The Visual Acuity and Social Issues of the Homeless Population in Toronto

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Abstract
We investigated the visual acuity of homeless people in Toronto and assessed the relationship of visual acuity to several determinants of health including age, education, attitudes and length of time in the homeless state. An interview questionnaire and a best-corrected near and distant visual acuity exam were conducted in a population of homeless men who were residing at the Good Shepherd Center, a homeless shelter in Toronto. We discovered that 56% of homeless individuals suffered from poor visual acuity and 54% of these individuals could achieve significant improvement in vision through the use of a pinhole. Elderly, chronically homeless men were more likely to suffer from poor visual acuity. Our study suggests that through effective screening of visual problems and support for free glasses, the quality of life and earning potential of homeless individuals in Toronto can be increased. Further recommendations are discussed.

Introduction
The United Nations defines absolute homelessness as the condition of people without physical shelter who sleep outdoors, in vehicles, abandoned buildings or other places not intended for human habitation. Homelessness is a widespread social problem. In 1996, almost 26,000 people used the shelter system in Toronto. This number greatly underestimates the number of homeless people in Toronto because it does not include the people who are living on the streets. The prevalence of homelessness in Toronto is increasing. The Toronto Homelessness Action Task Force reported that between 1992 and 1998, shelter use increased by 80% for youths, 78% for single women, 55% for single men, and 123% for families.

Ocular diseases among the homeless have not been well-studied. Poor visual health has important implications for the homeless individual since it not only decreases an already low quality of life, but also reduces earning potential. To better understand how to improve the vision of homeless people, we will discuss the unique health and social issues associated with this segment of the population.

Homeless people, in general, are at high risk of morbidity and mortality. The mortality rates for homeless men in Toronto are 8.3 times higher than the mean for 18-24 year-olds. Similarly, homeless people suffer from many debilitating health problems. The most common medical illnesses among the homeless are seizures, chronic obstructive pulmonary disease, arthritis, and other musculoskeletal disorders.

Access to quality health care in the homeless population is also compromised. In Canada, many homeless people do not have a health insurance card because it has been lost or stolen. Seven percent of the homeless people in Toronto have been refused health care services at one point due to lack of health insurance cards. Furthermore, as a result of barriers to accessing preventative health care, homeless people most often obtain care in the emergency department. Sachs et al. found that despite the high usage of medical services, many homeless people wait until their medical problems become serious before seeking treatment.

According to one popular theory by Gelberg et al., much of the life of homeless adults centers on meeting their basic needs for food, shelter, and safety, which are perceived as higher priorities than other health care needs. These “competing priorities” are thought to be major barriers to health care. Gelberg and associates found that subsistence difficulty had an inhibiting effect only on discretionary health services such as a regular source of eye care. Therefore, subsistence difficulty may contribute to the pattern whereby homeless people do not seek preventative care or care in the early stages of illness, but delay seeking care until their need is more acute. This may contribute to the high rate of hospitalization among homeless people, which is due to neglected illness that could have been prevented if identified earlier in the course of the disease.
Specific barriers for management of common medical problems may also lead to poor visual outcomes. Diabetic retinopathy, the leading cause of blindness in North America, is caused by diabetes mellitus. Hwang et al. studied the management of diabetes mellitus among homeless people in Toronto. They found that seventy two percent of the respondents experienced difficulties managing their diabetes. Poor glycemic control increases the progression of diabetic retinopathy leading to a poor visual outcome.

Few studies have investigated the visual status of the homeless. In an extensive literature search, only one study specifically examined various ocular diseases among the homeless people. This study by Ho et al. investigated ocular disorders among homeless and non-homeless poor in Los Angeles. They found that significantly more non-homeless poor people were diagnosed with uncorrected poor visual acuity worse than or equal to 20/50, astigmatism, and myopia than were a control group. In addition, they found a higher prevalence of glaucoma and cataracts in both the non-homeless poor and homeless people. Ocular disorders among the homeless people in Toronto has never been studied. Our purpose was to conduct a preliminary investigation of the visual acuity of the homeless people in Toronto and to investigate any relationships between poor visual acuity and various social and health-related factors common in this population.

Methods

Ethics approval from the University of Toronto was obtained. All participants in the study were volunteer men who were patients of a nurse at the Good Shepherd Center homeless shelter. Every attempt was made to include other shelters in Toronto and women in the study, but we were unsuccessful as participating in such studies was against the policy of most other shelters in the city. The authors conducted an interview questionnaire, which involved collecting names, age, ethnicity, detailed ocular and medical history, and other determinants of health variables including education, length of time of homelessness, smoking, drug and alcohol use, attitudes toward physicians, and preferences for physician’s office location. Special attention was directed at medical conditions with ocular manifestations such as diabetes and hypertension. The best-corrected (vision with glasses) near vision was measured using a Rosenbaum pocket vision screener at 14 inches from the participant. Best-corrected distant vision was subsequently assessed at 20 feet with a Snellen eye chart. Patients who had distant vision of 20/50 or worse had their vision re-assessed through a pinhole. The pinhole provided an indication of whether the problem was refractive or non-refractive and whether the vision could be improved with glasses. Visual acuity data were collected from 30 men. The average age was 49.7 and the age range was 33-70.

Results

Figure 1a shows that 43 % of individuals had vision worse than 20/70 distant or J 16 near vision. 54 % of individuals had vision worse than 20/50. Figure 1b indicates that at least 54 % of homeless individuals with poor visual acuity could achieve significant improvement (at least 2 lines on the Snellen eye chart) through the use of a pinhole. This provided an indication that the majority of participants in our study who had poor visual acuity had a problem in refraction rather than other eye pathologies.

Figure 2 indicates that a higher percentage of individuals (83 %) over the age of 50 have poor visual acuity, than individuals who were 40-50 (50 %), and individuals who were under the age of 40 (33 %). Twenty-five percent of the participants had been
homeless for more than 6 years, while 54% had been homeless for less than a year. Furthermore, Figure 3 indicates that individuals who were homeless for more than 3 years were more likely to have poor visual acuity (90%) than those who have been homeless for less than 1 year (41%). We did not find any relationship between poor visual acuity and education, preference for doctor’s location, attitude toward physicians, smoking, drug or alcohol use in the homeless people in our study.

Discussion
A high number of individuals (56%) in our study have visual acuity worse than 20/50. Furthermore, the majority of the homeless individuals (at least 54%) could achieve significant improvement in vision with the use of glasses. The study by Ho et al. also found that significantly more non-homeless poor people and homeless poor were diagnosed with uncorrected poor visual acuity worse than or equal to 20/50, and other eye disorders. The “competing priorities” theory discussed above may affect the utilization of eye services. With other basic needs to meet such as food, shelter, and safety, the homeless or the non-homeless poor individuals are not as concerned about the quality of their vision.

A much higher number of individuals over the age of 50 have poor visual acuity (83%) compared to the number individuals under the age of 40 (33%). Therefore, the assessment of visual acuity in the elderly homeless warrants special attention. In addition, we found that a higher percentage of people who have been homeless for more than 3 years have poor visual acuity (90%) in comparison to the percentage of individuals who have been homeless for less than 3 years (41%). This may suggest that chronically homeless individuals may be more at risk of suffering from poor visual acuity. Many factors, such as the length of time since the last eye exam, may account for this observation.

In our study, sixty three percent of individuals preferred health care at the doctor’s office. In contrast, Hewett’s study investigating access to primary health care for the homeless population found that 84% of individuals preferred a special homeless service. The inconsistency between these observations may be related to the location of the study (UK vs. Canada), and the wording in the questionnaires.

Our results indicate that a high percentage of homeless individuals in Toronto suffer from poor visual acuity and that most of these individuals could achieve significant benefits from the use of glasses. Elderly, chronically homeless men were more likely to suffer from poor visual acuity. A study by Ho et al. investigating visual acuity in Los Angeles found similar results. A similar study should be repeated with a larger sample of homeless men and women in Toronto.

An initial step to improving the quality of life for these individuals is through effective screening. The nurse at the Good Shepherd Center indicated that the outcome of our study has made her more alert in monitoring the visual acuity of her patients. It is also important for family doctors and other health care professionals providing primary care to the homeless population to screen for visual problems even if the individual does not complain about his or her vision. A program whereby an optometrist tests the visual acuity of the homeless people is also likely to be beneficial. The decision of whether to send patients to the optometrist or to test the vision in the shelters may be informed by the opinions of the homeless people. It has been discussed that 84% of the homeless respondents in one study preferred a special homeless service. In addition, once homeless individuals with poor visual acuity have been identified, programs to offer subsidized glasses should be made available. Fortunately, the individuals identified in our study with poor visual acuity were provided free glasses through a special program. However, most shelters do not have a similar program. Therefore, government support for glasses can be very beneficial and help to improve the quality of life as well as the earning potential for many homeless people with visual problems throughout Toronto.

References