

**Supplementary Table 2: Risk of bias assessment****Risk of bias assessment of cross-sectional studies using the Hoy et al. proposed tool.**

Article	Question 1	Question 2	Question 3	Question 4	Question 5	Question 6	Question 7	Question 8	Question 9	Question 10	Summary on the overall risk of study bias
Relationship between screen time and dry eye symptoms in pediatric population during the COVID-19 pandemic.	YES (LOW RISK)	YES (LOW RISK)	YES (LOW RISK)	YES (LOW RISK)	YES (LOW RISK)	YES (LOW RISK)	YES (LOW RISK)	NO (HIGH RISK)	YES (LOW RISK)	YES (LOW RISK)	Low risk
											Moderate risk
											High risk
Impact of COVID-19 Home Confinement in Children's Refractive Errors	YES (LOW RISK)	YES (LOW RISK)	YES (LOW RISK)	YES (LOW RISK)	YES (LOW RISK)	YES (LOW RISK)	YES (LOW RISK)	YES (LOW RISK)	YES (LOW RISK)	YES (LOW RISK)	Low risk
											Moderate risk
											High risk
Binocular accommodation and vergence dysfunction in children attending online classes during the COVID-19 pandemic: digital eye strain in kids (DESK) study-2	NO (HIGH RISK)	YES (LOW RISK)	NO (HIGH RISK)	NO (HIGH RISK)	YES (LOW RISK)	YES (LOW RISK)	YES (LOW RISK)	YES (LOW RISK)	YES (LOW RISK)	YES (LOW RISK)	Low risk
											Moderate risk
											High risk
Objective and subjective behavioral measures in myopic and non-myopic children during the covid-19 pandemic	NO (HIGH RISK)	YES (LOW RISK)	NO (HIGH RISK)	NO (HIGH RISK)	YES (LOW RISK)	NO (HIGH RISK)	YES (LOW RISK)	YES (LOW RISK)	YES (LOW RISK)	YES (LOW RISK)	Low risk
											Moderate risk
											High risk
The visual consequences of virtual school: acute eye symptoms in healthy children	NO (HIGH RISK)	YES (LOW RISK)	NO (HIGH RISK)	NO (HIGH RISK)	YES (LOW RISK)	NO (HIGH RISK)	YES (LOW RISK)	YES (LOW RISK)	YES (LOW RISK)	YES (LOW RISK)	Low risk
											Moderate risk
											High risk
Impact of E-schooling on digital eye strain in Coronavirus Disease Era: A survey of 654 students	YES (LOW RISK)	YES (LOW RISK)	YES (LOW RISK)	YES (LOW RISK)	YES (LOW RISK)	NO (HIGH RISK)	YES (LOW RISK)	YES (LOW RISK)	YES (LOW RISK)	YES (LOW RISK)	Low risk
											Moderate risk
											High risk
	YES	NO	YES	NO	YES	YES	YES	YES	YES	YES	Low risk

Prevalence and risk factor assessment of digital eye strain among children using online elearning during the COVID-19 pandemic: Digital eye strain among kids (DESK study-1)	(LOW RISK)	(HIGH RISK)	(LOW RISK)	(HIGH RISK)	(LOW RISK)	(LOW RISK)	(LOW RISK)	(LOW RISK)	(LOW RISK)	(LOW RISK)	(LOW RISK)	Moderate risk
												High risk
Progression of Myopia in School-Aged Children after COVID-19 Home Confinement	NO (HIGH RISK)	NO (HIGH RISK)	NO (HIGH RISK)	YES (LOW RISK)	YES (LOW RISK)	YES (LOW RISK)	YES (LOW RISK)	YES (LOW RISK)	YES (LOW RISK)	YES (LOW RISK)	YES (LOW RISK)	Low risk
												Moderate risk
												High risk

Interpretation: Low risk: 0-4 (No:High risk), Moderate risk: 5-7 (No:High risk), High risk 8-10 (No:High risk)

#### Risk of bias assessment for before-and-after studies using NIH tool.

Article	Question 1	Question 2	Question 3	Question 4	Question 5	Question 6	Question 7	Question 8	Question 9	Question 10	Question 11	Question 12	Quality Rating
Comparison of Myopic Progression before, during, and after COVID-19 Lockdown 10.1016/j.ophtha.2021.03.029	YES	NO	YES	CD	NR	YES	YES	NR	NO	YES	YES	YES	Good
													Fair
													Poor
Survey on the Progression of Myopia in Children and Adolescents in Chongqing During COVID-19 Pandemic	YES	YES	YES	YES	YES	YES	YES	NR	YES	YES	NO	YES	Good
													Fair
													Poor
The effect of home education on myopia progression in children during the COVID-19 pandemic	YES	YES	NR	YES	CD	YES	YES	NR	YES	YES	NO	YES	Good
													Fair
													Poor
	YES	YES	NR	NR	CD	YES	YES	NR	CD	YES	NO	YES	Good

The impact of COVID-19 home confinement on axial length in myopic children undergoing orthokeratology														Fair
														Poor
COVID-19 Quarantine Reveals That Behavioral Changes Have an Effect on Myopia Progression. 10.1016/j.optha.2021.04.001	YES	YES	YES	YES	YES	YES	YES	NR	YES	YES	CD	YES	Good	
													Fair	
													Poor	
Contribution of Total Screen/Online-Course Time to Asthenopia in Children During COVID-19 Pandemic via Influencing Psychological Stress	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	Good	
													Fair	
													Poor	
Prevalence of Self-Reported Symptoms of Computer Vision Syndrome and Associated Risk Factors among School Students in China during the COVID 19 Pandemic	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES		Good	
													Fair	
													Poor	

Interpretation: Good: 10 or more YES; Fair: 6 or more YES; Poor: 5 or less YES Abbreviations:

CD: Cannot Determine; NR: Not reported.

#### Risk of bias assessment of case series using the Murad MH et al. proposed tool.

Article	Selection	Ascertainment			Causality				Reporting
	Question 1	Question 2	Question 3	Question 4	Question 5	Question 6	Question 7	Question 8	
Acute Acquired Concomitant Esotropia From Excessive Application of Near Vision During the COVID-19 Lockdown	YES	YES	YES	YES	NA	NA	NO	YES	

#### Risk of bias assessment of cohort studies using the NEWCASTLE - OTTAWA QUALITY ASSESSMENT SCALE

Article	Selection				Comparability	Outcome			Overall
	Question 1	Question 2	Question 3	Question 4	Question 1	Question 1	Question 2	Question 3	
The Impact of Study-atHome During the COVID19 Pandemic on Myopia Progression in Chinese Children	1 Star. Truly representative of the average primary schools in Fuxing District, Handan, Hebei, China children	1 Star. Drawn from the same community as the exposed cohort	1 Star. Secure record (eg medical records and clinical evaluations)	0 Star.	1 Star. Study controls for not exposed to exposure factors (study at home)	1 Star. Confirmation of the outcome by reference to secure records and self report	1 Star. Yes: 6 months Assessment at baseline (July 2019), at the first follow-up (January 2020) and at the second follow-up (August 2020)	0 Star. No statement	6 Stars.
Rates of Myopia Development in Young Chinese Schoolchildren During the Outbreak of COVID-19	1 Star. somewhat representative of the average children in the community. (Especially, young school children)	1 Star. Drawn from the same community as the exposed cohort	1 Star. Secure record (eg medical records and clinical evaluations)	1 Star. They described the percentages of patients without the outcome at baseline.	1 Star. Study controls for grade.	1 Star. Confirmation of the outcome by reference to secure records.	1 Star. 3 measurements in 3 years.	1 Star. Subjects lost to follow up unlikely to introduce bias - small number lost - < 20 % follow up.	7 Stars.