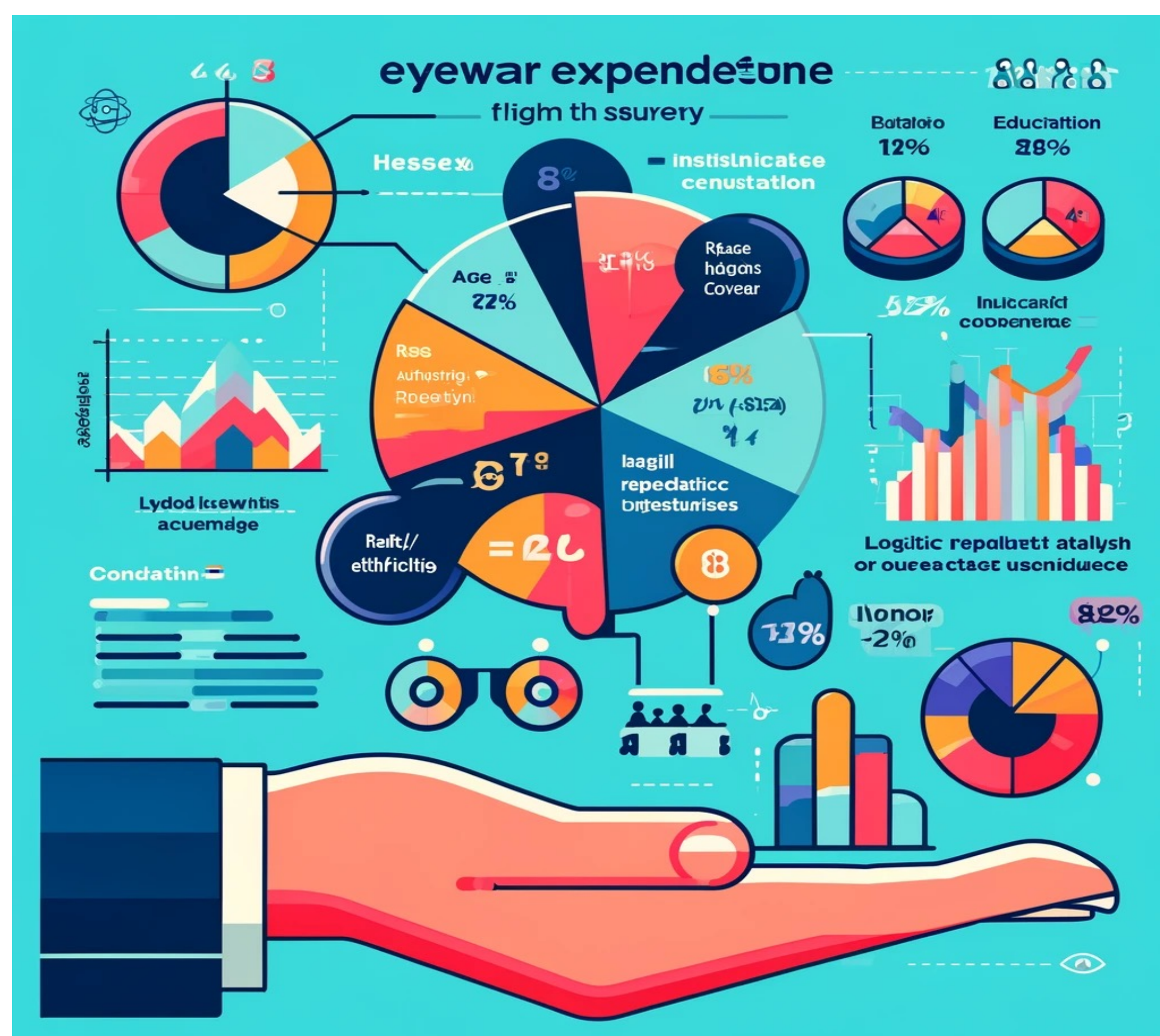




## BACKGROUND

- Eyewear, encompassing both eyeglasses and contact lenses, is indispensable for correcting vision impairments and enhancing visual acuity.
- Good vision is vital not only for routine daily activities like reading, driving, and using digital devices but also plays a significant role in education, employment, and social interactions.
- Vision care, however, can be a significant financial burden for many individuals and families. The costs of corrective eyewear and professional vision services can be substantial, particularly for those without adequate insurance coverage.
- This financial burden can lead to delays in obtaining necessary vision correction, which in turn may worsen vision problems or lead to other health complications.
- Identifying and addressing these factors makes it possible to devise strategies to reduce the economic impact of vision care.



## OBJECTIVE

This study examined the annual total eyewear expenditures (EE), and the proportion of the US population incurring these expenses and identified patient factors influencing EE.

## METHODS

### Study design and data source

- This study employs a retrospective cohort design using the Medical Expenditure Panel Survey (MEPS) from 2017-2021.
- The survey collects detailed information on healthcare utilization, cost, and insurance coverage, making it an ideal source for examining the patterns and predictors of EE.

### Study population

- From MEPS, we extracted data on individuals who reported EE during the study period. Sociodemographic variables included age, sex, race/ethnicity, education level, income level, and insurance coverage.

### Statistical Methods

- Descriptive Analysis: We employed weighted descriptive statistics to compare the characteristics of individuals with and without EE.
- Logistic Regression: This method was used to identify predictors of EE.
  - The model included demographic and socioeconomic variables to explore their association with the likelihood of incurring EE.
- Analysis was conducted using SAS 9.4 with PROC SURVEY statement.

## RESULTS

Table 1: Demographics of Individuals with EE

Demographic Feature		Percentage (%)
Age	< 18	5.22
	18-44	17.97
	45-64	31.04
	> 65	45.77
Gender	Female	41.79
	Males	58.21
Ethnicity	Non-Hispanic Whites	66.46
	Non-Hispanic Blacks	14.91
	Hispanic	2.59
	Others	16.04
	Education	11.03
Education	Less than high school	42.93
	High school	46.04
	Beyond High School	49.78
Income Status	Mid/High income	20.16
	Low income	30.06
	Poor/Near Poor	74.84
	Insurance	22.28
Insurance	Private	2.88
	Public only	2.88
	Uninsured	2.88

Table 2: Distribution of EE

	Value	95% CI
Individuals with EE	59.60 million	57.30-61.90 million
Annual EE	\$21.56 billion	\$20.80-22.19 billion
Average EE (Per Person Per year)	\$66.61	\$64.26-\$68.95

Table 3: Findings from Multivariable Logistic Regression Model

Variable*	aOR	95% CI
Non-Hispanic White	1.16	1.09-1.23
Female	1.40	1.35-1.45
Older Age (65+ years)	1.47	1.34-1.60
Higher Education	1.99	1.80-2.19
Lower Poverty	1.25	1.17-1.33
Private Insurance	2.06	1.84-2.29

\*P-value < 0.05

## CONCLUSIONS

- The US population bears a substantial yearly financial burden associated with EE.
- Predictors of occurring EE include being elderly, non-Hispanic White, female, having higher education, lower poverty, and having private insurance coverage.

Reference:

1. Varadaraj V, Frick KD, Saaddine JB et al. Trends in eye consequences affordability: The US National Health Interview Survey, 2008-2016. JAMA Ophthalmology. 2019; 137(4): 391-98.
2. Elam AR, Tseng VL and Coleman AL. Disparities in vision health and eye care: Where do we go from here. Ophthalmology. 2022; 129(10): 1077-78.