

Author Year	Setting	Location	Category of AE	AE Name and Definition	Routine PPE n/N (%)	Eye protection n/N (%)	Measures of Association
Ansari 2022	Multicenter; University hospital, postgraduate medical center, and hospital	Pakistan	Physical	Skin damage: Participants were asked face-to-face or through telephonic communication about skin damage such as rash, itch, dry skin, pressure injury, urticaria, and erosions after PPE use.		Goggles Rash: 22/93 (23.7%) Itch: 16/93 (17.2%) Xerosis (dry skin): 22/93 (23.7%) Pressure Injury: 40/93 (43.0%) Urticaria: 1/93 (1.1%) Erosion: 11/93 (11.8%)	
AriciParlak 2022	Training and research hospital operating room	Turkey	Job Impairment	Adverse events: Participants self-reported AE such as fogging, fear of dropping equipment on surgical site, and fear of disruption of sterility due to impact of the surgical team related to the use of goggles (cycling eyeglasses), goggle-type face shield (GFS), and face shield (FS)		Fogging Goggles: 32/35 (91.4%) GFS: 11/35 (31.4%) FS: 22/35 (62.9%) Fear of dropping equipment on surgical site Goggles: 5/35 (14.3%) GFS: 10/35 (28.6%) FS: 18/35 (51.4%) Fear of disruption of sterility due to impact of the surgical team Goggles: 8/35 (22.9%) GFS: 11/35 (31.4%) FS: 31/35 (88.6%)	Fogging: p<0.001 Fear of dropping equipment on surgical site: p=0.001 Fear of disruption of sterility due to impact of the surgical team: p<0.001
AriciParlak 2022	Training and research hospital operating room	Turkey	Physical	Adverse events: Participants self-reported AE such as Sweating/moisture, skin injury, discomfort, need for adjustment, feeling of restricted mobility related to the use of goggles (cycling eyeglasses), goggle-type face shield (GFS), and face shield (FS)		Sweating/moisture: Goggles: 22/35 (62.9%) GFS: 8/35 (22.9%) FS: 24/35 (68.6%) Skin Injury: Goggles: 10/35 (28.6%) GFS: 1/35 (2.9%) FS: 10/35 (28.6%) Discomfort Goggles: 28/35 (80.0%) GFS: 16/35 (45.7%) FS: 33/35 (94.3%) Need for adjustment Goggles: 20/35 (57.1%) GFS: 16/35 (45.7%) FS: 28/35 (80.0%) Feeling of restricted mobility Goggles: 9/35 (25.7%) GFS: 5/35 (14.3%) FS: 32/35 (91.4%)	Sweating/moisture: p<0.001 Skin injury: p=0.002 Discomfort: p<0.001 Need for adjustment: p=0.004 Feeling of restricted mobility: p<0.001
Arif 2021	NR	Pakistan, Australia, India	Job Impairment	Fogging: Self-reported fogging with goggle use that interferes to an extent of limiting performance and efficacy preventing respondent from wearing eye protection at all			Fogging: p<0.001
Ashour 2022	Ophthalmology eye clinic and OR	Egypt, US, UK, Iraq, Brazil, Morocco	Job Impairment	Convenience: Defined as being able to proceed with the various clinical procedures without difficulty, in a state of physical ease and freedom from pain or constraints during work was self-reported via anonymous web survey		Face shields and goggles had comparable low scores regarding convenience and clarity of various procedures while using them. Face shields were the most abandoned PPE followed by protective goggles [38/70 (54.2%) vs. 32/70 (45.7%)]	
Atay 2020	State and university hospitals	Turkey	Job Impairment	Sight problem: Self-reported problems with vision captured via questionnaire		Sight problem: 147/267 (47.9%)	Sight problem, >4 hours vs. ≤4 hours (ref): OR: 1.10 (95% CI: 0.69-1.73), p = 0.680

Atay 2020	State and university hospitals	Turkey	Physical	Adverse events: Sweating, headaches, and redness around the eyes self-reported via questionnaire after goggle and/or face shield use		Sweating/moisture: 117/267 (47.6%) Redness around eyes: 67/267 (27.1%) Headache: 95/267 (38.0%)	Redness around eyes, >4 vs. ≤4 (ref): OR: 1.02 (95% CI: 0.72-1.43), p = 0.898 Headache, >4 vs. ≤4 (ref): OR: 1.51 (95% CI: 0.99-2.14), p = 0.043
Ayub 2022	Public medical university hospital	India	Job Impairment	Adverse events: Fogging and visibility issues self-reported via questionnaire after goggle and/or face shield use		Fogging: 63/83 (75.90%) Visibility issues: 32/83 (38.55%)	
Ayub 2022	Public medical university hospital	India	Physical	Uncomfortable: Participants self-reported the most uncomfortable type of PPE via questionnaire		Uncomfortable: Goggles: 33/83 (39.75%) Face shields: 12/83 (14.45%)	
Baklouti 2022	University hospital	Tunisia	Job Impairment	Visibility restriction: Self-reported via questionnaire with visor and/or glasses use		Visibility restriction: 93/NR (31%)	
Baklouti 2022	University hospital	Tunisia	Physical	Adverse events: Discomfort, pain in pressure areas, facial and/or suborbital friction or maceration, and visibility restriction self-reported via questionnaire with visor and/or glasses use	Adverse events: 87/212 (41%)	Adverse events: 56/88 (63.6%) Discomfort: 61/NR (20.3%) Pain in pressure areas: 38/NR (12.7%) Facial and/or suborbital friction or maceration: 62/NR (20.7%)	Adverse events: aOR: 1.84 (95% CI: 1.1-3.37), p = 0.045 OR: 2.51 (95% CI: 1.50-4.2), p < 0.001
Bambi 2021	COVID-19 ICUs and high-dependency units	Italy	Physical	Adverse events: Device-related pressure injury and pain self-reported via questionnaire		Device-related pressure injury Goggles: 70.5% Face shield: 76.5% Goggles with face shield: 81.5%	Device-related pressure injury: p = 0.05 Pain: p = 0.36
CirisYildiz 2022	Pandemic hospitals	Turkey	Job Impairment	Convenience: Participants self-reported that protective goggles made it hard to do their jobs and made it difficult to wear their daily eyewear via questionnaire		Makes it hard to do job Strongly agree: 21.2% Agree: 25.7% Not sure: 18.4% Disagree: 20.8% Strongly disagree: 13.9%	121 participants must wear glasses in their daily life, and 70.2% of them reported that using protective glasses cause difficulty in using their daily eyewear.
CirisYildiz 2022	Pandemic hospitals	Turkey	Physical	Discomfort: Participants self-reported that protective goggles were uncomfortable via questionnaire		Discomfort Strongly agree: 22.2% Agree: 31.6% Not sure: 17% Disagree: 14.1% Strongly disagree: 15%	209/553 participants indicated they do not prefer to use protective glasses due to discomfort.

Ergin 2021	Hospitals	Turkey	Psychological and emotional	Anxiety: Self-reported via questionnaire and measured on a Likerty scale of 0-4 by the Coronavirus Anxiety Scale where a high score indicates high anxiety.	Anxiety Total Score, median (IQR): Use when necessary: 0.00 (3.00) Often use: 1.50 (4.00) Sometime use: 1.00 (7.00) Rarely use: 1.00 (6.00)	Anxiety Total Score: p = 0.094
Ergin 2021	Hospitals	Turkey	Physical	Physical comfort scale: Self-reported and measured by the Nurse Comfort Questionnaire which is scored on a 4-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree). Comfort increases when the scale score increases. Psycho-spiritual comfort scale: Self-reported and measured by the Nurse Comfort Questionnaire which is scored on a 4-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree). Comfort increases when the scale score increases. Socio-cultural comfort scale: Self-reported and measured by the Nurse Comfort Questionnaire which is scored on a 4-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree). Comfort increases when the scale score increases.	Physical Comfort Scale Total Score, median (IQR): Use when necessary: 28.00 (11.00) Often use: 26.00 (12.00) Sometime use: 25.00 (8.50) Rarely use: 25.00 (8.50) Psycho-spiritual Comfort Scale Total Score, median (IQR): Use when necessary: 44.00 (9.50) Often use: 43.00 (9.00) Sometime use: 42.00 (6.00) Rarely use: 41.00 (12.00) Socio-cultural Comfort Scale Total Score, median (IQR): Use when necessary: 30.00 (12.50) Often use: 29.50 (11.25) Sometime use: 28.00 (7.00) Rarely use: 28.00 (10.00)	Physical Comfort Scale Total Score: p = 0.061 Psycho-spiritual Comfort Scale Total Score: p = 0.650 Socio-cultural Comfort Scale Total Score: p = 0.096
Farag 2022	Two hospitals	Egypt	Physical	Headache: Headache was classified according to the International Classification of Headache Disorders, 3rd edition and self-reported via questionnaire	New onset and change of pre-existing headache Goggles: 16/29 (55.2%) Face shield: 46/54 (85.2%) None: 18/82 (22.0%)	New onset and change of pre-existing headache: p = 0.001 Headache (face shield vs. eyewear non-users): aOR: 15.8 (95% CI: 1.63-23.7), p = 0.017
Finn 2021	Neurosurgery	UK	Job Impairment	Fogging: Eye protection fogging up Difficulty using microscope: Respondent reported difficulties using the operating microscope while wearing the visor/goggles Removal to use microscope: Respondent reported having to remove eye protection in order to use microscope	Fogging: 62% Difficulty using microscope: 68% Removal to use microscope: 82%	
Hajji 2020	One tertiary care university hospital	Morocco	Physical	De novo headache: Headache generated by wearing eye protection that was never experienced before Aggravated: Aggravation of pre-existing headache generated by wearing eye protection	De novo headache stratified by duration of wearing eye protection: <4 hours: 15/51 (29.4%) >4 hours: 36/104 (34.6%) Aggravated headache stratified by duration of wearing eye protection: <4 hours: 20/51 (39.2%) >4 hours: 25/104 (24.0%)	De novo headache stratified by duration of wearing eye protection: <4 hours vs. >4 hours: p = 0.58 Aggravated headache stratified by duration of wearing eye protection: <4 hours vs. >4 hours: p = 0.06
Ho 2022	Healthcare conglomerate	Singapore	Physical	Dermatitis: Protective eyewear-related occupational dermatitis; includes facial itch/rash and pressure injuries such as abrasion/pressure sores	Dermatitis: 140/416 (33.7%) Facial itch/rash: 36/140 (25.7%) Pressure injury: 99/140 (70.7%)	Dermatitis stratified by duration of use: OR: 2.9 (95% CI: 1.1 - 7.8, p = 0.03) >1 hour: 35.2% ≤1 hour: 15.6%

Jose 2021	ICU of COVID-19 hospital	India	Job Impairment	Fogging: Fogging of goggle		Fogging: 91.7%	
Long 2020	University hospital	China	Physical	Dry eye symptoms: Questionnaire based on OSDI where scores ≥ 13 indicate symptomatic dry eye, in which 13-22, 23-32, and 33-100 indicate mild, moderate, and severe presence of dry eye symptoms			Dry eye symptoms stratified by duration of wearing protective glasses (≥ 6 hours vs. 4-5 hours, ref): OR: 0.145 (95% CI: 0.038 - 0.560), $p < 0.05$
Marraha 2021	University hospitals, regional hospitals, private clinics, rehabilitation centers, emergency medical services, and others	Morocco	Physical	Skin reactions: Reported after wearing goggles, including pressure lesions and erythema		Skin reactions: 118/202 (58%) Pressure lesion: 50% Erythema: 19%	Skin reactions stratified by duration (>2 hours vs. <1, ref): OR: 1.7 (95%CI: 0.98-3.12), $p = 0.05$
Min 2021	Public hospital	South Korea	Physical	Discomfort: Inconvenience due to discomfort with PPE self-reported via questionnaire		Discomfort due to goggles: 69 (67.7%) Discomfort due to face shield: 37 (36.3%)	
Ong 2020	Tertiary referral hospital	Singapore	Physical	Headache: de novo PPE-associated headache self-reported via questionnaire		Headache: 66/128 (51.6%) Time interval between donning protective eyewear to onset of headache was less than 60 minutes for 113/128 (88.3%). The attributed headache resolved spontaneously within 30 minutes after removal of protective eyewear in 114/128 (89.1%) and within 60 minutes in 124/128 (97.7%).	Headache stratified by duration of protective eyewear use per day: OR: 1.60 (95% CI: 1.13 - 2.25), $p < 0.001$ >4 hours: 109/125 (87.2%) 1-4 hours: 19/33 (57.6%) Headache stratified by frequency of protective eyewear use per month: OR: 1.5 (95% CI: 1.03 - 2.18), $p = 0.013$ >15 days: 96/111 (86.5%) 3-15 days: 32/47 (68.1%)
Prakash 2020	Operating rooms of tertiary care center	India	Physical	Discomfort: Reason reported via electronic questionnaire for not using face shield		Discomfort: 33%	
Prakash 2020	Operating rooms of tertiary care center	India	Job Impairment	Poor visibility: Reason reported via electronic questionnaire for not using face shield Fogging: Reason reported via electronic questionnaire for not using face shield		Poor visibility: 36% Fogging: 33%	
Singh 2021	Government institutes, private institutes, NGO/trust hospitals, nursing homes	India, America, Bangladesh, Brazil, Burundi, Barbados, Colombia, England, Italy, Nepal, Spain, Uganda, UK	Physical	Headache: Reported with use of eye protection Skin irritation: Reported with use of eye protection Comfort level: Reported with use of eye protection		Headache: 49/220 (22.2%) Skin irritation: 9/220 (4.1%) Comfort level of face shield: 80/220 (36.3%) Comfort level of goggles: 84/220 (38.2%)	

Singh 2021	Government institutes, private institutes, NGO/trust hospitals, nursing homes	India, America, Bangladesh, Brazil, Burundi, Barbados, Colombia, England, Italy, Nepal, Spain, Uganda, UK	Job Impairment	Fogging: Reported with use of eye protection Poor visibility: Reported with use of eye protection Level of satisfaction with visibility: Respondents self-reported satisfaction with visibility after wearing eye protection Convenience: Self-reported incompatibility with loupes and glasses		Fogging: 178/220 (80.9%) Poor visibility: 122/220 (55.4%) Level of satisfaction with visibility: Very satisfied: 4/220 (1.8%) Satisfied: 54/220 (24.5%) Dissatisfied: 119/220 (54.1%) Very dissatisfied: 25/220 (11.4%) Incompatible with loupes and glasses: 31/220 (14.0%)	
Thiagarajan 2021	Surgical Oncology of hospitals	India	Physical	Discomfort: Reported via electronic questionnaire Headache: Reported via electronic questionnaire		Discomfort: 6/342 (1.8%) Headache: 7%	
Thiagarajan 2021	Surgical Oncology of hospitals	India	Job Impairment	Poor visibility/fogging: Reported via electronic questionnaire Inability to enjoy surgery: Due to routine use of eye protection		Poor visibility/fogging: 84/342 (24.6%) Level of satisfaction with visibility: Very satisfied: 8/342 (2.3%) Satisfied: 68/342 (19.9%) Neither satisfied nor dissatisfied: 76 (25.4%) Dissatisfied: 117/342 (34.2%) Very dissatisfied: 40/342 (11.7%)	Goggles and face shields associated with poor visibility ($p < 0.001$) and fogging ($p = 0.017$) when compared to use of routine prescription glasses or no glasses Factors that contributed to the inability to enjoy surgery include poor visibility ($p = 0.04$), fogging ($p = 0.174$), lack of comfort ($p = 0.06$), incompatibility with loupes ($p = 0.282$), and headaches ($p = 0.334$)
Thiagarajan 2021	Surgical Oncology of hospitals	India	Psychological and emotional	Fatigue: Due to routine use of eye protection Stress: Due to routine use of eye protection			Factors that contributed to fatigue include poor visibility ($p = 0.001$), fogging ($p = 0.139$), lack of comfort ($p = 0.05$), incompatibility with loupes ($p = 0.34$), and headaches ($p < 0.001$) Factors that contributed to stress include poor visibility ($p = 0.028$), fogging ($p < 0.001$), lack of comfort ($p = 0.674$), incompatibility with loupes ($p = 0.151$), and headaches ($p = 0.319$) Stress due to fogging: aOR: 3.61 (95% CI: 1.93-6.77), $p < 0.001$

Score	Color	Definition
1		Element is present in this study
NA		Element is not applicable to this study design
0		Unclear if this element is present in this study
-1		Element is not present in this study

