

INTRODUCTION

Each year, complaints are filed at the Quebec and Canadian Human Rights Commissions by individuals who have been refused employment because their hearing sensitivity does not meet the standards required by the employer. This paper presents four recent cases. The first case deals with a young fireman who, after having completed his training in a specialized school, was refused a job based on a unilateral hearing loss which had not been detected before entering the school. The second case relates to a police officer having a unilateral hearing loss which does not meet the criterion of a federal employer. The two last cases refer to two railroad workers who failed the pre-employment hearing examination because they were not allowed to wear their hearing aids during the tests. These four cases will be discussed with the purpose of deriving a scheme of analysis which will take into consideration the Human Rights Acts and the current knowledge in the fields of audiology and ergonomics.

FIRST CASE: THE YOUNG FIREMAN

According to employers in the field of firefighting, job candidates must be physically fit, and their hearing thresholds must be within normal limits. In fact, the rejection criterion is: "Hearing acuity loss by audiometric test of 20 dB or more for the speech frequencies (500-1000-2000 Hz) in either ear, or loss of speech reception of phonetically balanced words at or below 90 percent normal reception for either ear". The auditory tasks associated with firefighting are multiple. For instance, detection, identification, recognition and localization of sound sources in quiet and noisy surroundings should be performed in a reliable manner due to the possible threat to life if an auditory signal is missed. The young fireman in question filed a complaint after failing a pre-employment hearing test. He had not noticed his hearing loss prior to the test. In fact, the young man had a mild to moderate sensorineural hearing loss in the low frequencies, ranging up to 2 kHz. At the time of the test, the etiology of this hearing loss was not identified. He had passed all his theoretical and practical exams during his training and, by his account, had demonstrated that he could adapt himself and perform the task requirements of his job and those of daily life.

SECOND CASE: THE POLICE OFFICER

In this case, the subject suffered from a severe unilateral sensorineural hearing loss in the high frequencies from 2 to 8 kHz. The probable cause was exposure to gunfire during his training as a police officer or to tire explosion when the subject was a teenager. Like the fireman, this individual had never noticed his hearing problem prior to the evaluation provided by the employer's medical service. According to the employer's own regulations, the candidate did not meet the recruiting standard which stipulated that: "Hearing loss [should be] no greater than 30 dB in both ears in the 500 to 3000 Hz frequency range". The auditory tasks associated with police work duties are multiple and unlike the previous case, the employer has detailed in a document all the auditory tasks related to the job asked by the complainant. This case went to court last January. According to the E.N.T. specialist called by the employer to testify at the Canadian Human Rights Commission Tribunal, the audiogram is a reliable and valid tool to judge if candidates are able to perform all the auditory tasks detailed in the employer's document.

THIRD & FOURTH CASES: THE RAILROAD EMPLOYEES

In the last few years, the Canadian Human Rights Commission has received a number of complaints concerning the hearing standard included in Transport Canada's Order No. 0-9. All Canadian railway companies have to comply to the articles contained in this Order. This standard draws a distinction between new candidates and those already employed by the company. For instance, the relevant articles of the Order stipulates that:

1) "No railway company shall accept for entrance to service in occupation referred to in Schedule I an applicant who was less than 20/20 hearing when tested by means of human voice or who has a hearing loss greater than 20 dB at frequencies of 500, 1000 and 2000 Hz when tested with an audiometer referred to in subsection 24(1)".

2) "No railway company shall retain in an occupation referred to in Schedule I an employee (a) who has hearing that is less than (i) 15/20 in one ear and 5/20 in the other ear, or (ii) 10/20 in each ear, or (b) who has a hearing loss of 40 dB or greater in each ear at frequencies of 500, 1000 and 2000 Hz, except in assignments in which the hearing loss does not prevent the proper and safe performance of the assignments."

In an other part of the Order, it is clearly specified that: "No candidate shall wear a hearing aid during the hearing test conducted pursuant these Regulations".

Both of the railroad employees manifested a bilateral moderate sensorineural hearing loss and both had to wear hearing aids (one subject had one aid in the right ear and the other had two aids). With their hearing aids, their thresholds were in the range of 30 to 40 dB and the speech intelligibility scores were 80% in silence, at a conversational level of 45-50 dB. It is the complainants' position that, regardless of their uncorrected hearing, their corrected hearing enables them to perform all the duties associated with the jobs they are asking for. On the other hand, Transport Canada holds that there are many problems in relying on hearing aids alone to overcome a handicap, and, therefore, it would not be prudent to allow railway service employees to use such aids. However, it could be noted that no detailed description of the tasks have been provided by the employers.

DISCUSSION

In the analysis of these four cases, different ethical and scientific aspects must be taken into consideration. First of all, it is important to clearly understand the Quebec or Canadian Human Rights Acts. Secondly, the analysis should be based on a good knowledge of the auditory abilities required to perform the job and the auditory status of the worker who is seeking employment. Thirdly, adaptation of the workplace or the use of assistive listening devices can be considered.

The Canadian Human Rights Act clearly prohibits discriminatory policies and practices in matters related to
employment. Section 7 states that it is a discriminatory practice to refuse to employ or continue to employ any individual or in the course of employment to differentiate adversely in relation to an employee on a prohibited ground of discrimination. Section 10 prohibits a policy, practice or agreement affecting recruitment, referral, hiring, promotion, training, apprenticeship, transfer or other employment-related matter if it deprives an individual or class of individuals of any employment opportunities on a prohibited ground of discrimination. Paragraph 14(a) of the Act provides exception to these prohibitions: it is not a discriminatory practice to refuse, exclude, expulse, suspend, limit, specify or prefer in relation to any employment if the employer establishes the practice to be based upon a bona fide occupational requirement (BFOR). To insure that individuals may be assessed equally, the BFOR policy does attempt to define parameters for the evaluation of an individual's performance or capacity to perform. In this respect, only the employer cited in the second example tried to prove that his hearing criterion was valid considering the list of auditory tasks the policeman had to perform. The final court judgment is not yet known however. All the other employers were convinced that the audiogram provided sufficient evidence of a candidate's ability or inability to meet the job requirements. According to these employers, the most important aspect to consider is the safety of the worker and his colleagues. The Commissions have stated that considerations of risk shall have diminishing weight according to whether they relate to the safety of others, the safety of the individual or the material loss.

With respect to the relation between auditory demands and capacities in the workplace, Hétu has published two papers dealing with this topic. He states that job requirements involving auditory capacities are almost always based on medico-legal definitions of hearing that were adopted in order to compensate workers affected by noise-induced hearing loss. In fact, in such definitions, a certain amount of hearing loss demonstrated by the audiogram is the only tool used by most companies. It is now well known that if the auditory task is done in noisy surroundings, the frequency selectivity of the auditory system will be crucial. The temporal and spatial resolution are also important factors in many tasks. For instance, the localization of an alarm on a heavy truck moving in reverse on a noisy construction site is clearly important for the worker's safety. Moreover, speech perception in silence and in noise is not well predicted by the audiogram since it involves peripheral and central auditory processing. In short, it is impossible to predict all aspects of auditory performance based on a measurement of auditory sensitivity alone. In the four cases presented earlier, the audiogram was used to select candidates without considering the other auditory capacities except in the case of the fireman where the speech perception in silence was also considered. If we consider that most of the auditory tasks are performed in contexts where background noise is present in various levels, this tool is not necessarily the most useful means of auditory assessment.

With respect to the adaptation of the workplace, Hétu notes that we should explore all the facilities which might compensate for the functional limitations associated with hearing loss. For example, the workplace may be adapted by reducing the background noise or the reverberation time and by selecting well designed warning sounds. Assistive listening devices such as hearing aids, FM system or infra-red system can also be considered. Concerning hearing aids, one important question often asked is whether or not hearing deteriorates if hearing aids are worn. A recent study by Hétu demonstrated that hearing aids can be used as protective devices when the mold is closed and as a warning sounds detector by using the FM technology, for example. More research is needed in that field in order to apply the available technology. An other reason given by employers to refuse hearing aids is the possibility that the worker may loose it or that the batteries weaken with use. Hearing aid dealers and audiologists are aware of these risks but, it is now possible to find on the market hearing aids which are worn deep in the canal. When the battery fades, a warning signal informs the user to change it. Of course, each case has to be evaluated individually since some hearing loss can not be compensated sufficiently by intra-canai hearing aids.

CONCLUSION

In summary, the actual hearing criteria used by most employers should be revised in order to improve the selection process of new employees. Although some audiological tools are now available that can provide a comprehensive assessment which is not restricted to auditory sensitivity. Measurement of frequency selectivity is one example. Other tools would have to be developed to assess localization abilities, for example. It is also hoped that the cases presented here will enable the Human Rights Commissions to encourage employers to review their hearing criteria and to recognize that the audiogram is not a good predictor of the auditory capacities required in the real life situations. Employers will have to develop, with the help of ergonomists and audiologists, precise description of auditory tasks related to specific jobs so as to provide appropriate assessment of a candidate's abilities in fulfilling job-related tasks. Such assessment will also have to take into consideration possible adaptation of the workstation and the use of assistive listening devices. Ergonomists are used to deal with this type of relations between requirements and capacities in many fields such as muscular-skeletal problems and visual acuity. Unfortunately, very few studies have dealt with auditory capacities and job requirements. There is an urgent need for more studies in that field.

References