

COMPLIANCE OF HOSPITAL HEALTHCARE PROFESSIONALS WITH CONTACT LENS USE AND CARE

Hastane Sağlık Çalışanlarının Kontakt Lens Kullanımı ve Bakımına Uyumu

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ABSTRACT

Objective: The study aimed to assess if healthcare professionals who wear contact lenses in hospitals comply with the rules for contact lenses use and care.

Material and Methods: A survey consisting of questions about contact lenses use and care was distributed to healthcare professionals. The survey investigated the following: a) Demographic data, b) Routines related to the use of contact lenses (type, indication, duration, overnight use), c) Routines related to contact lenses maintenance and cleaning (solution usage habit, exposure to water, hygiene of hands and lens cases).

Results: The average age of the participants was 28.35±5.58; 76% were women, and 87.3% were doctors. Contact lenses usage duration was 8.16 years. Most of them wore soft contact lenses for myopia that was changed monthly. 95.8% of participants were prescribed contact lenses by an ophthalmologist. To clean the contact lenses, 93.3% of the participants used multi-purpose solutions, and 7.3% reported that they rarely washed the contact lenses with tap water. A high level of compliance was observed with overnight use, washing hands before putting on and taking off contact lenses, expiration date, and filling the solution into the box or sharing it. Moderate compliance rates were noted for swimming and showering with contact lenses, cleaning, and changing the lens case and contact lenses.

Conclusion: Although healthcare professionals are compliant with the use and care of the contact lenses, it is thought that some of them still need training on avoiding contact with water while wearing the contact lenses, never using tap water, and cleaning the lens case and the contact lenses effectively.

Keywords: Contact lenses, healthcare professional, compliance

ÖZ

Amaç: Çalışma, hastanelerde kontakt lens kullanan sağlık çalışanlarının kontakt lens kullanımı ve bakımına ilişkin kurallara uyup uymadığını değerlendirmeyi amaçladı.

Gereç ve Yöntemler: Sağlık çalışanlarına kontakt lens kullanımı ve bakımına ilişkin sorulardan oluşan bir anket dağıtıldı. Araştırmada şu konular araştırıldı: a) Demografik veriler, b) Kontakt lens kullanımına ilişkin rutinler (türü, endikasyonu, süresi, gece kullanımı), c) Kontakt lens bakımı ve temizliğine ilişkin rutinler (solüsyon kullanım alışkanlığı, suya maruz kalma, ellerin ve lens kutularının hijyeni).

Bulgular: Katılımcıların yaş ortalaması 28,35±5,58; %76'sı kadın, %87,3'ü doktordu. Kontakt lens kullanım süresi 8,16 yıl oldu. Çoğu, miyopi nedeniyle aylık olarak değiştirilen yumuşak kontakt lens kullanıyordu. Katılımcıların %95,8'ine bir göz doktoru tarafından kontakt lens reçete edildi. KL'i temizlemek için katılımcıların %93,3'ü çok amaçlı solüsyon kullandığını, %7,3'ü ise kontakt lensi nadiren musluk suyuyla yıkadığını bildirdi. Gece kullanımı, kontakt lensi takıp çıkarmadan önce ellerin yıkanması, son kullanma tarihi, solüsyonun kutuya doldurulması veya paylaşılması konularına yüksek düzeyde uyum gözlemlendi. Kontakt lens ile yüzmek ve duş almak, lens kutusunun ve kontakt lensin temizlenmesi ve değiştirilmesi için orta düzeyde uyum oranları kaydedildi.

Sonuç: Sağlık çalışanlarının kontakt lens kullanımı ve bakımı konusunda uyumlu olmasına rağmen, bazılarının kontakt lens takarken su ile temastan kaçınma, asla musluk suyu kullanmama, lens kutusu ve kontakt lensi etkili bir şekilde temizleme konusunda eğitime ihtiyaç duyduğu düşünülmektedir.

Anahtar Kelimeler: Kontakt lens, sağlık çalışanı, uyum



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Received / Geliş Tarihi: 26.03.2024

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Accepted / Kabul Tarihi: 05.04.2024

INTRODUCTION

Contact lenses (CL) are artificial devices that help correct the refractive error and surface irregularities of the cornea and can be used for optical, cosmetic, preventive, or therapeutic purposes. Due to these benefits, the use of CL has increased greatly in recent years. There are approximately 140 million contact lens users worldwide today (1). However, using CL is not as simple as it seems, and compliance with the steps required for the correct wear, handling, cleaning and disposal of their lenses and lens cases. One study suggested that a normal daily routine for applying, removing, and cleaning lenses includes 49 separate steps (2). If these steps are not complied with, complications of CL may develop, ranging from relatively minor loss of comfort, mechanical trauma, toxic reaction, hypoxic changes, and reduced vision to more serious vision-threatening infective events.

Contact lens fitting and storage solutions are an important aspect of CL care. Serious infections leading to vision loss occur more frequently in patients who wear a monthly reusable CL instead of a daily disposable CL (3). Other similarly important risk factors for infection include prolonged wear, overnight wear, poor CL disinfection, and poor CL hygiene (4). The absolute risk of infection is low but may increase because of increased exposure to potentially pathogenic microbes in the hospital environment (5). Healthcare professionals in hospitals work in environments where the risk of microorganism transmission is higher. Since they are in contact with patients, waste products of patients, and infected materials, they need to pay more attention to CL care. Non-compliant behaviours with CL use and care may result in more serious ocular infections (6). In the hospital if the eye becomes contaminated or the use of eyewash is necessary, contact lenses should be removed and discarded or disinfected immediately (5).

Pseudomonas aeruginosa and *Acanthamoeba* are causes of potentially devastating ocular infections in contact lens wearers (5). The risk of these infections can be reduced by meticulous hygiene practices. In addition to cleaning the lens with the appropriate solution, cleaning the lens case is also important. The lens case should be thoroughly cleaned and dried before disinfection and never exposed to tap water.

Contact lenses must be prescribed by an ophthalmologist and aftercare visits at regular intervals. The fit of the lens to the eye and whether there are any complications should be evaluated. The person who will use CL should be informed in detail about the care of the lens, things that should not be done while the lens is on the eye, and the instructions for the use of the lens. It is important to comply with the wearing time of the CL. When this period is exceeded, the possibility of lens

deformation and the risk of complications increases. The aim of the study is to investigate the compliance of healthcare professionals in the hospital with contact lens use and care.

MATERIALS AND METHODS

This study was conducted in a tertiary hospital from February to March 2024. The study protocol was approved by the hospital's Institutional Review Board in accordance with the principles of the Declaration of Helsinki. For the study, a survey form was given to volunteers who used CL in the hospital. Volunteers will be informed, and their consent will be taken before giving the survey. The answers given in the survey forms filled out by the volunteers were analyzed statistically.

Inclusion criteria in the study: 1. Being a healthcare professional in the hospital (doctor, nurse, technician, staff). 2. Being between the ages of 20-60. 3. Having been using CL for at least 3 months. 4. Volunteer to take part in the survey.

Exclusion criteria: 1. Using CL for less than 3 months. 2. Leaving more than 50% of survey questions blank. 3. Inconsistency in responses.

A survey consisting of questions about CL use and care was distributed to healthcare professionals. The survey investigated the following:

- a) Demographic data: Age, gender, smoking, profession, title, education level, CL experience.
 - b) Routines related to the use of CL (type, indication, power, first prescriber, place of purchase, wear routine, wearing time, wearing modality, frequency of examination, use in hospital, overnight use, expiration time),
 - c) Routines related to CL maintenance and cleaning (solution usage habit, exposure to water, hygiene of hands and lens cases, sharing lens solution or lens case).
- Participants were asked to indicate behaviours related to lens care and hygiene as every time, most times, occasionally, rarely, and never. The percentage was determined according to the answers obtained. It was statistically evaluated whether there were differences in behaviour rates according to gender, profession, CL wearing time and routine.

Contact lenses behaviours were grouped into 3 levels of compliance: high (>80% compliance rate), medium (40-80%), and low (<40%) (7). For positive behaviours (should), those who chose always and most of the time were considered compliant, while for negative behaviours (don'ts), those who chose rarely and never were considered compliant. Compliance rates were evaluated according to the percentage rates of these behaviours.

Statistical analysis

Utilizing IBM SPSS Statistics 23.0 (IBM Corp., 2015 release), statistical analyses were carried out. Whether the data showed normal distribution was evaluated using the Kolmogorov Test. For continuous variables, results are presented as mean ± SD. Frequency and percentage were used to describe categorical variables. Normally distributed data were compared with Student's t test, and non-normally distributed data were compared with Mann Whitney U test. The distribution frequency of categorical data such as gender, laterality, and lens type were evaluated with Pearson's chi-square test. The Kruskal Wallis test was used to evaluate data comparing more than two variables. Situations with a 'p' value less than 0.05 were considered significant.

RESULTS

The study included 165 CL-wearing healthcare professionals who worked at the hospital. The average age of the participants was 28.35±5.58 years (22-48); of whom 126 (76.4%) were women, and 144 (87.3) were doctors. Most participants (81.2%) had completed or were continuing their postgraduate education. CL usage duration was 8.16 years (1-30). Table 1 presents demographic data of the study population.

Table 1: Demographic characteristics of participants (n =165)

Demographic factor	(Mean±SD) (Range)
Age (year)	28.35±5.58 (22-48)
CL experience (year)	8.16±5.24 (1-30)
Gender	Number (%)
<i>Female</i>	126 (76.4)
<i>Male</i>	39 (23.6)
Smoking	
<i>Yes</i>	47 (28.5)
Profession	
<i>Doctor</i>	144 (87.3)
<i>Nurse</i>	14 (8.5)
<i>Technician</i>	5 (3)
<i>Physiotherapist</i>	2 (1.2)
Doctor title	
<i>Assistant</i>	116 (70.3)
<i>Specialist</i>	13 (7.9)
<i>General practitioner</i>	10 (6.1)
<i>Associate professor</i>	3 (1.8)
<i>Professor</i>	2 (1.2)
Education	
<i>Undergraduate</i>	31 (18.8)
<i>Postgraduate</i>	134 (81.2)

CL:Contact lenses

Contact lenses usage characteristics

Most of the participants were myopes (70.3%), CL power was mostly less than 5 dioptre (73.3%), and most wore soft spherical CL that was replaced monthly. 95.8% of participants were prescribed CL by an ophthalmologist at the first visit. The average time to wear CL was mostly 6-11 hours/day. To clean the CL, 93.3% of the participants used multi-purpose solutions, and 7.3% reported that they rarely washed the CL with tap water. 62% of participants were changing the solution in the lens case once a day. Half of the participants stated that they exceeded the CL duration. Only 34.8% of users were applying and removing their lenses in the hospital. Table 2 describes the CL usage characteristics of the participants.

Compliance with behaviour's associated with CL wear and care

A high level of compliance was observed with sharing CL and lens case, sleeping with CL, washing hands before inserting and removing CL, using enough solution in the lens case, topping up solution, and rinsing the lens with tap water. Moderate compliance rates were noted for swimming and showering with CL, checking the solution's expiration date, sharing solution, cleaning lens case, rubbing, rinsing and soaking with solution, and replacing lens case. Lens case replacement has the lowest compliance behaviour. Table 3 shows compliance with behaviours associated with CL use and care.

Risk factors associated with non-compliant behaviours

Multiple risk factors, including exceeding the CL wearing period, gender, education level, smoking, CL wearing mode, wearing CL form for more than 12 hours, cosmetic CL wear, yearly CL replacement, ≥ 1 week changing solution in the lens case, applying and removing CL in hospital, purchasing from an optician without a prescription, and their relationships with non-compliant behaviours in lens use and care were evaluated statistically. The results are shown in detail in Table 4.

Responses of every time and most times for positive behaviours and never and rarely for negative behaviours were considered compliance. Compliance rates were calculated by summing the results of every time + most times and rarely + never in Table 3. When looking at the compliance rates for contact lens behaviours, the highest compliance was seen in sharing the CL and its case with someone else, washing hands before wearing the CL, and washing the CL with tap water. The least compliance was regarding rubbing, rinsing, and soaking the CL with lens solution, and replacing and cleaning the lens case. (Figure 1)

Table 2: Contact lens usage characteristics of the participants

Information	Category	Number (%)
CL type	Soft spherical	109 (66.1)
	Soft toric	47 (28.5)
	Soft color	6 (3.6)
	Soft multifocal	3 (1.8)
CL use indication	Myopia	116 (70.3)
	Hypermetropia	5 (3)
	Astigmatism	42 (25.5)
	Cosmetic	2 (1.2)
CL power (diopter)	>5	42 (25.5)
	<5	121 (73.3)
	0	2 (1.2)
CL first prescriber	Ophthalmologist	158 (95.8)
	Non-prescription optician	5 (3)
	Via internet	2 (1.2)
CL place of purchase	Optician	79 (47.9)
	Online	80 (48.5)
	Other	6 (3.6)
CL wear routine	Continuous	88 (53.3)
	Intermittent	77 (46.7)
CL wearing time /day	1-5 hour	23 (13.9)
	6-11 hour	78 (47.3)
	>12 hour	64 (38.8)
CL wearing modality	Daily	34 (20.6)
	Monthly	108 (65.5)
	3-6 Monthly	21 (12.7)
	Yearly	1 (0.6)
Frequency of examination	6 montly	19 (11.5)
	Yearly	74 (44.8)
	Every two years	31 (18.8)
	>2 years	27 (16.4)
CL care system	Never	14 (8.5)
	Multipurpose CL solution	154 (93.3)
	Hydrogen peroxide	1 (0.6)
Changing solution in lens case	No solution	9 (5.5)
	Topping up solution	149 (92)
Time to Changing solution in lens case		8 (4.9)
	>1 per day	15 (9.2)
	1 per day	101 (62)
	In a few days	32 (19.6)
Finger rubbing with solution	≥ 1 week	9 (5.5)
	Yes	61 (37.2)
Applying and removing CL in hospital	No	102 (62.2)
	Yes	57 (34.8)
Exceeding the CL wearing period	No	107 (65.2)
	Yes	81 (49.1)
	No	84 (50.9)

CL:Contact lenses

Table 3: Compliance to behaviour's associated with contact lens wear and care by participants (n =165)

Behaviour	Every time n (%)	Most times n (%)	Occasionally n (%)	Rarely n (%)	Never n (%)
Sleeping with CL	4 (2.4)	4 (2.4)	21 (12.7)	44 (26.7)	92 (55.8)
Sharing CL with others	0	0	0	0	165 (100)
Swimming with CL	16 (9.7)	17 (10.3)	17 (10.3)	42 (25.5)	73 (44.2)
Showering with CL	13 (7.9)	21 (12.7)	26 (15.8)	48 (29.1)	57 (34.5)
Using enough solution in lens case	118 (72.4)	31 (19)	2 (1.2)	2 (1.2)	10 (6.1)
Topping up solution	2 (1.2)	6 (3.7)	7 (4.3)	21 (12.9)	127 (77.9)
Checking the solution's expiration date	85 (51.8)	28 (17.1)	23 (14)	15 (9.1)	13 (7.9)
Sharing solution	7 (4.3)	7 (4.3)	21 (12.8)	29 (17.7)	100 (61)
Washing hands before inserting CL	138 (83.6)	23 (13.9)	2 (1.2)	1 (0.6)	1 (0.6)
Washing hands before removing CL	131 (79.4)	22 (13.3)	5 (3)	3 (1.8)	4 (2.4)
Rinsing lens with tap water	0	1 (0.6)	1 (0.6)	10 (6.1)	152 (92.7)
Rubbing, rinsing and soaking with solution	59 (36.2)	27 (16.6)	24 (14.7)	17 (10.4)	36 (22.1)
Cleaning lens case	41 (25.2)	52 (31.9)	52 (31.9)	9 (5.5)	9 (5.5)
Sharing lens case	0	0	0	6 (3.7)	157 (96.3)
Replacing lens case	27 (16.6)	48 (29.4)	62 (38)	14 (8.6)	12 (7.4)

CL:Contact lenses

Table 4: Risk factors associated with non-compliant behaviors in contact lens use and care among hospital healthcare professionals

Non-compliant behavior	Factor leading to poor compliance	p* value
Sleeping with CL	Exceeding the CL wearing period	0.019
	Smoking	0.040
	CL wearing continuous mode	<0.001
	Wearing CL form more than 12 hours	<0.001
Swimming with CL	Exceeding the CL wearing period	0.045
	CL wearing continuous mode	0.003
	Wearing CL form more than 12 hours	<0.001
	Prescription >5	0.013
	Purchase CL from internet	<0.001
Showering with CL	CL wearing continuous mode	<0.001
	Wearing CL form more than 12 hours	<0.001
	Prescription >5	0.035
Not using enough solution in lens case	Exceeding the CL wearing period	0.039
	CL wearing continuous mode	0.012
	Wearing CL form more than 12 hours	0.040
	Cosmetic CL wear	0.026
	Yearly CL replacement	0.047
	≥ 1 week changing solution in lens case	<0.001
Topping up solution	Exceeding the CL wearing period	<0.001
	>2 years examination	0.013
	≥ 1 week changing solution in lens case	<0.001
	Applying and removing CL in hospital	0.044
Not checking the solution's expiration date	Exceeding the CL wearing period	0.006
	Postgraduate	0.005
	Non-prescription optician	0.018
Sharing solution	Male	0.034
Not washing hands before inserting CL	Exceeding the CL wearing period	0.010
	≥ 1 week changing solution in lens case	0.011
Not washing hands before removing CL	Exceeding the CL wearing period	0.019
	≥ 1 week changing solution in lens case	0.021
Not Cleaning lens case	>2 years examination	0.009
	≥ 1 week changing solution in lens case	0.001
Not replacing lens case	Exceeding the CL wearing period	0.015
	Smoking	0.009
	Yearly CL replacement	0.025
	≥ 1 week changing solution in lens case	<0.001

*Mann-Whitney U-test and Kruskal-Wallis test

CL:Contact lenses

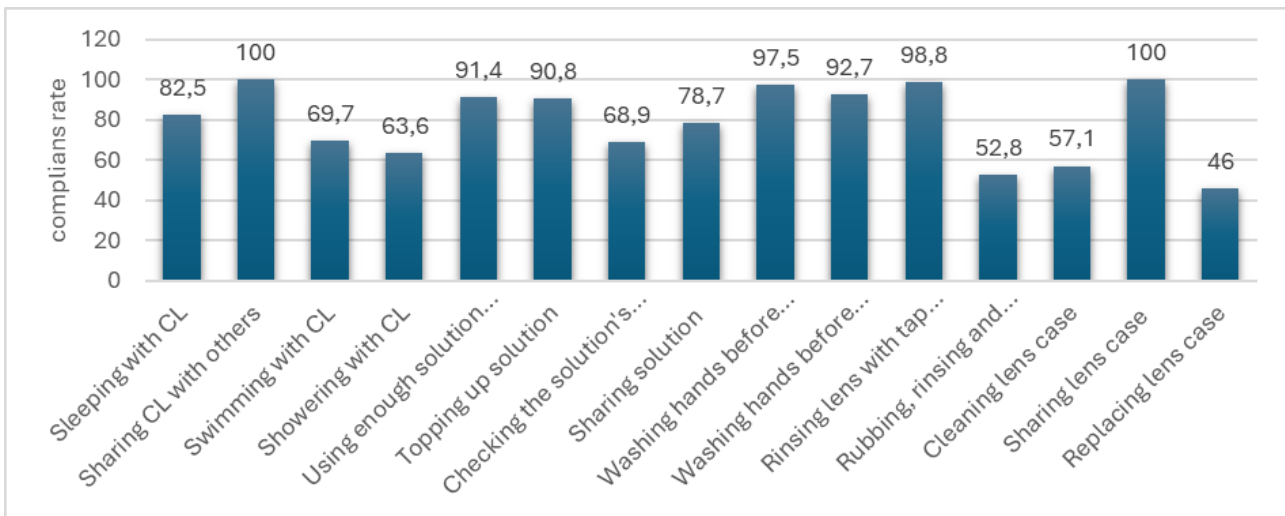


Figure 1: Compliance rate graphic of contact lens behaviours

DISCUSSION

Studies have been conducted in different countries on compliance with the use of CL (7-9). Contact lens wearers' attitudes towards CL use and care during the Coronavirus disease period have been evaluated in recent years (10-12). However, studies evaluating healthcare professionals' compliance with CL use were limited (5,6,13). In this study, the compliance with the use and care of CL by healthcare professionals who work in a hospital environment, where the risk of infection is increased, who are on duty and who may be exposed to infected materials, was evaluated with a survey.

Most of the participants were female, young and assistant doctors. As in previous studies, most participants were soft CL wearers for myopia (8,9). Most received their first CL with an ophthalmologist's prescription. Most of them used multi-purpose lens solution for lens cleaning. (93.3%). This rate was around 50-72% in studies (7,8). Monthly lenses were more preferred and CL wearing was mostly 6-11 hours/day. However, 38.8% stated that they wore CL more than 12 hours/day on average. This rate is slightly higher than other studies (7,8,12). This may be since the assistant doctors, who constituted the majority in the study, continued to wear CL during long-term shifts in the hospital. 34.8% of the participants stated that they applied and removed their CLs at the hospital.

Aftercare visits are crucial for CL wearers because they let professionals promote good hygiene and compliance while also identifying physiological changes in the eyes early on. In this study, the frequency of aftercare visits to the ophthalmologist in 1 year or less was over 50%. However, 8.5% stated that they had never been examined. Even though this rate is relatively low, it is an unacceptable level for healthcare professionals.

In the current study, 49.1% of the participants exceeded the recommended lens replacement time. Nearly half of

the participants use their lenses for a long time, perhaps because they think it is easy to reach an ophthalmologist if they feel a problem. Or they may have continued this non-compliant behaviour because they did not feel any serious discomfort when they exceeded the deadline several times. One study found that although 72% of ophthalmologists comply with the recommended lens replacement schedule, only 52% of lay people did (13). Most of the participants stated that they changed the solution in the lens case. 70% were changing the solution at least once a day, and 5.5% were changing the solution every >1 week. It was observed that participants who changed the solution in the lens case 1 week or later showed more non-compliant behaviours such as not using enough solution in the lens case and topping up solution, not washing hands before inserting and removing CL, not cleaning, and replacing lens case.

A high level of compliance was observed with sharing CL and lens case, sleeping with CL, washing hands before inserting and removing CL, using enough solution in lens case, topping up solution, and rinsing lens with tap water. The least compliance was regarding rubbing, rinsing, and soaking the CL with lens solution, and replacing and cleaning the lens case. Elimination of lens exposure to tap water is essential in preventing keratitis, as some studies have shown silicone hydrogel lenses to have increased preferential adhesion of Acanthamoeba to the lens surface (14). The study investigated several water-related activities, and it found that 98.8% of participants avoided rinsing their contact lenses with tap water, and that handwashing prior to inserting and removing contact lenses and swimming or taking a shower while wearing them both had high compliance rates. In their study, Gammoh et al. reported hand washing rates as 92.1% before lens insertion and 79.8% before lens removal (7). Wu et al. reported a compliance level of 88%, Sapkota reported a compliance level of 95% for handwashing (6,15).

Taslipinar et al. reported 100% of ophthalmologists and 92.3% of ordinary people complied with this behaviour (13). In the current study, the hand washing rate was found to be 97.5% before lens insertion and 92.7% before lens removal. These rates show that healthcare professionals are more compliant than other individuals regarding hand washing.

In this study, the rate of swimming and showering with CL was around 20%. Swimming and showering behaviour with CL was more common in those with a prescription over 5. This may be because vision is reduced without CL during these activities. Previous studies reported lower (15%) or higher (50-60%) swimming and showering rates with CL (7,8,13,15).

In the present study, the rate of rinsing the lens with tap water was 0.6%. It has been reported between 0% and 7% in studies (7,8,16). While the participants were compatible with the behaviours of using enough solution in lens case and topping up solution, the compliance the behaviour of rubbing, rinsing, and soaking with a solution was 52.8%. In the study of Taslipinar et al., it was observed that 76% of ophthalmologists complied with this behaviour, and the compliance of other groups was even lower (13). Previous literature has reported stronger compliance with this behaviour (6,15).

Participants demonstrated the least compliance in the behaviour of cleaning and replacement the lens case. Bacteria can increase their resistance to disinfectants by forming a colony of cells called biofilm on the surface of lenses or in the lens case (17). Biofilm formation can be avoided by regularly replacement of lens case, cleaning the lens case with solution, and rubbing the lens surface with it. After using contemporary CL solutions for two weeks, more than 80% of lens cases are contaminated (18). A 3.7-fold higher risk of acquiring microbial keratitis has been linked to poor lens case hygiene (19). In many studies, compliance with lens case cleaning and replacement was found to be low (8,15,20,21). In Sapkota's study, the lens case cleaning rate of medical doctors was 82%, while the rate of lens case replacement was 15.4% (6). This may suggest that eye care practitioners do not inform lens users sufficiently on this issue. It has been noted that the existing lens case hygiene guidelines are not standardized and may present contradictory information from manufacturers and practitioners (15). Compliance with lens case hygiene may be greatly improved if clear instructions are provided as demonstrated in a previous study by Yung et al. (20). In one study water education lowered endotoxin levels in CL storage cases and enhanced contact lens wearers' general water-related hygiene with "no-water" stickers on the lens cases (22). In the current study, risk factors that may be associated with non-compliant behaviours in CL use and care were also evaluated. It was observed that those who exceeded

the recommended lens replacement time showed non-compliant behaviour in many issues: Sleeping and swimming with CL, not using enough solution in lens case and topping up solution, not checking the solution's expiration date, not washing hands before inserting and removing CL, and not replacing lens case. Even though these participants are healthcare professionals, they should be warned that these incompatible behaviours as well as exceeding the duration of lens use may lead to serious complications.

It was found to be associated with using CL for more than 12 hours a day and in continuous mode (every day), sleeping, swimming, and showering with CL, and not using enough solution in lens case. Perhaps, due to continued use of lenses during shifts in the hospital, daily long-term CL use may lead to these non-compliant behaviours.

In addition, those who replacement their CL yearly was more non-compliant in their behaviour of using enough solution in the lens case and replacing lens case.

One of the limitations of this study may be that it was single-center and included mostly assistant doctors. However, since they are the hospital professionals who use CL the most and they work longer hours in the hospital (the number of hospital shifts is higher), this may be an advantage for evaluation. Secondly, evaluations of compliant behaviour may not be objective, as it is not known whether all participants are equally informed about CL use and care. On the other hand, since the participants were health professionals, it was assumed that they had sufficient knowledge on this subject.

The study concluded that healthcare professionals are mostly compliant with lens use and care, but they need to be more informed about some behaviours. For example: avoiding contact with water while wearing the CL, never using tap water, cleaning and replacing the lens case more frequently, rubbing, rinsing and soaking when cleaning the CL, not exceeding the replacement period of the lens, aftercare visit to the ophthalmologist at recommended intervals, renewing the lens solution more frequently, not exceeding the daily CL use period. Among the healthcare professionals who wear CL in the hospital, lens case replacement was the most neglected compliance behaviour. Healthcare professionals should be made aware of the risks associated with CLs and encouraged to reduce those risks with good CL hygiene. Frequent educational reinforcement techniques could be useful in changing this kind of behaviour. To lower the risk of lens-related complications, specific and uniform advice must be created and given to lens wearers.

The findings in this study indicate that even healthcare professionals who are expected to be more compliant are not sufficiently compliant in some behaviours regarding CL use and care. The definition of

compliance is adhering to practitioners' suggestions. Lens wearers who engage in non-compliant behaviour may not be aware of the consequences of such behaviour. Therefore, more effective programs designed to improve compliance among healthcare professionals are needed.

Conflict of Interest: The authors have no conflicts of interest to declare.

Researcher's Contribution Rate Statement: Concept/Design: ATB, IC, ZYA, AB; Analysis/Interpretation: ATB; Data Collection: ATB, IC; Writer: ATB; Critical Review: ATB, IC, ZYA, AB; Approver: ATB, IC, ZYA, AB

Support and Acknowledgment: No financial support was received from any institution or person.

Ethics Committee Approval: The study protocol was approved by the University of Health Sciences Ankara Training and Research Hospital Ethics Committee (Date: 21.02.2024, Number: E-93471371-514.10-237450006)

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