

An Inter-disciplinary Comparison of the Self-reported Dry Eye Practices of New Zealand Eye Care Clinicians

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BACKGROUND

Dry eye disease (DED) is recognised as the most common ocular dysfunction presenting to the primary eye care practitioner.¹

- DED causes ocular discomfort and impaired vision that affects almost 30% of the adult population in some parts of the world,² with increased prevalence rates observed in women and the elderly.
- Considerable variability in diagnostic and management protocols exist amongst practitioners due to poor association between symptoms and signs of the disease.³

With New Zealand's aging population, eye care practitioners have an opportunity to play an important role in managing this chronic condition. Therefore the current state of DED diagnosis and management in New Zealand needs to be examined.

AIM

- To evaluate the self-reported dry eye practises of New Zealand optometrists and ophthalmologists.
- To assess compliance with evidence-based guidelines as recommended by Tear Film and Ocular Surface Society's International Dry Eye Workshop (2007).³

METHODS

Participants: An anonymous web-based questionnaire was administered to NZ eye care clinicians (optometrists n=614, ophthalmologists n=113) via a secure survey system that maintained confidentiality but prevented multiple entries.

Survey: The prospective, cross-sectional survey included multiple-choice, multiple-response, and open-ended questions to determine practitioner demographics, and explore utilisation of dry eye diagnostic tests, dry eye management practices, referral patterns, tear film evaluation knowledge and sources of information used to guide clinical decision-making.

Analysis: Chi-squared tests were conducted to compare proportional data. A p value <0.05 was considered statistically significant.

Figure 1: Which diagnostic techniques do eye care clinicians routinely use for DED?

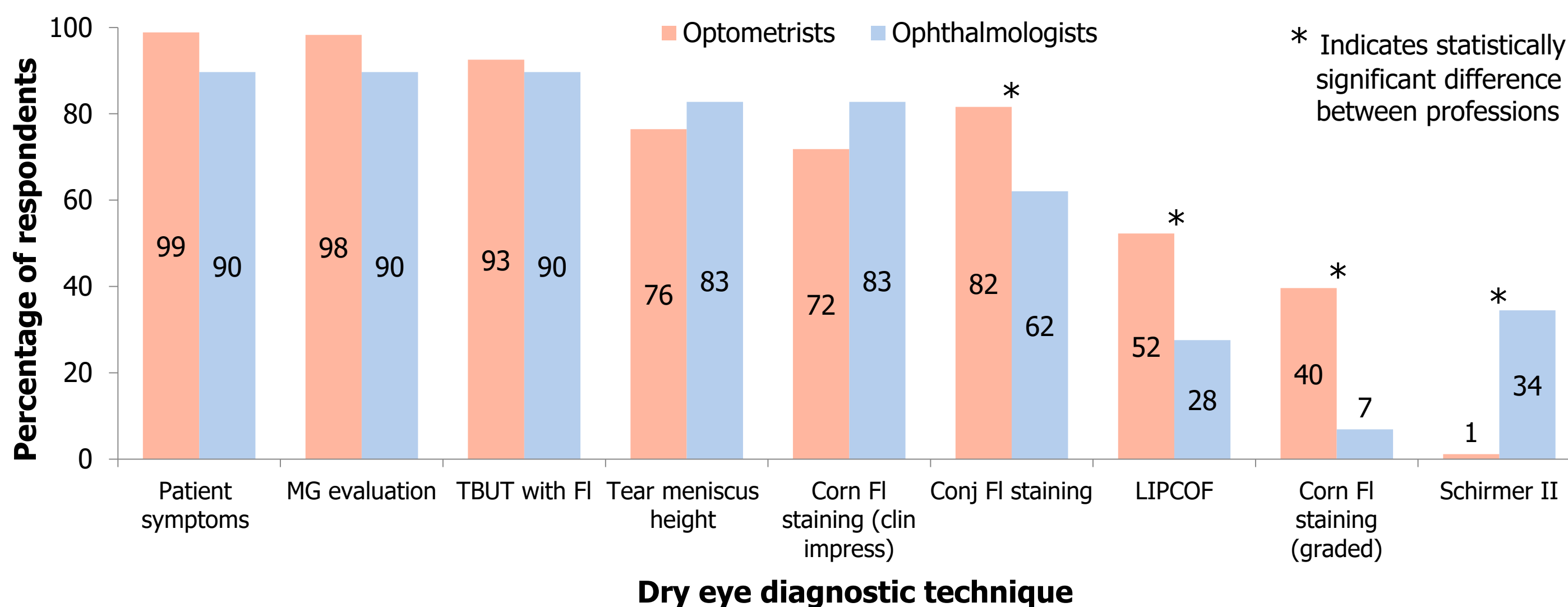


Figure 2: Which therapies do OPTOMETRISTS recommend for mild, moderate and severe DED?

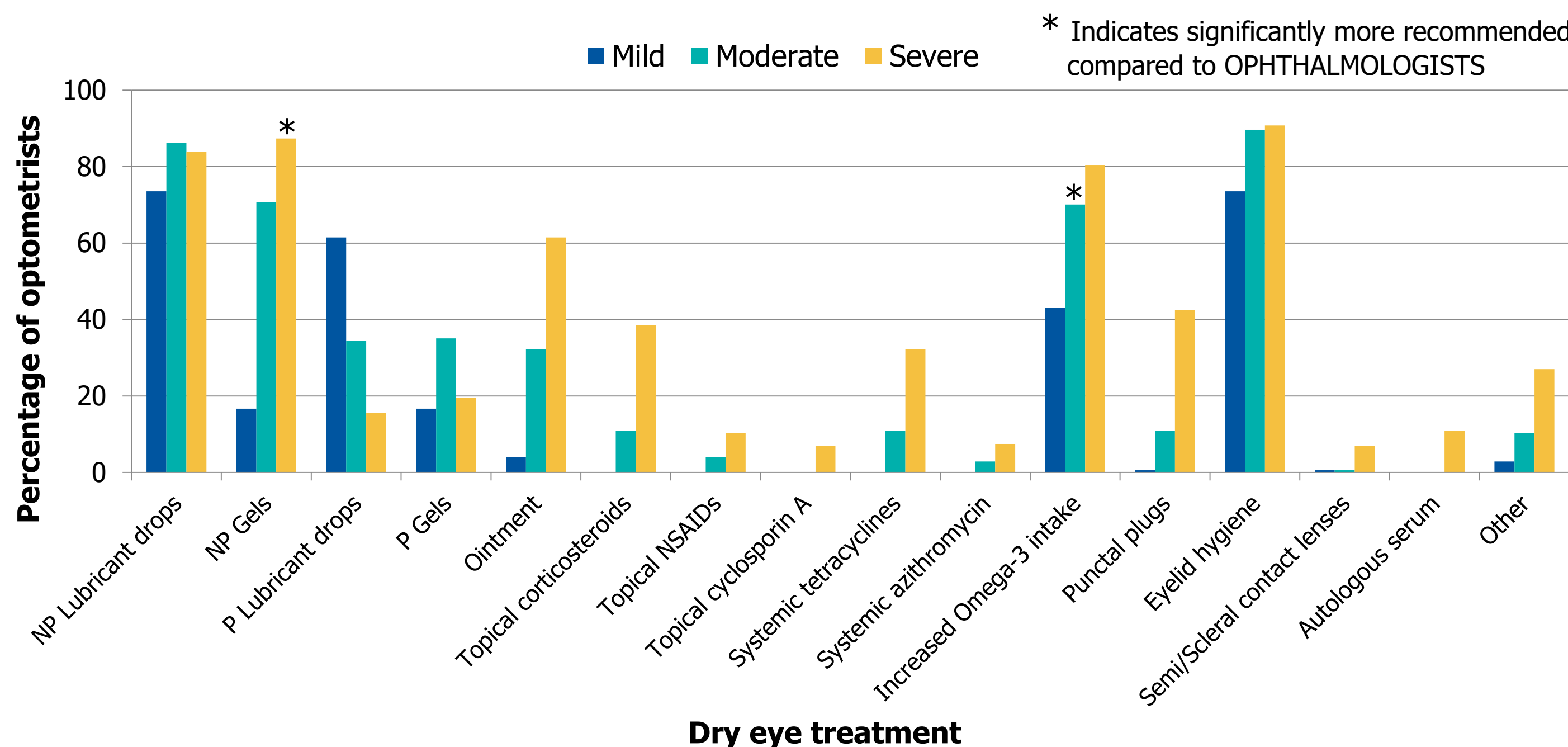
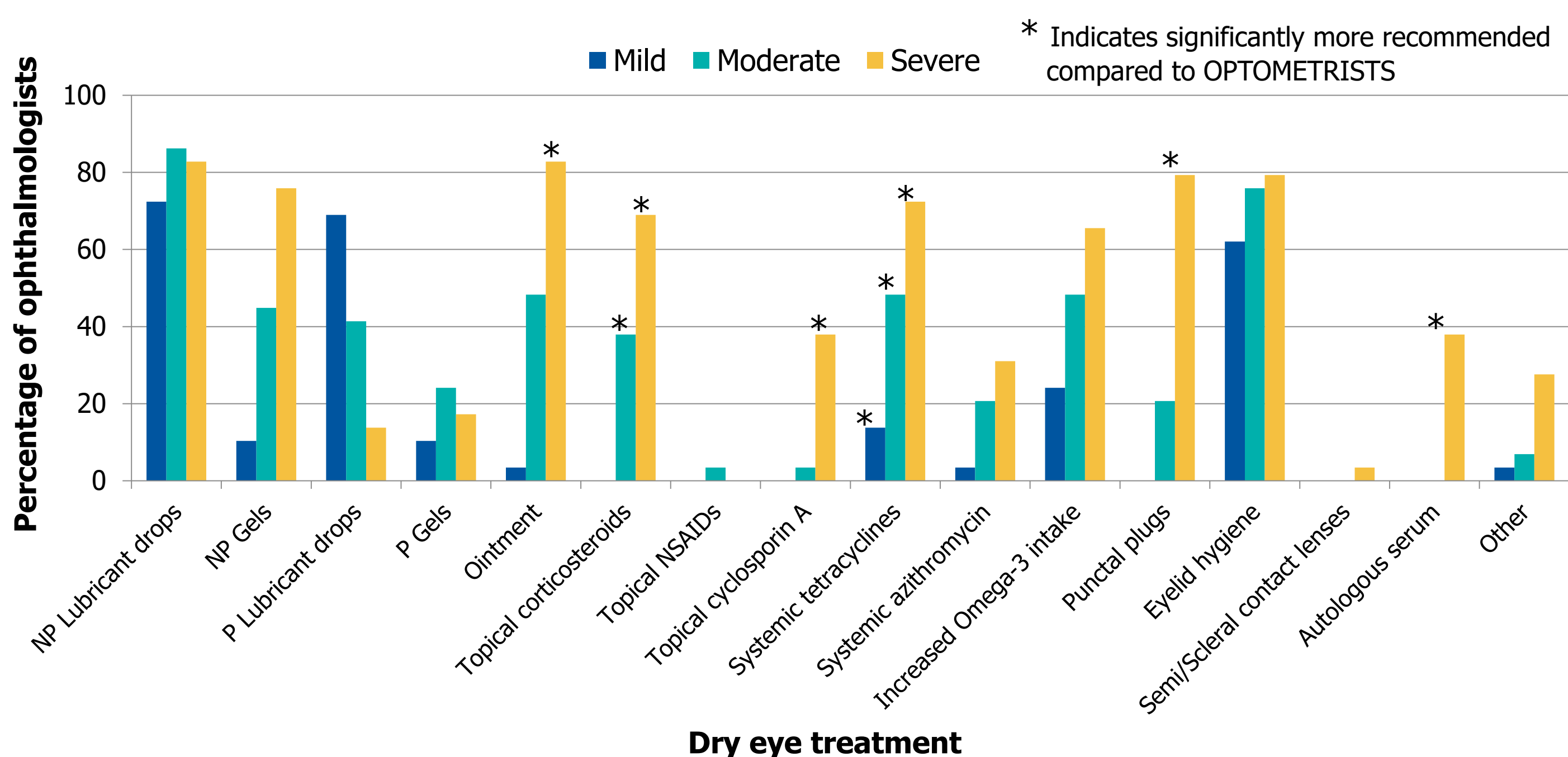


Figure 3: Which therapies do OPTHALMOLOGISTS recommend for mild, moderate and severe DED?



Legend: Clin impress, clinical impression; Conj, conjunctival; Corn, corneal; DEQ, dry eye questionnaire; FI, sodium fluorescein; LG, lissamine green; LIPCOF, lid parallel conjunctival fold; MG, meibomian gland; NP, non-preserved; NSAIDs, nonsteroidal anti-inflammatory drugs; OSDI, Ocular Surface Disease Index; P, preserved; TBUT, tear breakup time.

RESULTS

A total of 174 optometrists (response rate: 26%) and 29 ophthalmologists (response rate: 26%) submitted full responses that demonstrated similarly strong knowledge of tear film assessment.

Respondent demographics	Optometrist (n=174)	Ophthalmologist (n=29)
Therapeutic accreditation	Accredited: 71%	Not applicable
Practice modality	Independent: 68%	Independent: 65%
	Corporate: 21%	Hospital: 32%
	Locum/academia/other: 11%	Academia: 3%
Self-reported interest in DED	Interested: 67%	Interested: 59%

- Optometrists with self-reported interest in DED were more likely to use phenol red thread test ($p=0.047$) and McMonnies dry eye questionnaire ($p=0.048$) than those without self-reported interest. No significant differences were found for ophthalmologists.
- Patient symptoms were considered the most common and useful diagnostic test, however $<5\%$ of optometrists and only 7% of ophthalmologists employed validated dry eye questionnaires.
- Respondents from both professions stratified therapy based on disease severity (Figures 2 and 3), and indicated continuing education conferences as the most important evidence-base to guide their management approach.

CONCLUSIONS

- Reflecting the complexity of diagnosis, multiple subjective and objective tests are typically used to diagnose DED by eye care clinicians in NZ.
- Increased recommendation for increasing omega-3 fatty acids intake, topical corticosteroids and systemic tetracyclines in moderate-severe cases relative to mild cases (all $p<0.05$) highlight recognition of inflammation, particularly in more advanced DED.
- Inconsistent adoption of best-practice guidelines reveal potential to improve dissemination of research evidence into clinical dry eye practice, potentially through mechanisms focused upon continuing education conferences.

REFERENCES

- 1 Moss SE, Klein R, Klein BE. Prevalence of and risk factors for dry eye syndrome. *Archives of Ophthalmology* 2000;118:1264-8.
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- 3 Methodologies to diagnose and monitor dry eye disease: report of the Diagnostic Methodology Subcommittee of the International Dry Eye Workshop (2007). *The Ocular Surface* 2007;5:108-52.