

Canadians and risks to their visual health

A summary of Canadians' knowledge and understanding of risks, a behavioural study and recommendations

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Document developed in consultation with Drs. Diana Monea and Jack DiBerardino, and the support of Essilor Canada

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I. Introduction

It's no wonder that vision has been the subject of extensive scientific study in recent decades. Eyesight plays a vital role in our lives, enabling us to get around, learn and maintain relationships on a daily basis. Currently, major areas of research include eye protection, vision problems and illness prevention, as well as external or behavioural risk factors. As current lifestyles become more sedentary with the use of smartphones, computers, televisions and digital tablets, it has become clear that our eyes are exposed to new situations and risks.

How do Canadians perceive these risks? Are they fully aware of them and do they properly understand them? Are they making the right choices to protect themselves and preserve their eyesight?

In response to these questions, this discussion paper presents a situational analysis of current knowledge, the understanding of visual health risks, and Canadians' behaviours regarding these risks, based on an omnibus survey of 1,200 Canadians conducted by Ipsos in June 2017.

This survey's objectives were to:

- Assess Canadians' knowledge of external and behavioural risk factors;
- Assess their understanding of these risks according to level of importance;
- Learn about the visual health issues Canadians have experienced over the past 12 months, as well as their attitudes toward these issues;
- Highlight differences of perception and attitude between men and women, age groups and provinces.

In addition, this survey's results and findings were submitted to two eyecare experts to provide a qualitative and informed analysis, based on their knowledge of visual health risks and practical experience. Experts have also provided additional insights on these risks and behaviours through several talking points and advice to Canadians, which are included in the final section of this document.

Methodology

Ipsos conducted a nationwide online omnibus survey on behalf of Essilor Canada from June 5 to 7, 2017. They surveyed a sample population of 1,200 Canadians aged 18 and over, which was determined using the quota method. It was then weighted by national demographic variables (age, sex and region) to ensure that it was an adequate representation of Canada's overall adult population.

About Essilor Canada

Because Canadians have visual needs that impact their lives, and because we care about their vision, Essilor Canada's mission is to *Improve Lives by improving sight*. It translates into everything we do: our products, services, technologies, trainings, philanthropic initiatives, as well as in our involvement in health, environment and safety.

Present in Canada since 1972, Essilor is proud to contribute to the growth of our country's economy with over 1000 employees, 3 digital surfacing laboratories and 40 regional and partner laboratories. Essilor Canada is a subsidiary of Essilor International, the world leader in ophthalmic optical products that invests heavily in research and development to create new products always better adapted to the needs of wearers. Essilor creates, manufactures and personalizes a wide range of corrective lenses and coatings that are distributed through eyecare professionals and help prevent visual health issues, correct and protect vision. Canadians can entrust their vision to Essilor brands such as Varilux®, Eyezen™, Crizal®, Xperio® and Transitions®.

II. Experts presentation

Dr. Diana Monea

Dr. Diana Monea graduated with a Doctor of Optometry degree from the University of Waterloo's School of Optometry in 1978. She is the founder, owner and manager of three optometry clinics providing comprehensive eyecare in two provinces: one in Regina, Saskatchewan and two in Calgary, Alberta.

Dr. Monea is committed to using best practices in diagnostics and the latest digital imaging equipment for eye exams. In 1994, she became the first optometrist in Canada to design a website dedicated to eye health information: www.drhonea.com. Her current website is www.eyehhealthcentres.com.

In addition, she was the first optometrist in North America to develop an optometry case study profile using digital images, corneal topography and field analysis based on eye exams from her clinical practice.

In 2016, Dr. Monea was honoured by the Calgary Chamber of Commerce for her leadership, and recognized by the Alberta Association of Optometrists for the quality of her service. She is a true example of lifelong learning and the quest for excellence.

Dr. Jack DiBerardino

Dr. Jack DiBerardino received a Bachelor of Science degree from the University of Waterloo before going on to complete a Doctor of Optometry degree in 1986 from the same institution. In 1995, Dr. DiBerardino received a certificate in the treatment and management of ocular disease from Northeastern State University.

Dr. DiBerardino is a part-time staff optometrist at TLC Laser Eye Centers. Thanks to his experience in the eyecare industry, he is a member of many advisory boards. He is also a member of the Ontario Association of Optometrists and is certified by the Ontario Ministry of Health and Long-Term Care as an assistive devices plan (ADP) authorizer and vendor.

Dr. DiBerardino is based in Orangeville, Ontario where he owns a busy practice employing eight doctors and over twenty full-time staff.

III. Highlights and key findings

a. Knowledge of risk factors

In the survey's introduction, Canadians were asked to assess their knowledge of visual health risks (don't know anything, know a little, know fairly well, know very well).

Over half of Canadians (59%) believe they know fairly or very well the risks that may affect their visual health.

- Young Canadians seem to be more knowledgeable of risks: 65% for ages 18–34, compared to 57% for ages 35–54 and 58% for ages 55 and over.
- Residents of the Atlantic provinces seemed more knowledgeable of the risks (66%) compared to their counterparts in Ontario (58%), Western provinces (60%) and Quebec (59%).

b. Understanding of risk factors

The survey asked Canadians how important they consider external and behavioural risk factors for visual health (not important, not very important, fairly important, very important).

According to Canadians, the two biggest external risk factors for visual health are exposure to UV rays on sunny or summer days and exposure to artificial UV radiation (black light, lasers, tanning lights). Both of these risk factors are considered very important (65% and 63%, respectively), compared to exposure to UV rays on overcast, rainy or winter days (39%), exposure to digital screens (35%) and exposure to artificial light sources (26%).

Among respondents who consider external risk factors to be very important:

- Canadians aged 35 and over are more aware of risks associated with exposure to UV rays on sunny or summer days than Millennials (Generation Y). Compared to 66% of respondents aged 35–54 and 74% of those aged 55 and over, only 55% of respondents aged 18–34 consider the risk very important.
- Results are similar regarding exposure to UV rays on overcast, rainy or winter days, but on a smaller scale: 32% for ages 18–34, 42% for ages 35–54 and 41% for ages 55 and over.
- Young Canadians seem more aware of risks associated with digital screens (Millennials and Generation X), and artificial UV light sources (Millennials).
 - 36% of respondents aged 18–34 and 40% of those aged 35–54 consider digital screens an important risk factor, compared to 29% among those aged 55 and over.
 - 31% of Millennials consider artificial UV light sources an important risk factor, compared to 26% of respondents aged 35–54 and only 21% of those aged 55 and over.
- Generally, women and Anglophones consider external risk factors to be more important than men and Francophones. The difference is particularly significant regarding risks associated with UV rays:
 - Exposure to UV rays on sunny or summer days: 57% in Quebec, 67% in Ontario, 69% in Western provinces and 67% in the Atlantic provinces.
 - Exposure to UV rays on overcast, rainy or winter days: 31% in Quebec, 39% in Ontario, 42% in Western provinces and 42% in the Atlantic provinces.

The most important behavioural risk factors for Canadians are uncorrected vision problems (e.g., blurry vision, nearsightedness or farsightedness), followed by driving while exposed to blinding reflections of the sun. Canadians consider these two risk factors very important (66% and 55%, respectively). They are ranked above wearing uncomfortable eyeglasses with twisted or misadjusted frames, or scratched lenses or inappropriate lenses impairing vision (44%), driving at night while exposed to blinding lights (40%), doing prolonged or meticulous tasks (34%), and working or engaging in activities at night or in the dark (31%).

Among respondents who consider these behavioural risk factors to be very important:

- The proportion of Canadians who consider these two risk factors important grows based on age:
 - Vision problems are very important for 57% of respondents aged 18–34, 66% of those aged 35–54, and 73% of those aged 55 and over.
 - Driving while exposed to blinding reflections of the sun is considered a very important risk factor for 47% of respondents aged 18–34, 55% of those aged 35–54 and 61% of those aged 55 and over.
- Canadians over 55 (44%) and women (43%) are the biggest demographics to consider driving at night while exposed to blinding lights (car headlights, traffic lights, etc.) to be a very important risk factor.
- Once again, women and Anglophones are more aware of behavioural risks in general. Moreover, there is a marked difference between Quebec and the rest of Canada regarding risks associated with vision problems, as well as driving while exposed to blinding reflections of the sun or to blinding lights at night:
 - Vision problems: 55% in Quebec, 67% in Ontario, 70% in Western provinces and 72% in the Atlantic provinces.
 - Driving while exposed to blinding reflections of the sun: 42% in Quebec, 57% in Ontario, 61% in Western provinces and 57% in the Atlantic provinces.
 - Driving at night while exposed to blinding lights: 30% in Quebec, 39% in Ontario, 45% in Western provinces and 45% in the Atlantic provinces.

c. Visual health issues experienced

The survey then asked Canadians if they had any visual health issues over the past 12 months, even if only occasionally (yes or no).

Results revealed that **85% of Canadians claimed to have experienced visual health issues:** itchy, dry or teary eyes (56%), eye strain (55%), difficulty seeing objects that are far (39%) or near (37%), double vision (12%), and other unspecified issues (1%).

Among the respondents who claimed to have experienced visual health issues:

- Itchy, dry or teary eyes mostly affect Anglophones: 64% in Western provinces, 57% in Ontario and 56% in the Atlantic provinces, compared with 43% in Quebec.
- Eye strain, especially due to prolonged screen exposure, is a greater concern among younger generations: 64% of respondents aged 18–34, 56% of those aged 35–54 and 45% of those aged 55 and over. Eye strain may also be associated with artificial lighting and digital screens (see section a).

- Eye strain is also the top concern among women and Quebecers: 61% of Canadian women experience eye strain compared with 49% of men.
- 53% of Quebecers experience eye strain.

Furthermore, **over a third of Canadians claim to sometimes have difficulty identifying objects at a distance.**

- Millennials have the most difficulty seeing objects clearly at a distance: 45% of respondents aged 18–34, compared with 39% of those aged 35–54 and 33% of those aged 55 and over.
- The proportion of respondents who have difficulty seeing objects clearly at a distance is greater in Ontario (39%) and Western provinces (42%), compared to Quebec (36%) and the Atlantic provinces (32%).

Conversely, **Canadians aged 35 and over are the biggest demographic that claim to have difficulty clearly seeing objects up close:** 45% of respondents aged 35–54 and 46% of those aged 55 and over, compared with 18% of those aged 18–34.

Double vision is more prevalent in younger generations: 16% of respondents aged 18–34, 12% of those aged 35–54 and 8% of those aged 55 and over.

Overall, **men and Quebecers tend to claim they have experienced fewer visual health issues:**

- 17% of men claim they never experienced any visual health issues, compared with 12% of women.
- 19% of respondents in Quebec also claim they never experienced any visual health issues, compared with 17% in Western provinces, 15% in Ontario and 10% in the Atlantic provinces.

d. Attitudes toward visual health issues experienced

To better understand Canadians' attitudes toward the issues they experienced, the survey focused on the number of Canadians that consulted an eyecare professional after experiencing visual issues in the past 12 months, even if only occasionally. If they did not consult an eyecare professional, it asks the reasons behind their decision.

While 85% of respondents claimed to have experienced visual health issues over the last 12 months, even if only occasionally, only 57% claimed to have consulted an eyecare professional during the same period. Conversely, nearly one out of every two Canadians (43%) that experienced visual health issues did not consult an eyecare professional over the past 12 months.

- This proportion is greater among respondents aged 18–34 (48%) and 35–54 (50%), as well as in Western provinces (48%) and the Atlantic provinces (46%).
- Consulting an eyecare professional is a more common habit among respondents aged 55 and over (69%), as well as in Quebec (59%) and Ontario (60%).

The main reason given by Canadians who experienced visual health issues but did not consult an eyecare professional is that they considered their level of discomfort to be minimal (48%).

- Young Canadians (51% of respondents aged 18–34) are more likely to endure minimal discomfort instead of consulting an eyecare professional compared with older demographics (45% of those aged 35–54 and 47% of those aged 55 and over).

Financial reasons (26%) and insurance coverage (21%) rank second and third, respectively, among the reasons for not consulting an eyecare professional. This answer was more common among respondents aged 18–34 and those 55 and over:

- Financial reasons: 29% of respondents aged 18–34, 23% of those aged 35–54 and 26% of those aged 55 and over.
- Insurance coverage: 20% of respondents aged 18–34, 19% of those aged 35–54 and 24% of those aged 55 and over.

Lastly, other reasons include issues with scheduling appointments, lack of time or the length of appointments. 16% of respondents claim appointments are too complicated to organize or too far away, while 8% find that appointments take too long. These reasons were more frequently given by respondents aged 18–34 and 35–54, as well as Quebecers:

- Appointments are too far away or too complicated to organize:
 - 16% of respondents aged 18–34 and 19% of those aged 35–54, compared to 8% of those aged 55 and over.
- Appointments take too long:
 - 9% of respondents aged 18–34 and 9% of those aged 35–54, compared to 3% of those aged 55 and over.
 - 12% in Quebec, 8% in Ontario, 6% in Western provinces and 2% in the Atlantic provinces.

IV. Conclusions and key talking points

This discussion paper is based on a survey of Canadians conducted by Ipsos on the risks related to their visual health. The survey aimed to assess Canadians' knowledge and understanding of these risks and to learn about their behaviour when confronted with visual health problems. Key findings have been submitted to eyecare experts whose qualitative comments and conclusions provide areas for improvement in visual health education and prevention.

Knowledge and understanding of the risk factors

This study provided several important findings on these topics. In terms of the overall knowledge of the risks related to visual health, we learned that 59% of Canadians believe that they have a good general knowledge of risks. While this figure is far from alarming, 41% of Canadians still admit that they are ignorant about the risks. This gives us a good idea of how much effort is required to raise awareness of visual health and its associated risk factors among Canadians. Dr. Diana Monea stresses the pressing need for eye health information: "We have to work hard to educate the public on the importance of preserving vision throughout their lives."

As for understanding external risk factors, natural and artificial UV radiation are well-assimilated risk factors, considered important by 65% and 63% of Canadians, respectively. However, these figures surprised Dr. Jack DiBerardino: "Despite the many media campaigns over the last few decades on this issue, 35% and 37% of the population are still unaware of these risks. That's a lot. Canadians understand well the harmfulness of UV rays to their skin through sunburns or, more seriously, melanoma, but they do not make a connection with the risks to their eyes."

In terms of behavioural risks, Canadians consider the greatest risk factors to be uncorrected vision problems (66%) and driving while exposed to the blinding reflections of the sun (55%). These figures also reflect a difference between perceived and real risks to visual health. It appears in the study that Canadians are most sensitive to visual risks that cause pain or discomfort, but those are not necessarily the most dangerous for the eye. Indeed, there is a notable difference between the symptoms, their intensity and the risks. A lot of people are not aware of the silent risks, risks like UV overexposure which do not present painful symptoms, but can pose serious long-term threats.

The study also shows generational, gender and regional discrepancies between the importance given to different types of risk. In general, women, especially aged 35 and over, are more aware of the risks and their importance than men. "Women have been well educated by cosmetic companies and skincare specialists about the effects of the sun on their skin," explains Dr. Monea. "Women are often the primary caregivers in their families, visiting healthcare professionals more often than men. Also, because they tend to live longer, they are also more likely to take care of older family members," she adds.

On the other hand, while three-quarter (74%) of Canadians aged 55 and over consider natural UV rays to be the main risk factor, only 29% consider exposure to digital screens to be problematic, unlike young Canadians, for whom this new risk appears to be a major source of concern.

While these differences may be explained by advertising campaigns raising awareness about the eye damage caused by UV rays in the 90s, it could also be because many Canadians have seen their parents suffer the negative consequences of UV overexposure. According to Dr. Monea, "Many baby boomers have seen a vision loss in their parents, and certainly remember how it has made them very dependent and has seriously affected their quality of life. As they grow older, they understand that eye diseases like cataracts

or age-related macular degeneration (AMD) can happen to them, with serious consequences, if they do not protect their visual health.” AMD is one of the consequences of the cumulative effects of blue-light overexposure, while long-term exposure to UV rays is the primary cause of cataracts. While cataracts can be cured, AMD cannot, and it is one of the leading causes of vision loss among people aged 50 and older.

Recent concerns about the risks of prolonged digital screen exposure are growing among younger generations faced with the ever-present screens in their daily lives. As a part of a healthy lifestyle, moderation and prevention are essential. Overuse of digital devices and induced eye strain can be problematic without causing short-term complications. Canadians can reduce their risk by limiting exposure, taking breaks, or, for people who work in front of screens, using lenses or coatings that selectively filter harmful blue light. “We need to wait for longitudinal studies to see if excessive blue light exposure actually causes damage to retinal cells but recent studies are showing that visual performance and visual comfort increase while wearing lenses that selectively filter high energy blue light far better than non-selective yellow filters,” explains Dr. DiBerardino. “High energy blue light control does seem to offer benefits such as glare control on computers, improved contrast sensitivity, decreased computer vision fatigue and improved circadian rhythm.”

Visual health issues and behaviour

The study provides particular insight about Canadians’ visual health issues and how they behave when faced with these problems. 85% of Canadians have experienced visual health difficulties: while itchy, dry or teary eyes (56%) and eye strain (55%) are the most common, Canadians have also experienced difficulties to see objects that are far (39%) or near (37%) and double vision (12%).

Yet many Canadians do not necessarily link the symptoms to their causes. “Many people are experiencing symptoms, but do not realize that these problems are caused by digital eye strain. Symptoms of digital eye strain include eye irritation, double vision, excessive tearing or dry eyes, and excessive blinking or squinting,” adds Dr. Monea. Besides, a lot of people are not aware of the silent risks, risks like UV overexposure which do not present painful symptoms, but pose serious long-term threats.

While 85% of Canadians have experienced visual health issues in the past 12 months, only 57% of them have visited an eyecare professional. Dr. DiBerardino does not find this surprising: “Based on historical statistics, this is an improvement. One or two generations ago, few people visited eyecare professionals regularly.” However, this is still too low for Dr. Monea: “As eyecare professionals, it tells us that Canadians are not properly educated and do not understand the value of eyesight.”

Canadians who experience these problems give minimal discomfort and financial considerations (budget, insurance coverage) as the most common reasons for not seeing an eyecare professional. Eyecare experts find this particularly concerning; they believe that Canadians need to be educated about the importance of preserving their visual health: “Canadians take their visual health for granted until they are affected by a serious problem,” notes Dr. Monea. “The pain, continual aggravation, or blurry vision will then lead people to consult as an emergency. Unfortunately, it might be too late and the damage is sometimes irreversible.”

Canadians do not visit eyecare professionals because they misunderstand the irreversible nature of vision damage. While vision can sometimes be corrected with eyeglasses, the damage is sometimes permanent, especially in the case of AMD. This is why access to eyecare for serious problems is critical. Dr. Monea explains: “The population is aging and living longer; people expect more as new products and drugs evolve. The wait to see an eyecare professional for something as simple as a cataract may be a year or two. Everyone, including family doctors, must recommend routine eye examinations to detect problems before they become serious.”

Eye health: A priority for Canadians

Dr. DiBerardino also wishes that younger generations prioritized their visual health. They are the most likely demographic not to consult an eyecare professional when experiencing vision problems. According to Dr. DiBerardino: “The problem of non-consultation of the eyecare professional is the result of the emphasis placed on visual health in relation to other health or well-being issues, such as dental and aesthetic care. Visual health is clearly in the background for younger generations, with social acceptance deemed more important. People aged 55 and over are certainly the most health conscious and they devote more resources, time and money to this. Because the population is growing and people are living longer, we need to educate young people on starting proactive eyecare at an early age.”

Both of our eyecare experts agree that we need to address visual health risks before problems arise and encourage regular eye examinations. This is especially true for young children, who need their vision to learn and perform at school. Dr. DiBerardino explains: “We know that 80% of classroom learning is visual, yet only 15% of children have a comprehensive eye examination before starting school. We also know that as much as 25% of all school-age children have an undiagnosed vision or health problem this potentially leaves many kids at a disadvantage when it comes to school and learning performance.” It is all the more regrettable considering that the cost of a complete eye examination every two years is low compared to cosmetic or dental care.

If Canadians are entitled to expect more from governments in terms of eyecare coverage, the eyecare experts believe that industry stakeholders should work together to develop coordinated actions to raise awareness on the importance of eye health, and to educate Canadians on how to prevent eye diseases, and how to correct and protect their vision.

Solutions can also be found in better collaboration with other healthcare professionals, particularly family doctors who are often Canadians’ primary healthcare contact. Yet while visual health concerns us all, raising awareness starts with eyecare professionals. Through their interactions with Canadians, they can encourage healthy visual habits by informing the public of eye health risks and recommending solutions based on their needs and lifestyle.

V. Recommendations to Canadians

To preserve their eyesight and prevent eye health risks, here are a few recommendations to Canadians from our eyecare experts:

- Visit an eyecare professional for an eye examination at least once every two years.
- Wear sunglasses all year long, regardless of the weather and when driving to protect the eyes from UV rays and blue light, but also from blinding glare.
- Talk with your family about their visual health history. Genetics are important in eye health, particularly concerning certain diseases like glaucoma.
- Adopt good visual hygiene by reducing your exposure to blue light from digital screens and avoiding exposure late at night in order not to disrupt your sleep cycle.
- Take breaks every 20 minutes, looking 20 feet away for 20 seconds, or use eyeglasses to filter out blue light in case of prolonged digital screen exposure.
- Prepare for your eye examination by bringing all your eyeglasses and making a list of questions and symptoms you might have. Fill out your eyecare professional’s questionnaire if they offer you one.