QUESTIONNAIRE

GOALS

Principal Goals
- Prevalence of Quebec optometrists having experienced MSD+ during the past 5 years

Secondary Goals
- Identify most affected parts of the body and associated risk factors

METHODS

Instrument
- Online questionnaire “Standardized Nordic questionnaire for analysis of musculoskeletal symptoms” modified for our purpose

Subjects
- Active members of the OOQ (Ordre des optométristes du Québec: Québec’s regulatory board)

Reruitment
- By email and through the AOQ (Association des optométristes du Québec) Facebook page

MSD DEFINITION

MSD+ = 4 positive responses to the 6 following elements, for any body part

1. Did your pain eventually lead to you having to change jobs or change work field?
2. If not, for what length of time, in total, did you experience problems during the last 5 years?
3. Did your pain lead to a reduction of your activities during the last 5 years?
4. Did your pain lead to a reduction of your activities during the last 5 years?
5. Hobbies
6. Did your pain prevent you from normally doing your job (at home as well as at work)?
7. During the last 5 years, did you ever consult a doctor, a physiotherapist, a chiropractor or any other health professional because of your pain?

RESULTS

Baseline characteristics of participating optometrists - BY MSP
- Participation rate 19%
- 83% of respondents were women

Prevalence of MSD+ = 68% (n = 191)

| Characteristic | n | % | 95% CI | p
|----------------|---|---|--------|---
| Age (years)    | 44.4 (13.8) | 41.1 (13.8) | 0.11 |
| Sex            | Male | 24 (27.9) | 17 (26.5) | 0.61* |
|               | Female | 20 (23.4) | 16 (26.5) | 0.61* |
| BMI (kg/m²)    | 26.6 (5.8) | 26.3 (5.4) | 0.67 |
| Physical activity score | 70 (34.4) | 54 (34.4) | 0.47 |
| Non-active    | 31 (58.1) | 23 (47.4) | 0.10 |
| Hours of practice (mean, SD) | 22.7 (13.2) | 17.9 (12.3) | 0.46 |
| Hours of patient care, per week (mean, SD) | 30.4 (6.3) | 28 (5.7) | 0.66 |
| Dominant hand (n, %) | Right | 176 (91.1) | 87 (94.7) | 0.39 |
|               | Left | 15 (7.9) | 1 (5.3) | 0.39 |

* Student t-test for age, BMI, years of practice, hours of patient care.
Welch Test for or CI-square test for sex, physical activity, dominant hand

Factors associated with developing a MSD+
(Logistic regression R² = 0.066)

| Risk factors                      | OR (95% CI) | p  
|-----------------------------------|-------------|---
| Male                              | 1.08 (1.01, 1.15) | 0.03 |
| Hours of practice (mean, SD)      | 1.01 (1.01, 1.02) | 0.001 |
| Physical activity score           | 1.01 (1.01, 1.02) | 0.001 |

CONCLUSION

- First glimpse of the issue:
  - High prevalence of MSD+ among Quebec optometrists
  - Important postural risks associated with BIO and refraction and other techniques

POSTURAL ANALYSIS

GOALS

Principal Goals
- Level of risk of MSD+ during most common and repetitive optometric techniques

Secondary Goals
- Identify the common errors (postures with the highest risk of MSD+) within the studied population

METHODS

Instrument
- “Rapid entire body assessment” (REBA)

Subjects
- Students from the class of 2019 from the University of Montreal school of optometry

4 techniques
- Refraction
- Fundus biomicroscopy
- BIO (upper retina)

RESULTS

REBA score for common optometric techniques

- Low risk
- Moderate risk
- High risk
- Very high risk

Risk factors associated with optometry techniques

FREQUENCY

INADEQUATE POSITION

STATIC POSITION

REPETITION

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