

Awareness, Healthcare-Seeking Practices, and Recognition of Glioma Warning Signs Among the General Population of Pakistan

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● BACKGROUND

Glioma causes ~28% of Pakistan's 2,750 registry brain tumours, yet public awareness has never been measured nationally — in China, 60.5% had never even heard of it.

● OBJECTIVES

- Measure glioma **awareness** (knowledge & attitude) and **practice** in the general population.
- Identify sociodemographic correlates and inter-domain (KAP) correlations.

● METHODS

- **Design:** Community-based cross-sectional, Jan–Jul 2026.
- **Setting/Sampling:** Lahore, Karachi, Islamabad + online; convenience, adults ≥18y.
- **Tool:** KAP questionnaire adapted from Ma et al. 2024.
- **Analysis:** SPSS v26 — χ^2 , t-test/ANOVA, correlation, regression ($p<0.05$).

● SAMPLE (N=399)

Female / Male	58.9% / 41.1%
Aged 18–25 years	88.5%
Students	78.7%
Graduate education+	56.4%

● INCLUSION / EXCLUSION

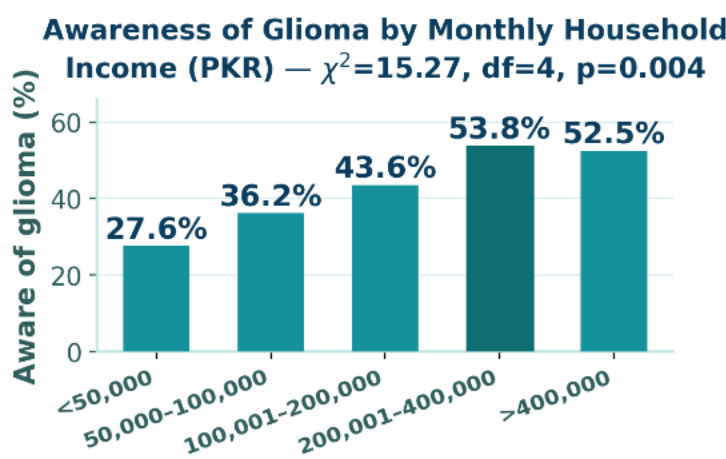
INCLUDED	EXCLUDED
• Pakistani resident, age ≥18y, understands English/Urdu	• Healthcare workers/students; non-Pakistani residents
• Gave informed consent	• Unable/unwilling to consent

41.4% had **ever heard of glioma** (165/399) — first such estimate for Pakistan.

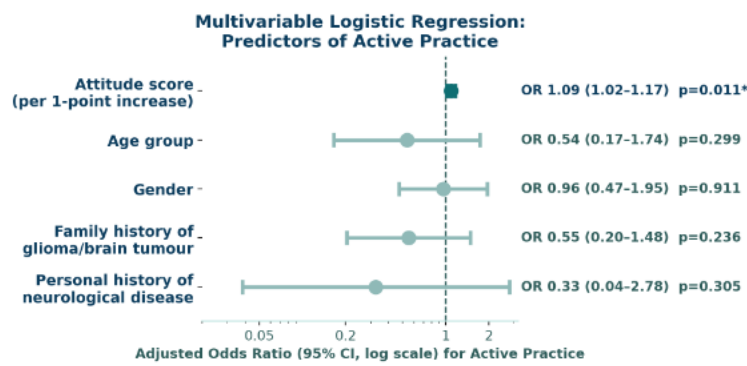
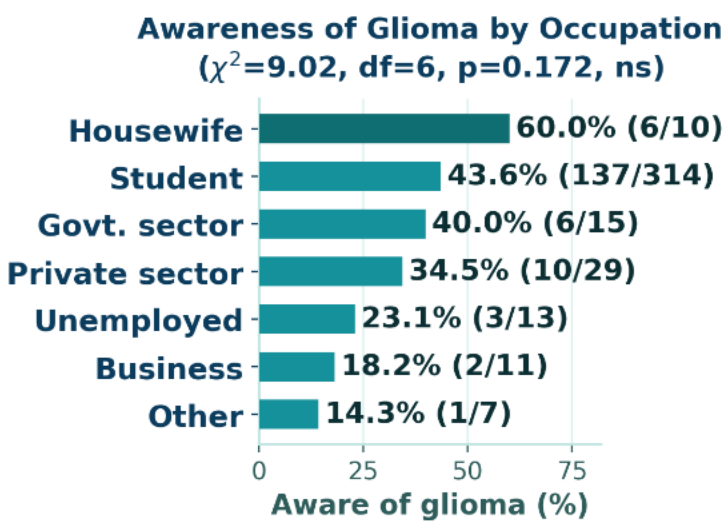
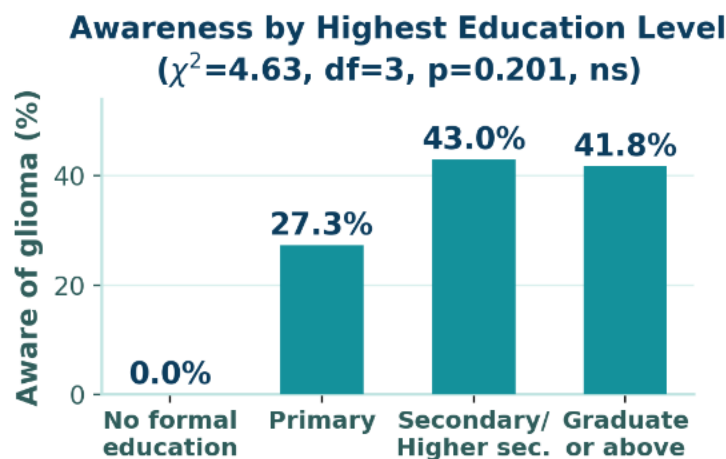
● KAP SCORES (AWARE, N=165)

Knowledge	71.7%	Moderate
Attitude	77.2%	Favourable
Practice	73.0%	Active

Pearson Correlations Among KAP Domains (n=165)			
Knowledge		Attitude	Practice
		$r=0.261$ $p=0.001$	$r=0.328$ $p<0.001$
			$r=0.417$ $p<0.001$
		$r=0.261$ $p=0.001$	$r=0.417$ $p<0.001$
			$r=0.417$ $p<0.001$
		$r=0.328$ $p<0.001$	$r=0.417$ $p<0.001$
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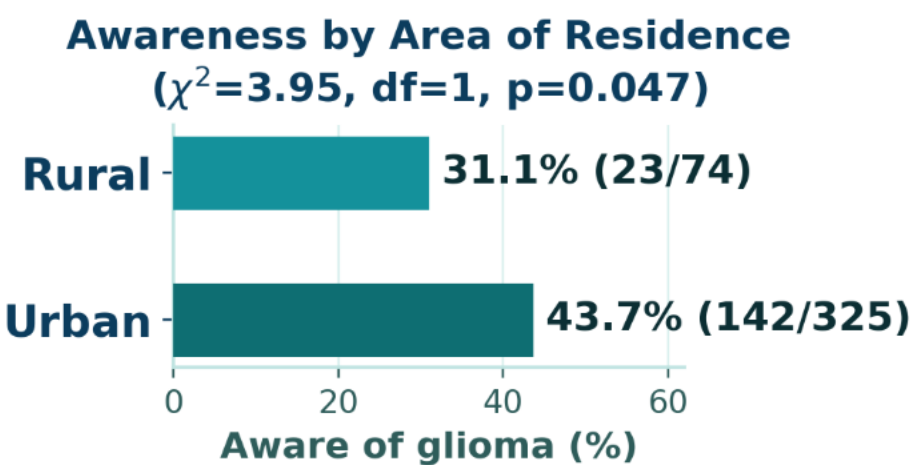
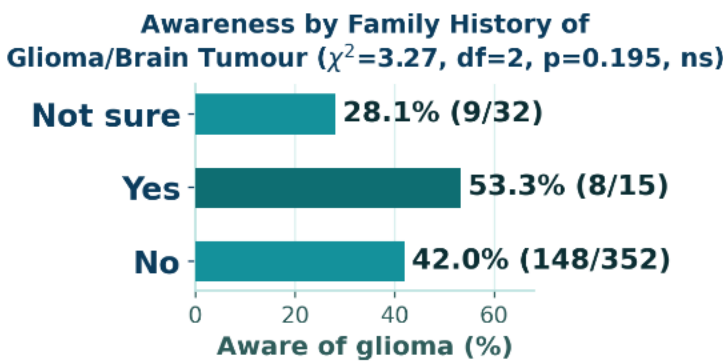
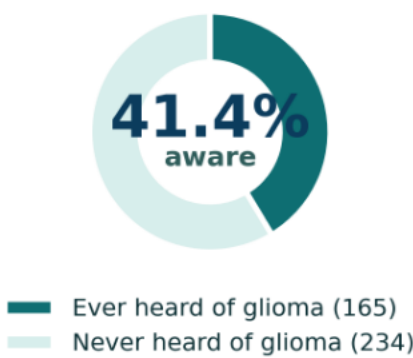
Awareness rose with income (27.6% → 53.8%), plateauing above 200k PKR — consistent with a health-literacy gradient.



● HELP-SEEKING DRIVER

Perceived personal importance of glioma ($\beta=.328$, $p<.001$) — not fear ($p=.517$) — was the strongest correlate of willingness to seek help; knowledge added a smaller effect ($\beta=.166$, $p=.028$).

Glioma Awareness in the Full Sample (n=399)



● CONCLUSION

Fewer than half of Pakistanis had ever heard of glioma, and knowledge among the aware was only **moderate**. Awareness was higher among urban and higher-income respondents, and **attitude**, **not knowledge**, was the strongest independent predictor of active practice. These first Pakistan-specific data support glioma-education campaigns that build perceived personal relevance alongside facts, rather than facts alone.