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MEMBER ARTICLE



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OPTICS AND OPTOMETRY IN GERMANY

Opticians are first and foremost players in the private health market. Of the 12.18 million spectacle fittings per year, an estimated 11.7 million are privately funded. In all of these cases, opticians provide their customers with prescription spectacles on their own responsibility. The same applies to the provision of contact lenses, only a fraction of which are covered by health insurance. There are no restrictions on the age of the customer, the degree of visual impairment or the type of visual aid. However, not all opticians offer the full range of services. Many, especially chain stores, concentrate on the more profitable and less time-consuming treatments. This does not

usually include the care of young children, customers with severe visual impairment, corrective glasses with a prismatic effect or rigid contact lenses.

The profession of optician is a craft requiring a licence and may therefore only be practised in businesses whose owners are entered in the Register of Craftsmen. The requirements for registration are stricter than for many other trades that require a licence. In Germany, 47,800 people are employed in around 11,000 specialist opticians' shops. Entry into the field of optometry takes place through both traditional vocational training and academic routes.

Vocational training in optometry consists of an apprenticeship that ends with a journeyman's examination, further training to become a master craftsman and, if necessary, further training. The master craftsman's diploma and equivalent qualifications under the HwO, such as state-certified optician, graduate engineer in ophthalmic optics/optometry and Bachelor of Science in ophthalmic optics/optometry, entitle the holder to practise independently as an optician.

Journeymen opticians' main task is to advise customers on the choice of the right visual aid based on a given prescription. They make the glasses in the workshop, hand them over to the customer and instruct them on how to use them. They also advise on contact lenses and magnifying visual aids, the fitting of which is reserved for the master optician.

The master optician is qualified to run a business independently, to take on management tasks in the technical, commercial and personnel areas, to train and independently implement professional competence and to adapt it to new requirements. The professional profile of the master craftsman's examination, as set out in § 2 of the Regulation on the Professional Profile of the Master Craftsman's Examination and on the Examination Requirements in Parts I and II of the Master Craftsman's Examination in the Optician's Trade, is strongly oriented towards business management and customer orientation. Further training to become a master optician builds on

the skills acquired in the journeyman's examination and covers different content than the journeyman's examination, in particular:

- Performing optometric eye examinations
- the determination of visual defects (refraction)
- determining the need for correction according to the individual visual task
- the fitting of contact lenses
- the making of spectacles, and
- the fitting of magnifying visual aids.

Academic training in ophthalmic optics has been available since 1981, when the first course was introduced at Aalen University of Applied Sciences. Other universities now offer similar courses. Although each university has a different focus, all courses teach at least the skills and abilities of a master optician. Whereas a successful journeyman's examination used to be a prerequisite for studying optometry at university, it is now possible to study optometry at all universities without any previous professional qualifications.

It is also possible to study for a master's degree after completing a bachelor's degree. In Aalen this is offered as a Master of Science in Vision Science and Business (Optometry), in Berlin as a Master of Science in Ophthalmic Optics/Optometry and in Jena as a Master of Science in Optometry/Ophthalmotechnology/Vision Science.



The actual and economic focus of optometry will continue to be the provision of spectacles and contact lenses to the population. However, the health services provided by opticians are becoming increasingly important. Back in 2000, the German Federal Constitutional Court authorised opticians to offer their customers an optometric screening, which, in addition to testing various visual functions, can also include measuring intraocular pressure and checking the visual field. At the time, the court considered that the benefits of such screening in relation to the eye disease glaucoma outweighed any possible harm that might arise, for example, from the fact that a customer's eye condition was labelled as unremarkable when in fact they had a disease that remained (initially) undetected. Since then, the quality of optometric screening by qualified optometrists has continued to improve, not least because modern fundus cameras allow the retina to be examined without the use of drugs. Such devices now have artificial intelligence applications that allow reliable assessment of the retina for certain eye diseases. At the same time, digitalisation is enabling collaboration between opticians and ophthalmologists, so that optometrists can provide their customers with targeted information about possible risk factors.

The expansion of optometric screening - whether by qualified optometrists, the use of AI or interprofessional collaboration - has the potential to improve the quality of life of those affected through early detection and to significantly reduce the costs to social security systems of blindness and visual impairment. The German Ophthalmological Society (DOG) estimates the annual cost at 49.6 billion euros. There are several reasons for this:

Demographic change is leading to an ageing population, resulting in an increase in the number of older people. With age comes an increased risk of several eye diseases, including macular degeneration, glaucoma and diabetic retinopathy. These diseases usually manifest themselves in people without any subjective symptoms at first. If left untreated, they can lead to irreversible visual impairment and are the three leading causes of blindness in Germany. The DOG predicts a further increase in these eye diseases of around 25 per cent by 2050. As a result, the number of cases requiring ophthalmological treatment is expected to continue to rise sharply in an ageing society. Demographic change is also having an impact on the number of contract physicians working for the National Health Service. As a result, the number of contract ophthalmologists has been declining steadily for years. A comparison of figures from the Federal Medical Register of the National Association of Statutory Health Insurance Physicians shows that the number of contract ophthalmologists has fallen from 4,606 to 3,200 (as of 31 December 2023) since 2013. Currently, 35.5 per cent of contract ophthalmologists are over 60 years old, so a further

decline is expected in the coming years. With an increase in the number of ophthalmology cases and a decrease in the number of contracted doctors, it is likely that the insured will continue to have difficulty in getting an appointment with an ophthalmologist in a timely manner. The shortage of specialists and the lack of subjective complaints - despite the presence of eye diseases - are major disincentives for insured persons to undergo regular ophthalmological examinations.

In contrast to ophthalmic examinations, optometric screenings are very low-threshold. This is because by the age of 45 at the latest, almost all people need visual aids due to the onset of age-related visual impairment, which can be obtained from the 11,000 opticians throughout Germany. Educating customers about age-related eye diseases and their progression, combined with the offer of

optometric screening to identify risk factors and abnormalities, leads to increased awareness and education of these diseases among the population. In addition, customers who actually need treatment or clarification are referred to ophthalmologists. In this context, it should be noted that it would be advisable to establish optometric screening as a service provided by statutory health insurance funds prior to the provision of spectacles or contact lenses from a certain age. This could make a significant contribution to cost savings for the social insurance system at a comparatively low cost. However, the specific design of the screening programme still needs to be discussed. There are a number of possible options, including collaboration with ophthalmologists, the use of artificial intelligence or the use of specially qualified opticians.



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