

**The Optometric Trends Discovery Group's
2023 Report on**

**Myopia
Management:
INSIGHTS &
TRENDS**

**By Dr. Erin Tomiyama
OD, PhD, FAAO**



**FUNDINGSLAND
GROUP**

Myopia management in children involves strategies to slow the progression of nearsightedness, enhancing long-term eye health. Specialized lenses, eye drops, and other strategies aim to reduce the risk of severe myopia-related complications in the future.

We'll review data from the 2023 Optometric Trends Discovery Group (OTDG) Survey to gain insights into clinical practice patterns and opinions of US optometrists as they relate to the diagnosis and treatment of myopia management.

Prevalence of Pediatric Myopia

On average, respondents report that they encountered around 18 children with myopia per month, but that number may be changing. The majority (66%) of respondents reported a rise in the prevalence of myopia among children in the past five years, whereas just 2% reported a decrease. This aligns not only with my personal experience but with the existing data indicating an escalating myopia epidemic and an anticipated increase in its prevalence in the next two decades. It's no surprise then that most respondents (74%) are somewhat or very concerned about the increasing frequency of pediatric myopia in their practice.

The rising rates of pediatric myopia underscore the need to make myopia management a standard care for affected children. Increasing awareness of myopia management strategies and how to implement them will help more practitioners start to adapt these practices and increase patient awareness.

“The rising rates of pediatric myopia underscore the need to make myopia management a standard care for affected children.”

When to Begin Treatment

Intriguingly, 67% of respondents would only initiate myopia management therapies for children exhibiting myopia of -1.00 or -2.00 D, as shown in Figure 1. This is in contrast to the International Myopia Institute (IMI)'s definition of myopia as a refractive error of -0.50 D or more, which is the level at which numerous current myopia management therapies can be employed. Importantly, there is emerging evidence of the potential benefits of applying these therapies to pre-myopic individuals or those with a refractive error more hyperopic than -0.50 D.

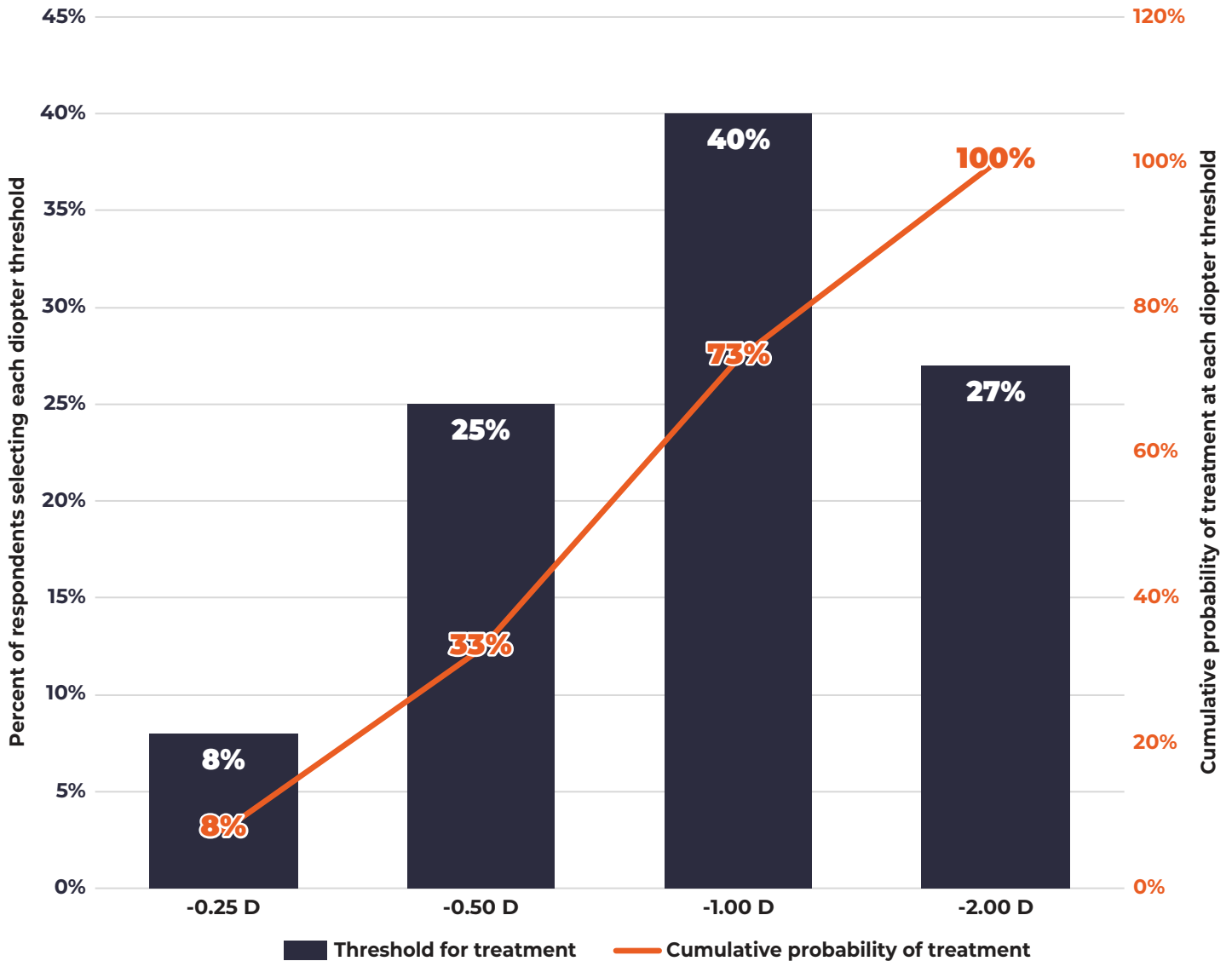


FIGURE 1. What would be the minimum amount of myopia (in diopters) for you to consider fitting a child with a specific myopia management correction?

Treating Myopia

As shown in Figure 2, survey results revealed that for patients younger than eight years old, behavioral modifications and pharmaceutical solutions are often preferred, while multifocal soft contact lenses are commonly used for patients aged between eight to twelve. I believe this is due to the fact that younger children might not be ready for the responsibilities of contact lens care and hygiene. For them, implementing behavioral changes, like spending more time outdoors, increasing near working distances, taking regular breaks from near work, or using eye drops administered by their parents, is simpler.

Between the ages of eight and twelve, children are generally capable of handling contact lenses and may choose them for aesthetic cosmetic reasons, boosting their self-esteem. Parents can also be involved to their desired extent, assisting in the application and removal of contact lenses.

While there's no strict age boundary for contact lens use, I do have patients younger than eight who use some forms of contact lenses. We found that increased outdoor time can delay myopia onset, though data on its effectiveness in slowing progression isn't as robust. Research has also shown that the intensity of near work

is more significant than the duration spent on near activities, implying the importance of increasing working distances and breaks during continuous near work.

While about half of the respondents (48%) do not prescribe atropine, the other half reported a variety of concentrations with 0.05% atropine being slightly favored. In my practice, I typically begin with 0.05% and may reduce that concentration if the child is symptomatic or finds adaptation challenging.

It's encouraging that the survey results show that 71% of respondents feel confident in their understanding of contact lenses for myopia management, which could be attributed to influential studies like BLINK and MiSight, as well as support for orthokeratology lenses. However, only 35% expressed confidence in their understanding of spectacle lenses specifically designed for myopia management. This lower confidence level is likely due to limited availability of these specialized spectacle lens designs. For instance, in the US, where I currently practice, prescribing these spectacles is not yet possible, which affects our firsthand experience and confidence in this particular treatment approach.

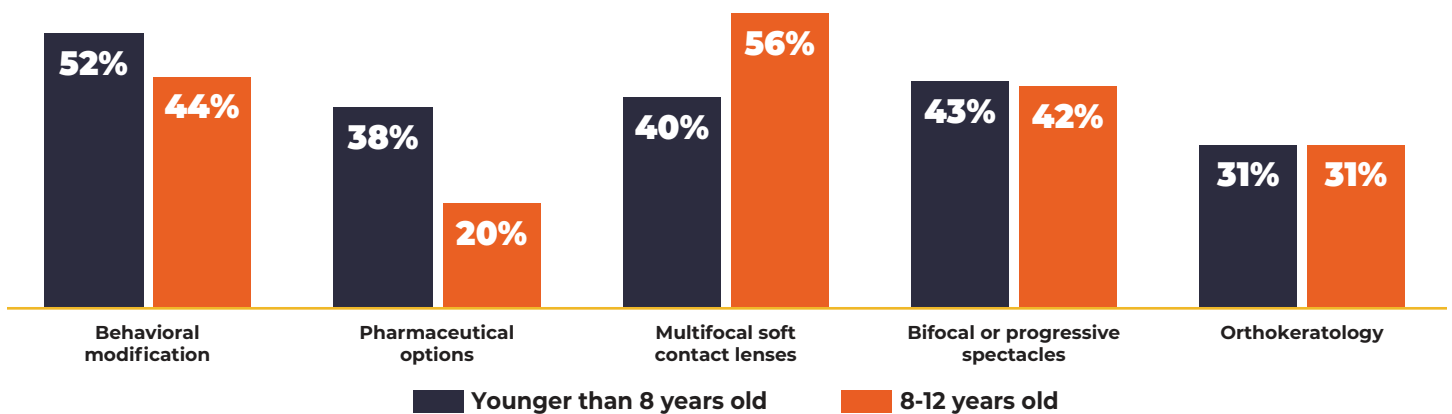
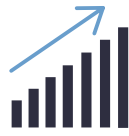


FIGURE 2. When treating a patient younger than 8 years old/8-12 years old for myopia progression, what are your top 2 most common treatment strategies? (Select top 2)

Did you KNOW?



18
average
number
of myopic
children seen
per month



66%
of respondents
reported that
over the past 5
years, they have
seen an increase
in the number of
myopic children



74%
of respondents
are concerned
about the
increasing
frequency of
pediatric myopia
in their practice

Most recommended behavioral modification for myopia management:

50%

Spend more time
outdoors

34%

Reduce time spent
on digital devices

11%

Increase breaks
in near work



5
average number of
orthokeratology (ortho-k)
fittings each month



48%
of all respondents don't
prescribe atropine for the
treatment of myopia



71%
of respondents are confident
in their understanding
of contact lenses
specifically designed for
myopia management



35%
of respondents are confident
in their understanding of
spectacles specifically designed
for myopia management

The Optometric Trends Discovery Group

(OTDG) Survey was launched on February 4, 2023. The survey included 141 questions developed and reviewed with the OTDG leadership board. The survey questions explored doctors' understanding and current practice patterns across a number of areas of optometric care, including presbyopia, astigmatism, corneal therapeutics, ocular surface disease, glaucoma, lid management, corneal refractive surgery, dry AMD and geographic atrophy, and myopia management.



Nearly 300 optometrists responded to the survey which was closed in mid-March 2023. You can access interpretive reports on additional OTDG topics as they are released by visiting otdg.tfgeducation.com or scanning the QR code.



Meet the Board

MELISSA
BARNETT



MARC
BLOOMENSTEIN



GLORIA
CHIU



CECELIA
KOETTING



SELINA
MCGEE



MOHAMMAD
RAFIEETARY



JUSTIN
SCHWEITZER



ERIN
TOMIYAMA



Meet the Author

Dr. Erin Tomiyama
OD, PhD, FAAO



Dr. Erin Tomiyama is an Assistant Professor of Optometry at Marshall B. Ketchum University. She is a Southern California native and completed her undergraduate degree at UCLA. She then received her OD degree from the Southern California College of Optometry at Marshall B. Ketchum University.

Dr. Tomiyama went on to complete a Cornea and Contact Lens Residency at the University of Houston College of Optometry. During residency, she was introduced to clinical research and decided to pursue a MS, then PhD in Physiological Optics. She has developed a passion for myopia management and her research areas of interest are myopia, optics, and astigmatic corrections.

Dr. Tomiyama is a fellow of the American Academy of Optometry and a two-time Ezell Fellowship recipient.