arts community. Among the determinants concerning this theme, we should mention the level of preparation and organization of presenters and hall owners, both in terms of equipment and organization for hosting productions.

8. DISCUSSION

The purpose of this exploratory study was to more effectively delineate OHS issues in the performing arts. The research team deliberately opted for the broadest possible research strategy in order to discern the dynamics of the multiple factors involved when considering a comprehensive strategy for restructuring prevention, and the action to be implemented in a given sector of activity.

The results presented in this report shed light mainly on the impact of the organizational mode of a production, the cultural enterprise and the sector of activity on the health and safety of artists and artisans, because this kind of knowledge is still underdeveloped in the research. Moreover, despite the many studies on the health problems and injuries of artists and artisans, there is little documentation on the link between career paths and health paths, and on the importance of the context in which the craft is exercised. Finally, there are still far too few studies investigating the organizational causes of these injuries, and most are limited to the characteristics of individuals and the conditions associated with their general training and fitness training.

8.1 A non-traditional sector of activity

The *Plan d'action pour l'amélioration des conditions socio-économiques des artistes* (Action plan to improve the socioeconomic conditions of artists) of 2004 already showed how artists and artisans in the performing arts end up in non-traditional work situations. The data collected in this survey are consistent with these findings: a large proportion of self-employed workers and freelancers, atypical schedules, short careers but long artistic experience, low salaries, etc. The performing arts sector itself can be described as non-traditional; it has very few medium or large enterprises; its permanent teams and crews are limited; productions, and even the cultural enterprises themselves, are short-lived; funding is limited and essentially public, etc.

In this context, the diagnostic tools allowing us to profile injuries and OHS risks in this sector are limited and unreliable. For example, the employment injury statistics (accepted cases) compiled by the CSST and the accident registers collected by cultural enterprises only offer a summary picture and limited knowledge of the risks and their causes. Nonetheless, based on these data, it is possible to target a certain number of elements which can lead to interventions in prevention. This, among other reasons, is what led the CSST a few years ago to develop an action plan for stage technicians and the problem of elevated work. These initiatives produced results but remain targeted in time and limited in scope, given the target population and the multiple risk factors involved.

The results of this study revealed a significant variance between the CSST statistics and the reality as experienced by artists and artisans in the performing arts. The underreporting of industrial accidents and health problems, well documented in the case of workers with precarious status (Lippel, 2001), conceals many risk factors. The fact that only nine employment injury cases were accepted by the CSST over a three-year period (2002-2004), when all the musicians we interviewed told us they had gone through work stoppages due to repetitive stress injuries related to their professional practice, hinders research and the development of prevention mechanisms. The same finding is true of the other artists interviewed, most of whom rarely

reported their industrial accidents throughout their career path, though several identify a number of determinants on which it was possible to take action to reduce high-risk situations. Thus, we find that the CSST data provide practically no indication of the occupational diseases from which certain artists suffer. This conceals the need to develop prevention mechanisms, particularly to reduce the presence of risk factors for musculoskeletal disorders.

Moreover, in this atypical work context, the traditional OHS management and prevention conditions seem ineffective. The few examples of accident registers consulted in cultural enterprises show the limits of this approach. The information they contain is too sketchy and does not describe the context in which the employment injuries occur. Documenting this context allows us to understand the organizational factors that underlie the presence of OHS risks or, on the contrary, that ensure the maintenance of a healthy and safe environment. Given the context of a changing workforce and the ephemeral nature of productions, site inspections, safe-practice training and delegation of powers and responsibility for prevention are limited.

It is also important to emphasize that the vast majority of cultural enterprises are small businesses (SBs). Most of the studies covered in the literature review show that SBs have difficulty managing occupational health and safety. Although generally all employers and workers have the same rights and obligations, in cultural enterprises of 20 workers or less some provisions of the Act respecting occupational health and safety regarding the prevention program and the joint health and safety committee apply differently. Moreover, the unit contribution rate applies uniformly to small establishments, which deprives them of an economic incentive to use participatory approaches for OHS management. The difficulties of making contact with small businesses and their short life cycle are factors explaining why SBs are largely left to their own devices in OHS management (Champoux and Brun, 2000). The owners of these small businesses often assume all of the management functions themselves; OHS is sometimes far down the list of their priorities. On the whole, the studies show that the difficulties of takeover of OHS in small businesses are linked to the isolation of their executives, their lack of knowledge of the risks to their business, their rights and obligations in OHS and a lack of various kinds of resources. All the studies agree that adapted approaches are required to foster awareness and takeover of OHS in small businesses.

8.2 Towards an evolving portrayal of OHS

The interviews conducted with individuals in management positions (general managers, artistic, production and technical directors, hall owners and managers, personnel agency owners, etc.) in cultural enterprises revealed a representation of OHS that mainly refers to elevated work, falls, scenes involving extreme situations (human flight, pyrotechnics, fight scenes, etc.) and handling. The factors that contribute the most to the presence of these risks are technical conditions, layout of work areas and the practices of artists and artisans. For these interviewees, the means of prevention therefore depend on the use of personal protective equipment, compliance with the standards prescribed by agencies such as the CSST and the fire prevention services, and empowerment of the workers themselves. These results are similar to the comments obtained from the small business executives (irrespective of the sector of activity), who consider that the risk is inherent in the activity and seem less aware of the possibilities for taking action, especially in the area of work organization as a focus of prevention (Eakin, 1989; Franklin and Goodwin, 1983). According to a Canadian study by Eakin (1992), the approach preferred by SB

executives regarding OHS mainly consists of empowering the workers to assume responsibility for their own occupational safety. For these executives, OHS is a question of behaviour at work and, above all, a personal matter for each individual, over which the business does not always have legitimate authority. In this sense, the production managers, technical directors and presenters often refer to the problem of accumulation of contracts by the freelancers they hire and their lack of control in ensuring that these freelancers are rested enough to work safely.

The analysis of the causes of employment injuries revealed the complexity of the factors at stake and highlighted three types of causes that become possible foci for prevention. The first type is mainly associated with workers' practices, with "*human error*", to the extent that the individual is directly involved in the event's occurrence; this is not true of the other two types of causes, which refer to dimensions such as management, work organization and organization of production, training or a specific work context.

These results suggest an evolution in how OHS is represented: there is a growing awareness that the management and planning choices of an artistic production also have repercussions on the OHS of technical and artistic teams. We also observed that some choices made to ensure a production's efficiency, such as keeping the same department heads for the technical crews, or at least rehiring them from one production to the next, offered benefits in terms of prevention. Thus, worker takeover of prevention does not necessarily imply taking additional actions, which would add to the decision-making burden. Instead, it suggests taking a new look at the practices in place and judging their possible impact, not only on the efficiency and quality of the production but also on prevention. Several OHS studies have shown the possible convergence of these different issues (Cloutier et coll., 2005; Bellemare et coll., 2005; Bourdouxhe et coll., 1992).

The question of individual responsibility must also be agreed upon and integrated by the different stakeholders. Acting on the organizational aspects will help change these portrayals. A commitment by the producers and their associations, the unions and the joint bodies on the importance of prevention and OHS in general can only help in this change of perspective.

Moreover, stakeholders in the performing arts cannot avoid considering this representation, which sees OHS and prevention as a hindrance to creation. The design process is often described as a piecemeal process, which draws on a large number of specializations, each of which is a special world with its own language, symbolic systems, models, instruments, physical supports and professional sensibility. Each participant operates within his own world, exploring the different concepts and conducting his research. To ensure a coherent design, the participants must continually negotiate their differences, develop judicious exchanges and resolve their differences of viewpoints and priorities (Bucciarelli, 1988). One participant's recommendations become another participant's constraints. The design process is also a continuous process of managing constraints (budget, deadlines, resources, etc.), which are transformed into creative challenges. The assumption of responsibility for OHS in the creative process of a work of art can thus be seen as a creative challenge. Here again, a change of perspective is proposed.

Finally, the performing arts field is a sector in which cultural enterprises and crafts are rapidly evolving. We are now at a turning point in the assumption of responsibility for prevention. Progress has been made: there is a growing proportion of young workers who are open to and

knowledgeable about OHS or who demonstrate a greater concern for prevention; cultural enterprises increasingly integrate OHS into their organizational mode and creative process, and there is a pool of experienced artists and artisans who are open to sharing their knowledge of OHS. There are strong grounds to believe that the creative forces and stakeholder commitment to progress in the performing arts will make it possible, in the near future, to cite this sector as one that incorporates prevention into all of its activities.

8.3 Participatory approaches for OHS management and artists

The interviews conducted with twenty-five performing artists reveal that career paths and health paths are interlocked. These paths intersect and influence each other. Injuries and development of persistent pain are the plight of many performing artists. The exacerbation of these symptoms sometimes leads them to reconsider their career orientation.

Most of the time, they feel that it is they who are primarily responsible for their problems. Often they say that the primary cause of an accident is their failure to train, warm up or adequately check their props. They rarely mention causes pertaining to the organizational mode of the production or of the cultural enterprise. However, they all mention the risks of overwork and burnout related to the precarious employment status – and often the precarious finances – that are characteristic of their craft.

During these interviews, our team was particularly touched by the isolation these artists experience when they have to deal with the onset of their craft-related pain. The underreporting of these problems to the CSST seems generalized, particularly for freelancers, and few of them benefit from group or individual health insurance. They also experience a lot of difficulty finding medical personnel well informed of the requirements of their craft and capable of making a credible diagnosis.

However, they are not only victims, because they invest a lot of effort in looking for ways to resolve their difficulties. They do research, consult foreign sources, try different types of alternative therapies, or engage in often-lengthy processes to relearn their playing. However, this assumption of responsibilities is mainly individual and often involves a major investment of time and money. During interviews with some freelance artists, we were able to estimate that the costs associated with preventive alternative therapies could account for more than 15% of their annual income.

We also presented a series of strategies, developed by the artists, to reduce the risks of injury throughout their career path. These strategies are mainly developed with experience or after suffering an initial major injury. Once again, these strategies are essentially individual strategies and pose few challenges to the conditions of practice of the craft. Through these artists' comments, we sensed the difficulty of reporting situations they consider risky, and some mentioned that when they did raise these issues no one listened.

The institutions, unions and the professional associations are therefore urged to provide better support to and develop participatory approaches for OHS management.

8.4 A model of OHS determinants in the arts sector: multiple targets for prevention

This exploratory study allowed us to develop a model for analysis and understanding of the various determinants of artist/artisan OHS in the performing arts. In this model, the health and safety balance is presented as the outcome of interactions among different microscopic and macroscopic determinants and their impact on workers' practices.

Four categories of determinants are directly associated with production of the work itself – layout, which concerns both the layout of the presentation sites and the scenic elements and special effects; equipment, props and costumes, the technical and artistic crews and teams; and finally work organization. They form the first tier of determinants, which have an impact on the workers' practices and characterize a production's organizational mode. These determinants, pertaining to the production itself, were the primary targets of prevention identified, for which we were able to observe interesting developments in some cultural enterprises. For example, by providing facilities better adapted to the requirements of the activities, some renovation projects at presentation sites were able to reduce risk factors related to equipment handling and elevated work. On tour, the design of trolleys facilitating transport of sets and reliance on a flying team of technicians ready to provide backup were other examples of practices having a positive impact on prevention of industrial accidents. The interviews also revealed a whole series of prevention practices that stakeholders developed as they gained experience in the performing arts. It would be interesting to further document these practices so that this expertise can be shared.

The analytical model then opens onto a second category of determinants, this time concerning the organization of the cultural enterprise. We will expand the concept of enterprise to include institutionalized companies, creative troupes and independent contractors, which account for a significant part of cultural entrepreneurship. This tier is characterized by the presence of structural and organizational factors that underlie the development of productions, while pertaining to an entity specific to the performing arts sector.

On this level, one of our observations in the field was that, as with small businesses, OHS and prevention management did not play an important role in the overall management modes of cultural enterprises. Most of the time, management is limited to dealing with compensation claims. We noted the virtual absence of basic tools, such as an accident or incident register, which could allow structuring and prioritization of preventive actions. Studies on small businesses tend to show that the executives believe that their OHS management is adequate, since problems and accidents are rare. In this context, they attach little importance to prevention. Those who have gone through unfortunate experiences take more responsibility for OHS, but since their approach is not systematic, the selection of the problems they try to solve is sometimes arbitrary, or following an accident.

Another dimension of the organizational mode of the cultural enterprise with an influence on OHS, one especially noted by performers and technicians, is the planning of the activity schedule and programming of works over a period of one or more years. To ensure a better distribution of workload, some stressed the importance of alternating the works by level of artistic and technical difficulty. This dimension is also of the utmost importance for self-employed performers and

artists, whose ability to strike the right balance in their schedules is highly variable. This ability is often developed as they gain more experience and fame, despite the precarious context.

One last category of determinants is proposed in the analytical model. These determinants pertain to the organizational mode of the cultural sector. At this level, the influences are more muted but deep-rooted, because they dictate the major parameters of the context in which performing arts enterprises and workers must make choices to carry out their projects in accordance with OHS commitments.

Reliance on this analytical mode of the determinants of OHS sheds light on the effects of microscopic, mesoscopic and macroscopic organizational factors, and on the fact that taking action on these determinants can be more stable and sustainable over time. For example, the effects of planning and programming, crew stability, capital funding programs, and development of the OHS component of training programs, among other factors, will have multiplier effects that apply not only to a specific production, but also to developing a culture of prevention in the performing arts.

Analysis of the data also allowed us to reflect on the relationship between the special status of artists and artisans (self-employed or freelancers) in the performing arts and the actions they take on their own initiative in the area of prevention. As in the case of other workers with this employment status, self-employed artists and freelance technicians must organize part of their work according to market constraints and the constraints of their physical health. As such, they can be considered “a cultural enterprise”, subject to the same constraints and responsibilities for prevention as businesses in the usual sense of the term. The results of this exploratory study reveal that it is also important for these individuals to act on their work organization and assume part of the responsibility for prevention. We are aware that a form of culture of silence exists regarding health and safety problems in the performing arts and that artists and artisans are often inclined to feel responsible for their employment injuries. Indeed, the work begun by the members of the *Table de concertation* and the results of this exploratory study are intended to identify the multiple OHS issues and pinpoint a multitude of prevention targets concerning both the organizational mode of a production and the organizational mode of the cultural sector as a whole. The aim is to ensure that responsibility for OHS is no longer an individual matter but one shared by all of the sector’s stakeholders and organizations.

8.5 Scope and limits of research

To delimit the OHS issues in the performing arts, we favoured a systemic approach to the problem and opted for data gathering based on multiple information sources.

A one-year exploratory study cannot claim that it has probed the full complexity of the OHS problem in a given sector of activity. However, this study has made good progress in understanding the causes of employment injuries and the multiple determinants of OHS, all of which become possible targets of prevention. The results presented in this report are innovative, especially in the light they shed on the health and safety impacts, for artists and artisans, of the organizational mode of a production, the cultural enterprise and the sector of activity. To date, few studies have dealt with these questions.

However, the exploratory study contained little or no discussion of several aspects of this sector: “corporate” shows, regional and international tours, the requirements of the designer’s craft, the relationships with hall owners and service and resource providers, etc. In addition, this study did not comprehensively investigate the creative phase of a new work; here, far upstream from the design process, several decisions crucial to OHS are made. Also, the time restrictions of the research project and difficulties with access to the field did not allow us to observe a dance production. The fact that we could not combine observation data with interview data from the field of dance means that the results obtained for this field of performing arts were more slender. Consequently, further studies are required to complete the picture of OHS issues in the performing arts.

Another objective of our exploratory study was to encourage reflection and taking decisions on actions to be carried out by the various performing arts partners; the aim was to improve the sector’s structure of OHS responsibilities and prevention. Thus, the results of our exploratory study provided food for thought for the *Table de concertation paritaire en santé et sécurité du travail du domaine des arts de la scène*. Throughout the study, the research team benefited from the energy, support and involvement of the members of this joint table on occupational health and safety in the performing arts, which greatly facilitated access to the field and data gathering. Throughout the study, preliminary results were presented to Table members, each of whom were able to suggest improvements.

The results can now serve to develop an action plan and intervention strategies for this sector, such as awareness, information, training and technical assistance programs. They will also allow new research questions to be formulated according to priorities that will be adopted by the members of the *Table de concertation paritaire en santé et sécurité du travail du domaine des arts de la scène*.

9. RECOMMENDATIONS

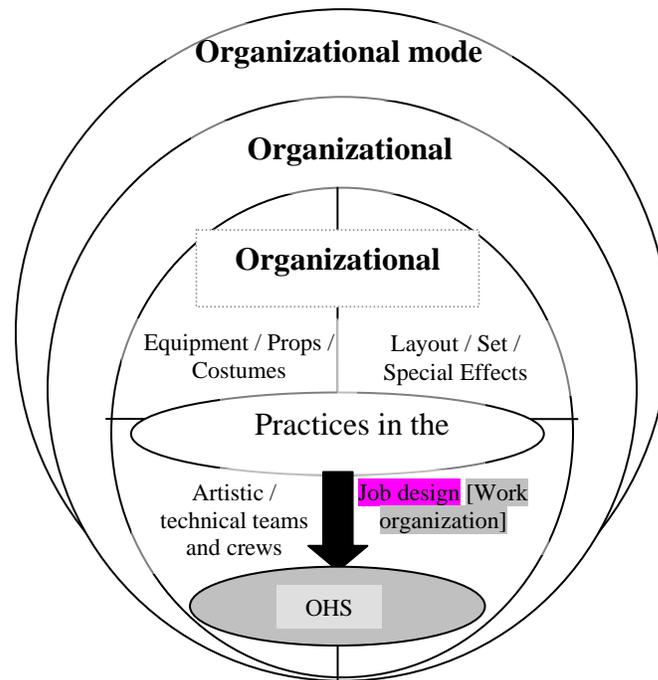
The purpose of this exploratory study was to better delimit OHS issues in the performing arts. It was developed and produced in collaboration with the members of the *Table de concertation paritaire en santé et sécurité du travail du domaine des arts de la scène*, chaired by the CSST, and many stakeholders from cultural enterprises.

The study reveals the necessity of a systematic approach to OHS issues in this sector and a concerted action strategy intended for multiple prevention targets in professional practices, the organizational mode of a production, the organizational mode of the cultural enterprise and the organization of the cultural sector.

The recommendations presented in this report emerged from all of the research results obtained in the course of this exploratory study. They were presented to the members of the *Table de concertation* and discussed at two meetings. The Table's members made improvements to these recommendations. We should emphasize that the recommendations were submitted for discussion to the partners concerned by OHS issues in the performing arts. These proposals are therefore formulated to enable the sector's partners to agree on action priorities at different levels and develop an action plan for the years ahead, aimed at better integration and consideration of OHS in cultural enterprises by producers, presenters, artisans, designers, technicians and artists, all of whom give this sector its dynamism. Following presentation of these recommendations to the members of the *Table de concertation*, a working committee was mandated to develop an action plan with the aim of translating and implementing some of these recommendations. The committee was composed of representatives of *Rideau*, *Union des artistes*, ADISQ, the *Ministère de la Culture et des Communications*, *Théâtres associés inc*, the Québec (French) Section of the Canadian Institute for Theatre Technology, *En piste*, the CSST and the IRSSST.

The recommendations are grouped according to the different prevention targets presented in the model, taking into account the determinants of OHS and prevention in the performing arts (Figure 9.1). Some of them are more specifically intended for the sectors' professional associations and umbrella groups, as well as for the CSST.

Figure 9.1 : The multiple targets of prevention in the performing arts



9.1 Recommendations concerning the organizational mode of a production

Pre-production / Production / Performance

- Raise creator and stakeholder awareness of the importance of considering OHS from the very beginning of the creative undertaking.
- Incorporate a “budget item” for safety elements/equipment into a production’s financial planning.
 - Have cash in reserve to manage OHS contingencies that may arise during development of the production.
- Balance the number of performances per day/week according to the difficulty of the work and the possible reliance on understudies, substitute numbers and flying replacement technical crews.
- Incorporate prevention elements right from the start of production design, by involving them in the technical direction of the process as quickly as possible.
 - Staging idea/concept.
 - First plans and mockups.

- Beginning with the show design phase, include a concern for tour issues.
 - Transport, handling, rapid setup/takedown, possibility of adaptation to halls, etc.
- As concerns the composition of the technical crew, ensure that it is as stable as possible or that personnel return.
 - Department heads.
 - Balance between experienced and novice crew members.
- Recognize the key role of the department heads as “guardians” of prevention in the field.
 - Encourage the designers to be present during initial setup.
 - Encourage the tour technical director to be present during the first setup/takedown.
 - Plan the setup in a way that avoids “spatial” overlap and, in some cases, temporal overlap (lighting vs. sound) of the different departments.
- Plan rehearsals on the set with props and costumes as soon as possible.
 - Availability of a rehearsal room on the presentation site to avoid cohabitation with the technical crew.
- Before the 1st rehearsal, review the set in terms of OHS.
 - Provide tools for prevention as soon as the actors’ movements and the playing requirements are known.
- As soon as the first rehearsals begin, keep abreast of the adjustments to be made in terms of safety.
 - Integrate this step into the process.
- Be sensitive to the requests of performers and technicians concerning their safety, by creating a context favouring communication.
 - Assign the responsibility for reconciliation between performers or between performers and directors, choreographers, etc. to a field person who can play a “conciliating” role (e.g., rehearsal coach, stage manager, assistant director, etc.).
- Formalize the notes procedure:
 - Review the situation after each performance and not only after the dress rehearsal and the premiere.
 - Include the aspects concerning OHS in this exercise: difficulties related to physical interaction (e.g., fight scene, stabbing, fall, etc.), sets, costumes, props, etc.).

Presentation

- Integrate needs regarding prevention into the agreements between the producer and the presenter, according to the requirements of the work.
 - The facilities must be safe and in compliance with standards/norms.
- Involve the tour technical director in negotiating the tour schedule with the presenters.

- Whenever a show is moved, initiate a formal inspection of the premises by a production person, in collaboration with a person responsible for the presentation site, :
 - Review of the premises according to the actions and movements of the artists on and off stage, in order to identify potential risks.
 - Inspection of accesses and routes used for equipment handling.
 - Appropriate installations for elevated work.
 - Heated boxes and warmup rooms, adequate humidity, etc.
- Sensitize artists to the importance of familiarizing themselves with every new show site (for example, by walking across the set).
- Some suggest better supervision of night transport during tours, particularly “one-nighters”:
 - Working hours.
 - Tour bus to ensure rest for some crew members.
 - Backup technical crew.
- Encourage technical crews to exercise the options available to them to limit night-time driving.
- Plan the schedules of the performers and technicians on tour, taking into account the particularities of the work and jet lag.

Post-production

- Institute production evaluation practices in terms of prevention for the next productions.
- Develop feedback mechanisms in order to develop and implement preventive maintenance and equipment improvement and layout practices.

9.2 Recommendations concerning the organizational mode of the cultural enterprise

- Integrate a concern for OHS into the development of the schedule of activities.
 - Alternation according to the artistic and technical requirements of the work.
- A hiring policy favouring the return of technical directors, department heads, etc.
 - Contract extending over more than one production, for example.
- Have a representative of the performers on the Board of Directors, and encourage this representative to take an active role.
 - Someone who has experience with certain dance companies in adapting the requirements of the work and the intensity of presentation.
- Develop a component specifically focused on OHS in the contracts.

- Encourage the development of an OHS policy and the establishment of an accident and incident register, with emphasis on the context and not only on the accident itself.
- Ensure better adaptation of the type of fitness training and warmup to the special requirements of the work.
 - For example, ballet class vs. contemporary dance creation.
 - Inspired by weekly athletic fitness training programs.
 - Principle of gradually increasing intensity as the days and weeks progress.

9.3 Recommendations concerning the organizational mode of the cultural sector

Workforce and Training

- Regarding the structure of the job market, find mechanisms for reducing the negative effects of precarious status, the low level of compensation and the absence, in most cases, of social safety nets that have a significant impact on the other risk factors.
 - Several of the measures proposed in the *Plan d'action pour l'amélioration des conditions socio-économiques des artistes* (Action plan to improve the socioeconomic conditions of artists) attempt to reduce the effects of this precarious status in part, including the effects on artists' health.
 - Also refer to several recommendations contained in the Bernier Report published in 2003, "Les besoins de protection sociale des personnes en situation de travail non traditionnel", *Ministère du Travail*.
 - Tour support and other programs may also have an impact on the OHS of artists and artisans in the performing arts, by offering a little more financial leeway.
- Explore the possibility of creating forms of "volunteer" organizations to support the technical crews on tour.
 - Possible involvement of groups of regional presenters to ensure basic training of these "volunteers".
 - Development of information and awareness tools.
 - Possible training of flying tour crews available for several producers and presentation sites in a given region.
- Support the development of specialized training for certain specialists, such as acrobatic rigging.
- Pursue and consolidate the efforts for better integration of OHS into vocational training.
- Ensure better alignment of technical and artistic aspects in artistic training.
 - Also train artists in the actual conditions of practice of the craft: planning their schedules, contract negotiation and OHS requirements, recognition of their limits, etc., as mentioned frequently by the more experienced artists.

Presentation Sites and Equipment

- Favour better alignment between the capital expenditure assistance program and exemplary practices in safe layout of cultural facilities.
- Improve the directory of presentation sites, describing the main characteristics of the technical platform, rehearsal rooms, boxes, etc.
- Develop a network of presenters to reduce the fragmentation of tour circuits in Québec.
 - This fragmentation puts pressure on technicians and performers and exposes them to major time constraints.
- Encourage innovation in the development of equipment better adapted to elevated work and handling.
 - Manual counterweight systems (Netherlands example).
 - For example, cases of ingenuity.

Associations and Umbrella Groups

Establish OHS assistance or guidance mechanisms for their members:

- For union and professional associations: information on rights and obligations, database on existing resources providing assistance, etc.
- For employer associations: support the development of prevention tools (accident registers, OHS action plan, prevention policies, etc.), draft a standard contract integrating OHS aspects, etc.
- Participate in the development of means to facilitate access to quality care adapted to the special requirements of performers.

CSST

- Ensure a better concordance between the categories in the 57010 classification unit and the NAICS codes used by statistical agencies, in order to facilitate monitoring.
- Set up a specialized team in the performing arts, in order to meet the sector's special needs.
 - The team would be composed of inspectors, compensation officers and information officers.
 - Directories of specialized engineering resources with scenographic expertise for load calculations.
- Review the list of care covered by the plan, to respond better to the sector's specific needs.
- Favour the development of an organization with a specific mandate to support prevention in the field, (e.g., SHAPE).
- Explore the possibility of establishing a fitness training reimbursement program for circus artists similar to the fitness class reimbursement program for dancers managed by the RDQ.

- For circus artists who have been admitted into to this program, explore the possibility of their benefiting from CSST coverage in cases of an injury or accident occurring during supervised fitness training outside the employment contract.
- In a communication plan, support actions designed to improve OHS awareness and information, and equip the performing arts community with tools for OHS, such as:
 - Prevention guide for the performing arts
 - Technical data sheets on prevention
 - Information document on coverage available for tours outside of Québec
- Continue the work of the Table de concertation paritaire en santé et sécurité du travail du domaine des arts de la scène.

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APPENDIX 1

List of performing arts occupations taken from the National Occupational Classification for Statistics (NOC-S) used by the Observatoire de la culture et des communications du Québec (OCCQ)

| NOC-S Code 2001 | Occupations |
|----------------------------|--|
| A342 | Managers – Publishing, Motion Pictures, Broadcasting and Performing Arts |
| F143 | Theatre, Fashion, Exhibit and Other Creative Designers |
| F031 | Producers, Directors, Choreographers and Related Occupations |
| F032 | Conductors, Composers and Arrangers |
| F033 | Musicians and Singers |
| F034 | Dancers |
| F035 | Actors and Comedians |
| F126 | Other Technical and Co-ordinating Occupations in Motion Pictures, Broadcasting and the Performing Arts |
| F127 | Support Occupations in Motion Pictures, Broadcasting and the Performing Arts |
| F132 | Other Performers (circus artists) |

APPENDIX 2

Sociodemographic profile of the artists who participated in the study, by discipline.

Table 1: Circus Artists

| Worker | Sex/ Age | Seniority in the practice | Employment status (principal/ secondary) | Jobs | Work-related health history ⁶ | Injuries ⁷ / Industrial accidents ⁸ | Work stoppage | Compensation by the CSST | Therapy | Insurance (ind. / group) or individual |
|--------|-------------|---|---|--|---|---|------------------|---|---|---|
| 1 | F 29 | 6 years as an acrobat 4 years of training 1 year recreational Total: 11 years | Freelancer / A few periods as a regular | Aerial numbers (tightrope) in circus or corporate Casting agency | #1 Lumbar sprain #2 Thigh and hip contusions Both related to the same fall. #3 Right shoulder pains | Fall during a show (leg and back) | 2 weeks | Rejected | Physio- therapy Osteopathy | Assumes the costs due to CSST rejection |
| 2 | M 55 | 35 years as a professional | Manager/ Freelancer Trainer Coach | Artistic director Clown | #1 Lumbar sprain #2 Worn cartilage in right hip | #1 Fall during a show | #1 1.5 day | N.A. | #1 Chiro. & conventional medicine #2 Chiro & physio Change of modus operandi | N.A. |
| 3 | F 23 | 4 to 11 years in dance and gymnastics. In circus arts for | Freelancer | Contortionist Aerialist | Several repetitive stress and traumatic injuries | Fractures, dislocations, sprains, tendonitis, | No | Yes as employee for physio and massage | Employee: physio Freelancer: | Individual as freelancer with private for Tx and |

⁶ Reminder: this concerns an occupational disease or the presence of chronic, often incapacitating pain.

⁷ Any reference to injuries means events that did not arise out of or in the course of work, or that are not work-related.

⁸ “Industrial accident” means a sudden and unforeseen event arising out of or in the course of work (as defined in the AIAOD).

| | | | | | | | | | | |
|---|------|--|--|-----------|----------------------------------|--------------------------------|----------------------------------|------------------|------------------------|--|
| | | 12 years, including 7 professionally. Total 19 years | | | | back pains | | therapy expenses | massage and osteo | group as employee |
| 4 | F 29 | Training Circus studies at age 11 and professional at 16 Total of 18 years | Alternating as employee and freelancer Currently freelancing as artist and trainer | Aerialist | #1 Major stress in a few periods | #2 Torn ligaments in one ankle | #1 3-month period #2 4 months | #2 Yes | Physio, massage, osteo | As employee: group insurance As freelancer: herself |

Table 2: Dancers

| Worker | Sex/ Age | Seniority in the practice | Employment status (principal/ secondary) | Jobs | Work-related health history ⁹ | Injuries ¹⁰ / Industrial accidents ¹¹ | Work stoppage | Compensation by the CSST | Therapy | Insurance (ind. / group) or individual |
|--------|----------|--|--|---|--|---|----------------------|--------------------------|--|--|
| 1 | F 30 | Dances since age 6 2 to 3 classes/ week | Freelancer from age 18 to date | 5 dance companies overlapping over time + contracts with young creators "Regular" contract with | #1 Fracture of the ischioms (age 14) with after-effects #2 Torn hamstrings #3 Back injury #4 Repetitive stress injury in the feet | #5 Injury to knees #6 Back injury | #5: No #6: No | Yes Yes | #1 #2 #3 #4 multiple #5 and #6: multiple | No insurance Worker assumes excess costs + certain Tx |

⁹ Reminder: this concerns an occupational disease or the presence of chronic, often incapacitating pain.

¹⁰ Any reference to injuries means events that did not arise out of or in the course of work, or that are not work-related.

¹¹ "Industrial accident" means a sudden and unforeseen event arising out of or in the course of work (as defined in the AIAOD).

| | | | | | | | | | | |
|---|------|---|---|--|--|---|---|--------------------------------|---|--|
| | | | | a company since 1999 Teaching since 2001 Choreography since 1999 (solo/duo) Summer: Festival (logistics) | #5 Injury to knees #6 Back injury Periodically a little "depressed" due to fear of not having a contract Always dancing with some pain, which has intensified in the past 2 years | | | | | |
| 2 | F 43 | Dances since age 5. Daily fitness training since age 12 (2-3 hrs) Professional since age 19 | Regular (6 years) Then freelancer Teacher Regular again for past 8 years | 4 dance companies including one abroad Dance company | | #1 Ankle injury during an audition #2 Torn calf #3 Torn meniscus | #1 #2 No #3 Yes, 3 months later. 7-week stoppage | #1 No #2 #3 Yes | #1 #2 #3 Physio #3 Operation Preventive treatment in osteo once a month | #1: No insurance Worker assumes excess costs + certain Tx #2#3 Group insurance |
| 3 | M 35 | Dances since age 18. Professional since age 20 | Regular (2 years), then freelancer | Two dance companies | Pain in the knees starting in 1995 and locking from time to time | #1 Left knee problem (floating meniscus) #2 Meniscus problem in right knee | #1 No initially #2 Yes | #1 No #1 Yes | #1 Physio and then surgery #2 Physio and then surgery | T assumes the costs of Tx |
| 4 | M 53 | Dances since age 17 Starting at age 18, 6h of fitness training 4 days/week | Freelancer Choreographer Volunteer director | Multiple creators Creative company until 1990, then paid | Back pain with slow onset in the 1980s Shoulder pain with onset since | #1 Broken toe #2 Sprained ankle #3 Elbow in the eye #4 Severe | #1 #2 #3 : No | #1 #2 #3: No #4 #5: Yes | #1 #2 #3 #4 #5: surgery and multiple Tx Massage | No group or individual insurance Worker assumes the |

| | | | | | | | | | | |
|---|------|--|---|---|---|---|---|---|--|--|
| | | Professional at age 21 | Reception clerk Teacher | afterwards Cultural enterprise since 1971 | 1998 | back injury #5 Torn knee ligament | #4 Yes (3 months) #5 Yes) | | (once/week since 1984 Osteo Special fitness training | costs of Tx |
| 5 | F 44 | Dances since age 10 Professional since age 17 | Two long regular jobs (10 years and 17 years) and galas as freelancer | Mainly dancer with a ballet company Self-employed for some galas | #1 Ankle pain #2 Sporadic back pain | 3 sprains in all: #3 in training, #4 with first company, and #5 with last company (ankle) #6 in back #7 One elbow injury | #5 3 months #6 3 months | #3 and #4 no #5 yes #6 yes | Physio, massage, etc. | Preventive Tx paid by the company. |
| 6 | M 38 | Dances since age 8 2 to 3h/day since age 14 | Regular until 2001 Some contracts with other choreographers since 1998 Since 2001 Freelancer Actor Teacher No longer dances since 2004 | Dancer with a ballet company | #1 Sporadic back locking and gradual onset of pain since 1990 #6 Onset of pain in daily living from 2001 to 2004. Chronic pain since then | #2 Stress fracture of the tibia as apprentice # 3 Crackling in the knee at first and then torn meniscus # 4 Back pain # 5 Torn meniscus (other knee) | #1 No #2 No initially Yes three months later 3-month stoppage # 3 Finished the tour and then 5-week stoppage later for operation # 4 No # 5 Yes: 5-week absence # 6 No | Yes Yes Yes Yes Yes | Yes Yes Yes Yes | Yes but it has never been used. Didn't know what purpose this insurance served. Starting in 2001 worker assumes excess costs + certain Tx |
| 7 | F | Dances since | Regular for the | Very | #1 Back injury at | #3 Back | #3 No | Yes | #1 #2 #3 | Greater |

| | | | | | | | | | | |
|--|----|--|--|--|---|---|--------------------------------|-------------------------|----------------|---|
| | 43 | age 13 In training 6 days/week from ages 17 to 23 | first 2 years of her career with a company and freelancer since then | diversified freelance dancer Choreographer Teacher | age 17 during training. #2 Injury to knees at age 17 during training. Sporadic back pain. | injury #4 Fractured foot #5 Torn calf muscle membrane in 1999 Several minor injuries during 15 years as a freelancer | #4 Yes #5 Yes No | Yes No No | #4 #5 Multiple | individual responsibility for treatment |
|--|----|--|--|--|---|---|--------------------------------|-------------------------|----------------|---|

Table 3: Musicians

| Worker | Sex/ Age | Seniority in the practice | Employment status (principal/ secondary) | Jobs | Work-related health history ¹² | Injuries ¹³ / Industrial accidents ¹⁴ | Work stoppage | Compensation by the CSST | Therapy | Insurance (ind. / group) or individual |
|--------|-------------|--|---|--|--|---|---|--------------------------------------|---|---|
| 1 | F 44 | Plays since age 6 = 38 years of playing | Regular | Orchestra (cello) only (previously: 2 other ensembles) | #1 Stress→ burnout #2 Herniated lumbar disc #3 Tendonitis (left shoulder) | Fall (back: sports) Fall (right or left shoulder? - recreation) | #1: Yes Other: No | No | #1: yes (psychologist) #2 and #3: multiple | #1: <i>sick leave.</i> #2 and #3: <i>worker</i> <i>assumes the</i> <i>excess costs</i> <i>+ certain Tx</i> |
| 2 | M 46 | Plays since age 13, i.e., 33 years. | Regular | Orchestra (trombone) + teaching Conservatory | #1 Focal dystonia (respiration / cheeks) #2 Shoulder pain (years ago) | 0 injury 0 industrial accident | #1: Yes #2: No | #1: No, mp claim (Dx problem) | #1: multiple + Change of playing method | #1: <i>group</i> <i>insurance</i> <i>(salary</i> <i>insurance)</i> <i>Worker</i> <i>assumes cost</i> <i>of Tx</i> |
| 3 | M 44 | Plays since age 4: cumulative 40 years of playing | Regular | Orchestra (violin) + teaching Conservatory + chamber music | #1 Tendonitis in wrist #2 Epicondylitis in rehearsal #3 Neck / tension Herniated cervical disc | 1 right arm injury (curling but simultaneous: bcp performed by university) | #1: No #2: No #3: Yes on 2 occasions | #3: yes for both times | #3: multiple + change of playing method | <i>CSST</i> <i>assumes Tx ;</i> <i>#2: may have</i> <i>paid for Tx</i> |
| 4 | F 65 | <i>Plays since</i> <i>age 13; 52</i> <i>years of</i> <i>playing</i> | <i>Regular</i> | <i>Orchestra</i> <i>(cello)</i> <i>+ chamber</i> <i>music</i> | <i>#1 Pain in left</i> <i>wrist and hand</i> <i>(carpal tunnel</i> <i>syndrome?)</i> <i>#2 Pain in right</i> | <i>0 injury</i> <i>0 industrial</i> <i>accident</i> | <i>#1: Yes</i> | <i>#1 and #2: no</i> <i>claim</i> | <i>#1 and #2:</i> <i>multiple + Dx</i> <i>exams</i> <i>Change of</i> | <i>Group</i> <i>insurance</i> <i>(salary</i> <i>insurance?)</i> <i>Private</i> |

¹² Reminder: this concerns an occupational disease or the presence of chronic, often incapacitating pain.

¹³ Any reference to injuries means events that did not arise out of or in the course of work, or that are not work-related.

¹⁴ “Industrial accident” means a sudden and unforeseen event arising out of or in the course of work (as defined in the AIAOD).

| | | | | | <i>shoulder blade + shoulder</i> | | | | <i>playing method</i> | <i>insurance + individual for Tx</i> |
|---|---------|---|---|--|---|--|---|----------------------------|---|---|
| 5 | F 38 | Plays since age 7: cumulative 31 years of playing. | Regular only 2 years (previously : freelancer ++) | Orchestra (violin) + 1 ensemble + private classes | #1 Stiff neck #2 Tendonitis in left wrist #3 Left shoulder pain | 1 left shoulder injury during fitness training (Nautilus) 0 industrial accident | # 1 and 2: yes, during conservatory studies #3: No but management of contracts | #2 and #3: No, no claim | #1, #2, and #3: multiple + change of method since conservatory (#1 and #2) | <i>Worker assumed cost of her absences (refusal of contracts) + her Tx</i> |
| 6 | M 30 | Plays and sings since age 7; i.e., 23 years | Regular Freelancer | Administration + organizations Rock music (singing) | Neck pain ("trash") | 0 injury 0 industrial accident | None | N.A. ¹⁵ | None (reorientation to another type of singing) | N.A. |
| 7 | M 30 | Says he makes music since age 15. | Regular Freelancer | Administration Rock music | Ad hoc wrist pain (1 x) | 0 injury 1 fall from a truck (back) while on tour | None | No | None | No |
| 8 | F 47 | Completed her training in singing at age 25; singing for past 22 years. | Regular Freelancer | Administration Singing (orchestra + opera + ensembles + masses, etc.) | #1 Burnout #2 Loss of a tooth while singing / root canal Tx / prosthesis | 0 injury #3: 1 neck accident during a dress rehearsal (falling equipment / stage) | #1: yes (about 2 months) #3: 1 day | #1: No #2: No #3: No | #1: psychologist #2: dentist #3: exam ok (emergency) | #1: salary insurance? #2: private insurance didn't want to pay for dentist #3: N.A. |

¹⁵ N.A.: Not applicable (i.e., the situation is not appropriate to it).

Table 4: Actors/Comedians

| Worker | Sex/ Age | Seniority in the practice | Employment status (principal/ secondary) | Jobs | Work-related health history ¹⁶ | Injuries ¹⁷ / Industrial accidents ¹⁸ | Work stoppage | Compensation by the CSST | Therapy | Insurance (ind. / group) or individual |
|--------|-------------|---|---|-----------------------------------|--|--|---|-----------------------------|---------------------------------|--|
| 1 | M 50 | Since age 22, i.e., 28 years. | Employee | Production manager | Ankle pains | 23-foot fall from a ladder Multiple fracture | 2 months and return half-time for 5 months | Yes | Medical and orthopedic | N.A. |
| 2 | F 45 | First contact at age 15 and professional at age 23 (22 years in the craft) | Self-employed | Actress | Back pains | Multiple fracture #1 Fall from a ladder, #2 in a trap and one incident without injury | #1 2 weeks #2 No | No | Medical | No |
| 3 | F 50 | 28 years in the craft | Self-employed | Actress and visual artist | Back pains following a herniated disc | #1 Accident on stage with prop #2 Fall from a set element | #1 No #2 | #1 No #2 Yes | Medical | N.A. |
| 4 | H 49 | 28 years in the craft | Self-employed | Actor, director and trainer | Back pains following a herniated disc | #1 Facial bruise following a falls #2 Prolonged stress herniated disc | #1 No #2 3 months | #1 No #2 No | Osteo, physio, massage, etc. | Paid by the actor. |

¹⁶ Reminder: this concerns an occupational disease or the presence of chronic, often incapacitating pain.

¹⁷ Any reference to injuries means events that did not arise out of or in the course of work, or that are not work-related.

¹⁸ “Industrial accident” means a sudden and unforeseen event arising out of or in the course of work (as defined in the AIAOD).

| | | | | | | | | | | |
|---|---------|-----------------------|---------------|-------------------|----------------|--|--------------------------------|--------------------|------------------------|------|
| 5 | H 50 | 25 years in the craft | Self-employed | Actor and trainer | Back pains | Bruised shoulder | No | No | Medical (physiologist) | N.A. |
| 6 | F 60 | 39 years in the craft | Self-employed | Actress, host | Shoulder pains | #1 Fall: fractures, contusion, semi-coma #2 Incident without injury: Fall from a ladder | #1 Yes (6 months) #2 No | #1 No #2 No | #1 Medical | N.A. |

APPENDIX 3

Group interview grid with producers

- 1- Round table: Brief presentation of their position and duties
- 2- The main stages in preparation of a production (main lines, challenges and issues).
 - Programming
 - Creation
 - Setup and rehearsal
 - Show
 - Post-production
- 3- Choice and selection criteria of the crew at these different stages
 - Interdisciplinarity and alignment of roles
 - Stability
 - Special knowledge
 - Availability
- 4- Main constraints (for example, time, availability of human and financial resources, technical)
 - For the production
 - For OHS
 - Links between the production and OHS
- 5- Reconciliation of creation and safety
- 6- OHS issues:
 - At what times?
 - For what aspects?
 - Subcontracting?
- 7- OHS management
 - Registers and data
 - CSST
 - Mutual
 - For the last year
- 8- Best and worst situations: complexity associated with
 - The owner and sole user of the theatre
 - Touring
 - Intermediate cases
- 9- Evolution of practices over the past 5-10 years (intensity, complexity)
- 10- Difference and links with presenters, locators, etc.

Individual interview guide with artists

- 1- What art do you currently practice?
- 2- What is your career path?
 - First contact with your art
 - Training
 - Your different jobs
- 3- What difficulties have you experienced in your career?
 - Finding a school
 - First jobs
 - Freelance work
- 5- Have you suffered any injuries during your career (at work or off work)
 - Accidents
 - Injuries
 - Do you still have pains?
 - Did you rely on insurance?
- 6- What were the consequences of these events?
 - Career reorientation
 - Change in method of playing
 - Adoption of special strategies
 - Mechanisms for increasing individual responsibility
- 7- To what do you attribute these injuries?
 - The factors involved
 - The people involved
- 8- How do you see the future of your career?
 - Retirement at what age?
 - A possible reorientation