



Perspectives in the Use of Electronic Health Information Systems

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Presently:

- Junior Resident & Tutor at Department of Pharmacology, Kasturba Medical College, MAHE, Manipal, India
- Worked as a Duty Medical Officer at Citi-Neuro Centre, Hyderabad
- MBBS from Shadan Institute of Medical Sciences, Hyderabad

Research Activities:

- Publications in Scopus Indexed Journals: 1
- Ongoing Research:3

Certificates and awards: **11**

Adoption of EHIR

- **2000s:** Initial implementation of basic intranet systems in large hospitals for record-keeping.
- **2010-2015:** Integration of EMRs and digital imaging systems for patient data access.
- **2016-2018:** Introduction of mobile-compatible intranet platforms for on-the-go updates.
- **2019-2020:** Expansion of telemedicine features and real-time collaboration tools.
- **2021-2023:** AI-powered decision support integrated into intranet systems for personalized care.
- **2024:** Ongoing efforts to connect intranet systems with National Digital Health Mission initiatives

Study Objectives

- **Primary:** Usage & **attitudes** → electronic health Information resources (**EHIR**) → Indian health care providers.
- **Secondary:** Determine **perspectives** → **adoption** of EHIR → Indian health care providers.

Design - overview

- **Ethics:** Institutional Ethics Committee approved, IEC2: 519/2024
- **Study Design:** Online cross-sectional survey → single time point
- **Study frame:** 1-year period from Sep2024 – Sep2025
- **CTRI**2024/10/074610

Eligibility criteria

- **Inclusions:**

Indian → Health care **professionals** >**18Years**

- **Exclusion:**

Incomplete → survey **forms**

Fail → **trap** question

Methodology

- **Data collected digitally** → Self-administered / Investigator-administered
- Shared **online** → digital platforms
- First presented → **Informed consent form**
- **Digital written informed consent** → before eligibility screening.
- Eligible participants → **study questionnaire**

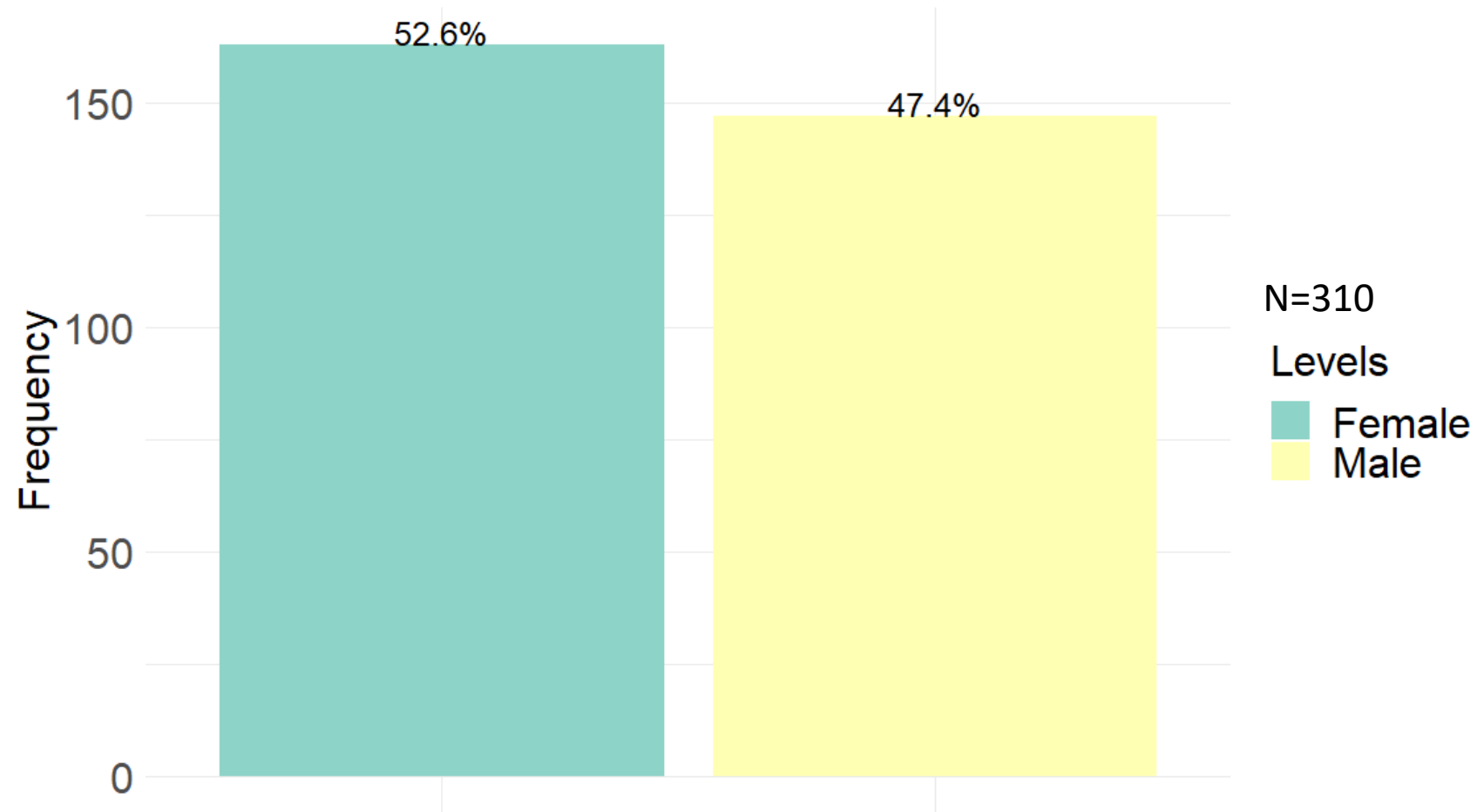
Statistical Analysis Plan

- **Demographic** characteristics → Descriptive statistics.
- **Prevalence of EHIR** → proportions & 95% confidence intervals
- **Hypothesized predictors** → univariate analysis → simple regression and those with a p-value < 0.2 will be subjected to multivariate regression.
- Performed by **SPSS**
- Overall statistical significance → **p < 0.05.**

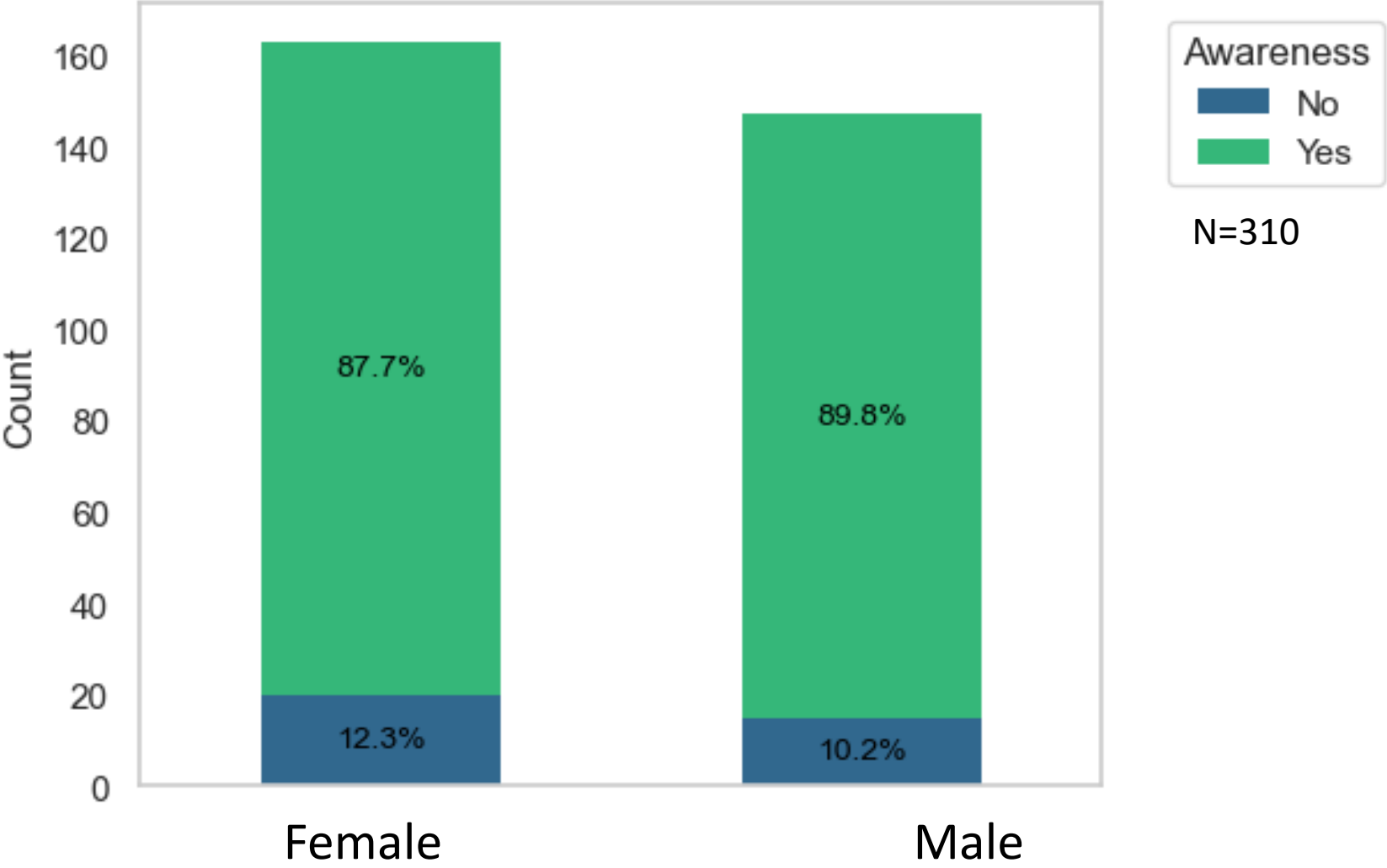
Sample size

- **Willingness to Use EHIR:** Estimated ~75% → Senishaw et al.
Statistical Assumptions: Alpha error: 5%
Beta error: 20%
Absolute precision: 10%
- **Sample Size Calculation:** Initial estimate (Cochran's formula): 75
Adjustment for pan-Indian study:
 $75 \times 36 = 2700$
(to cover 28 states + 8 UTs)
- **Final Target Sample Size:** Anticipated non-eligibility (10%) due to form errors: 300 additional participants
- **Total target:** 3000 healthcare workers across India

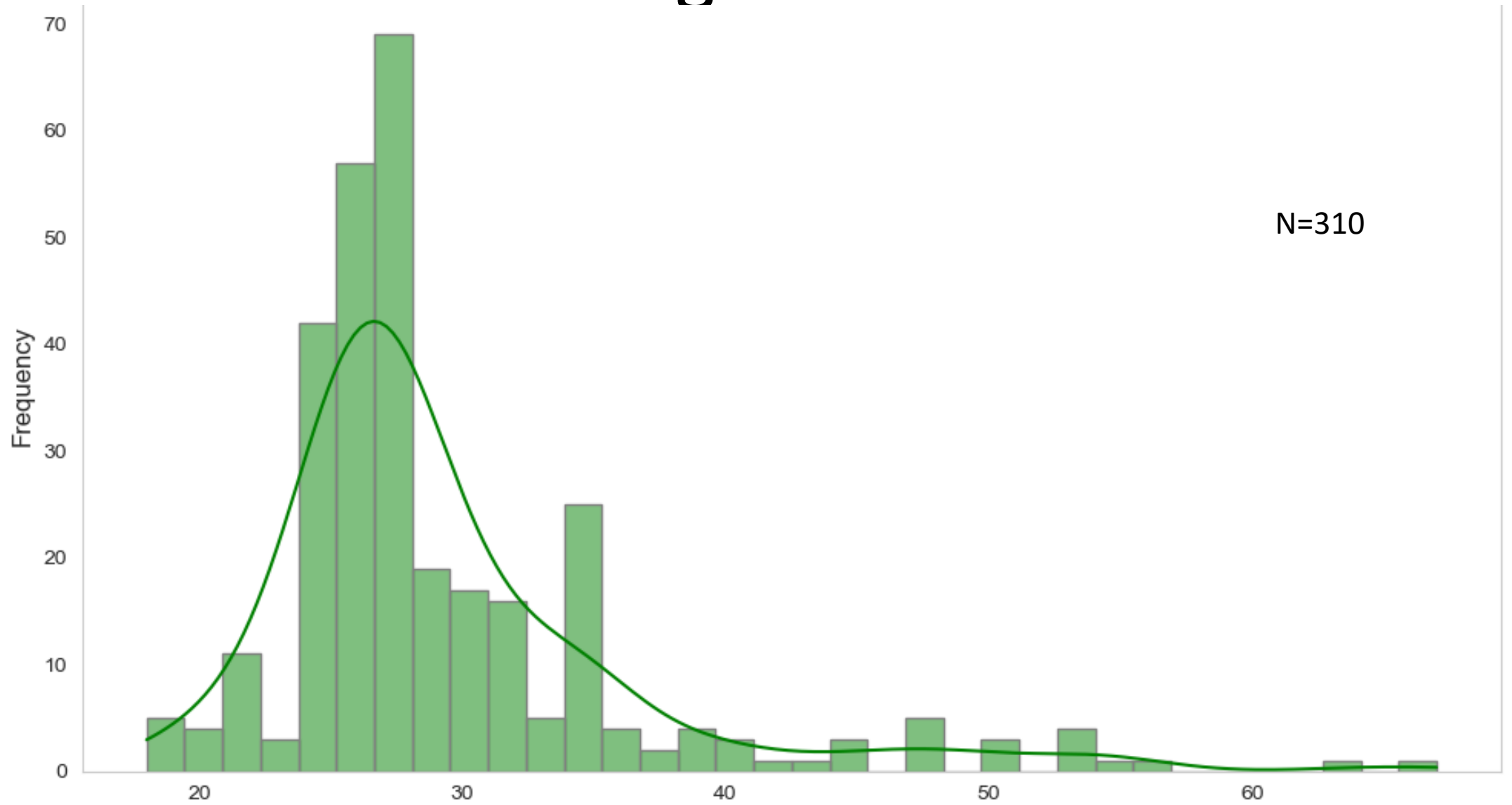
Results-Biological Sex Distribution



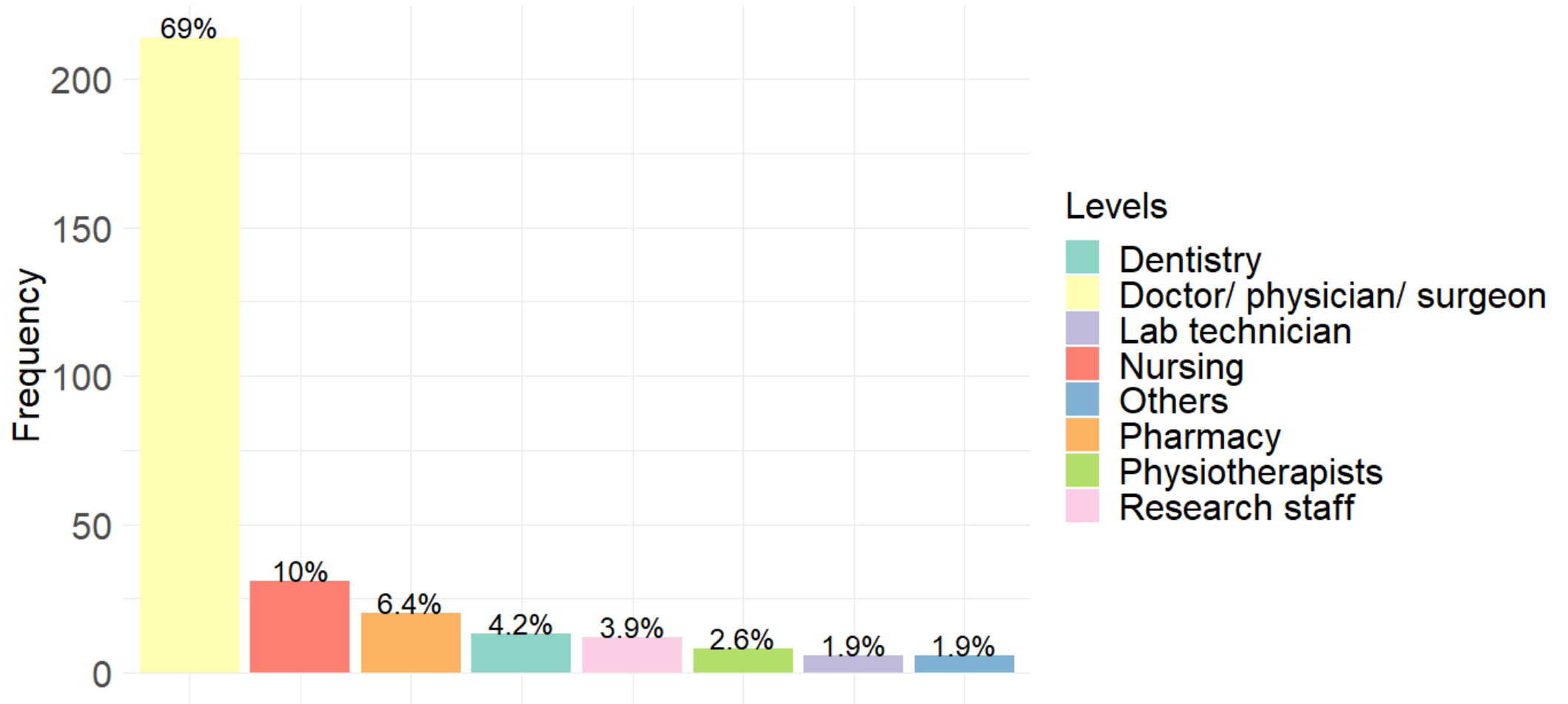
Results- EHIR awareness by Biological Sex



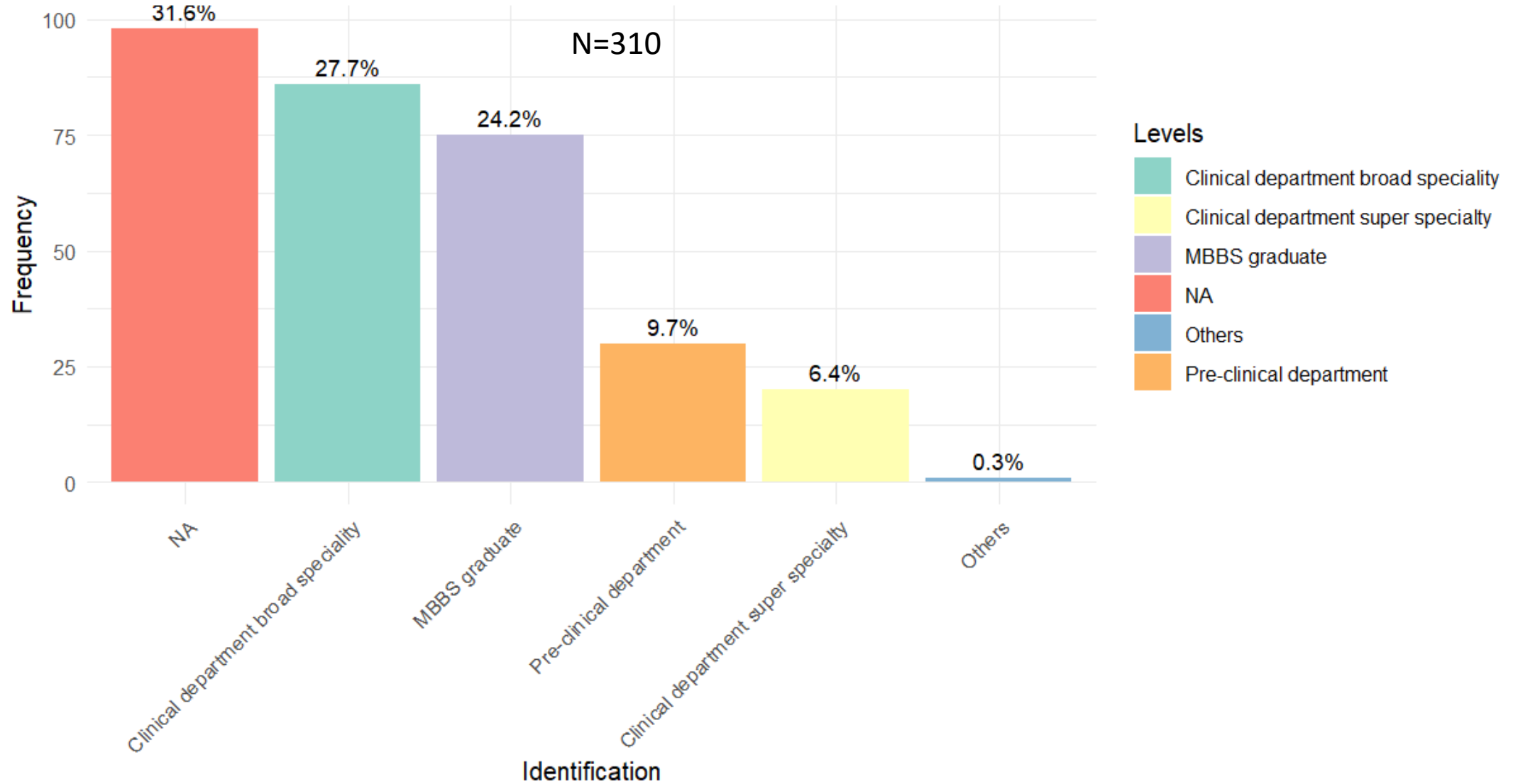
Results- Age Distribution



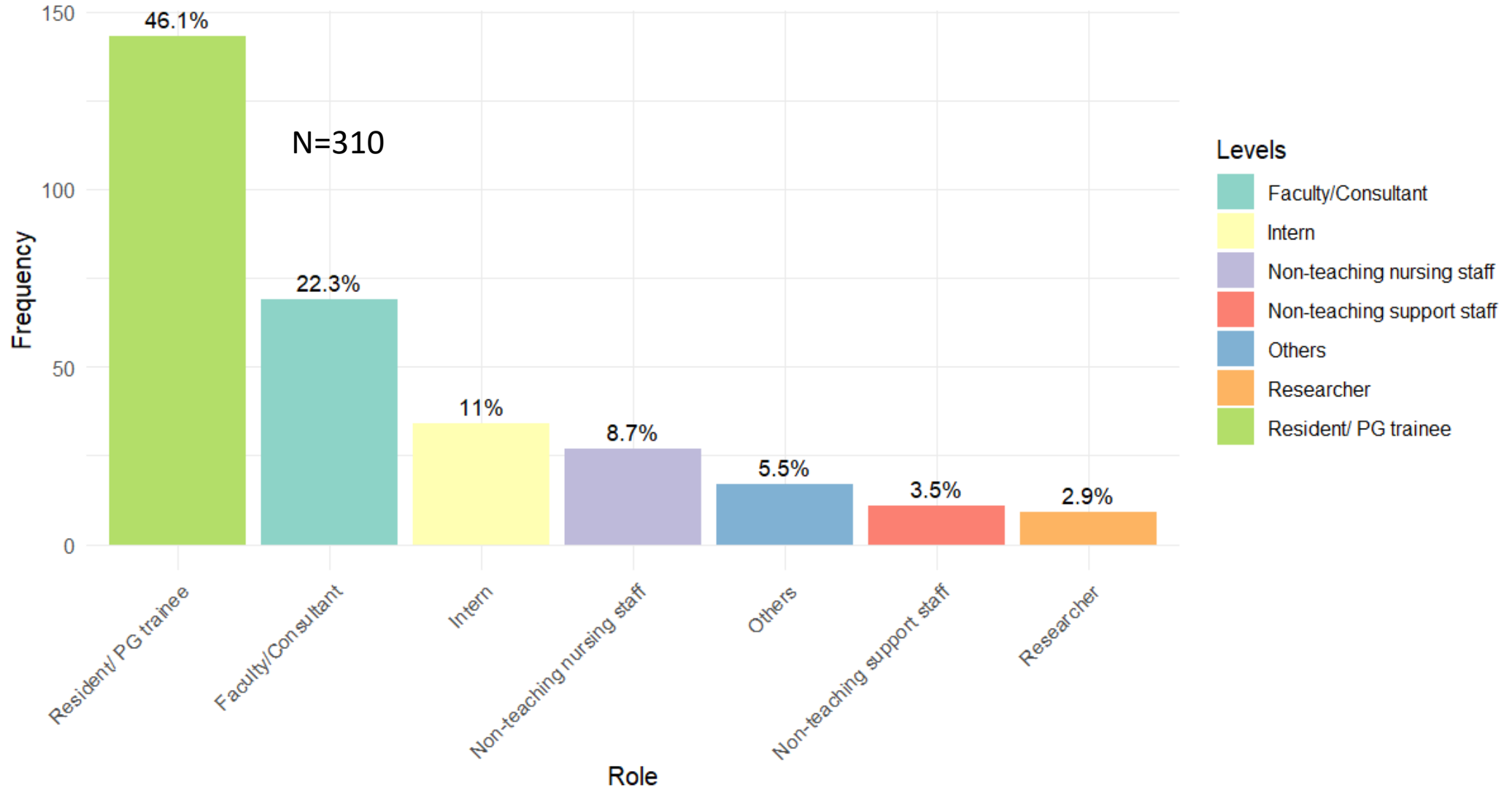
Results- Field of Distribution



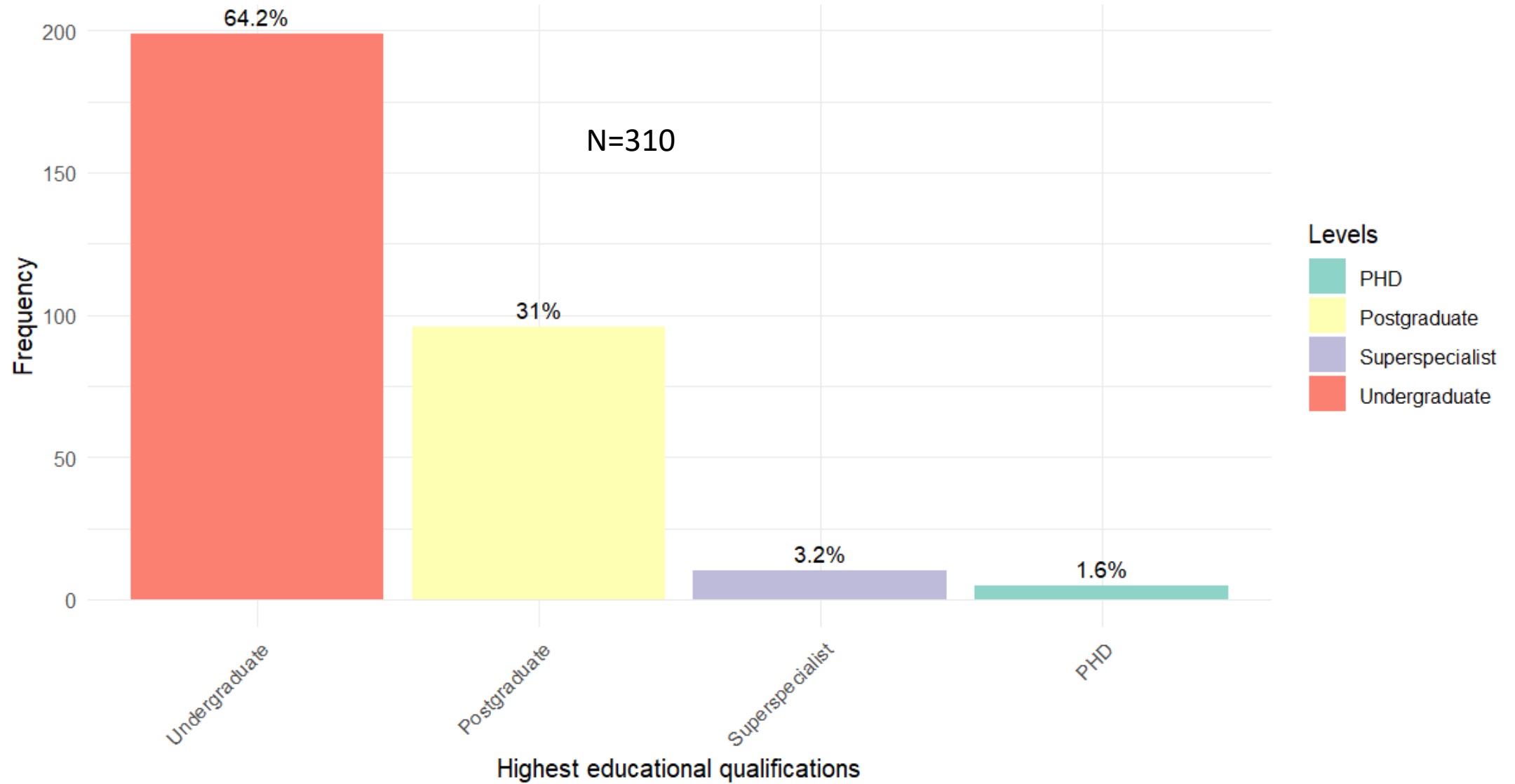
Identification Distribution



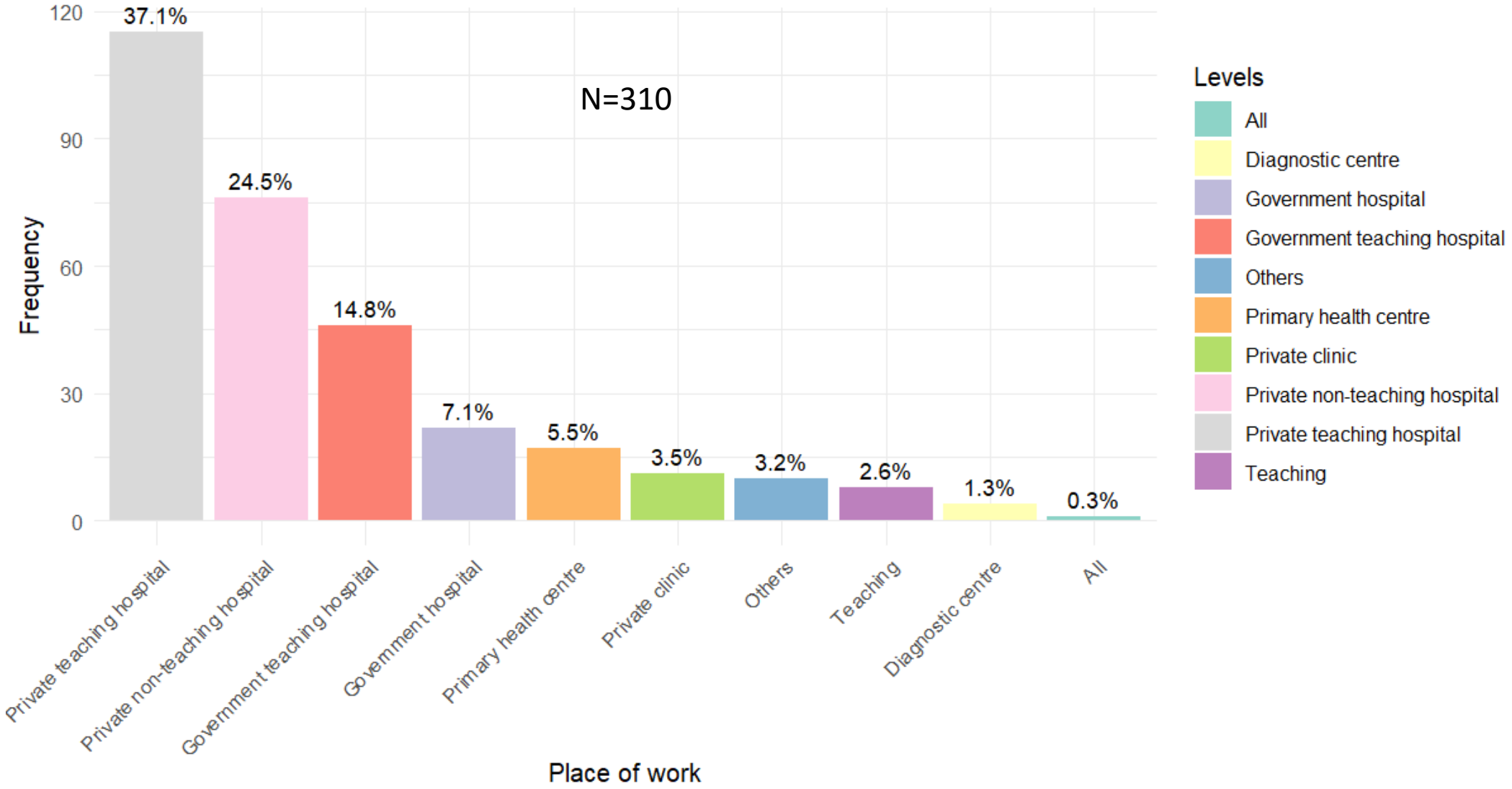
Role Distribution



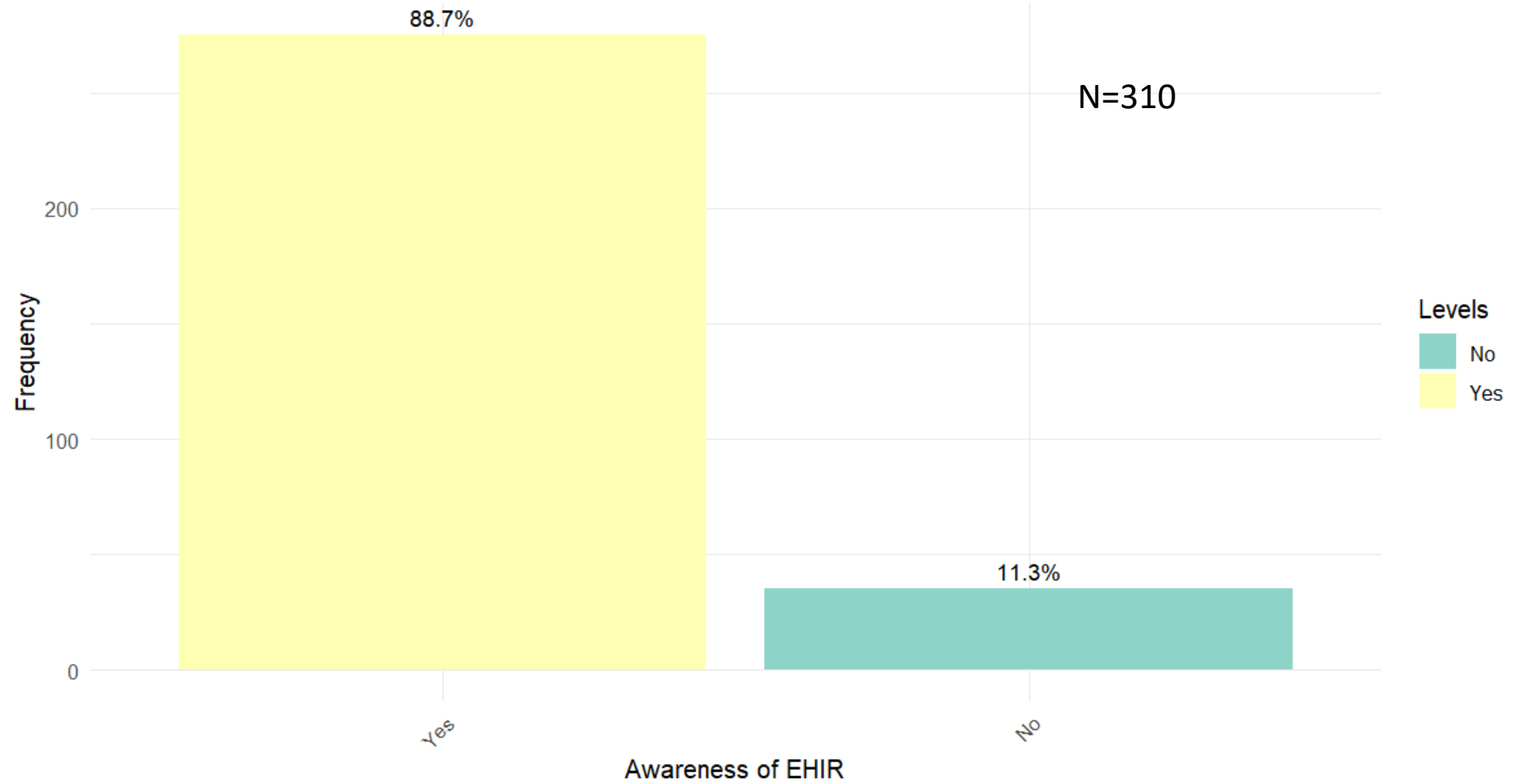
Highest educational qualifications



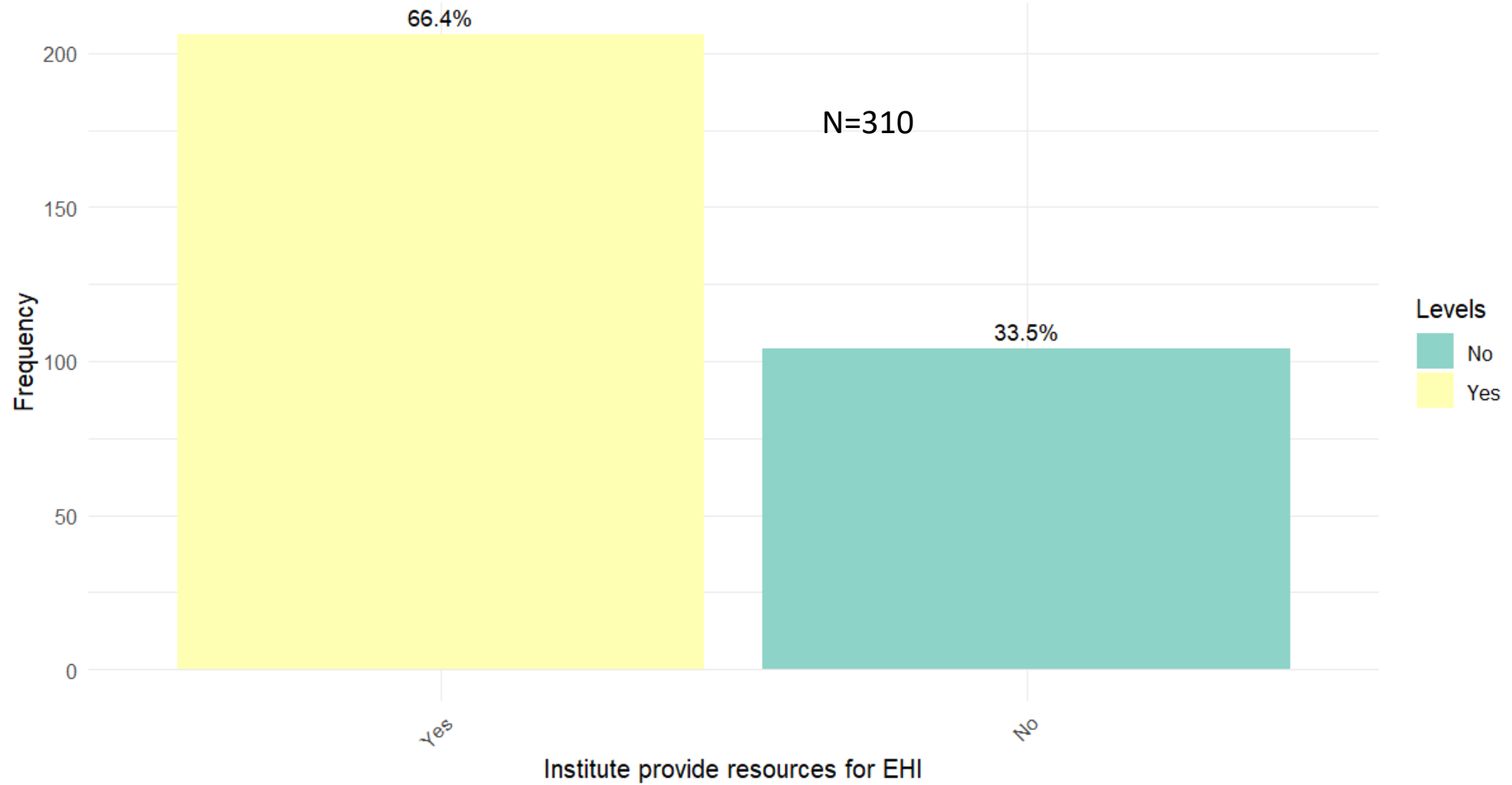
Place of work Distribution



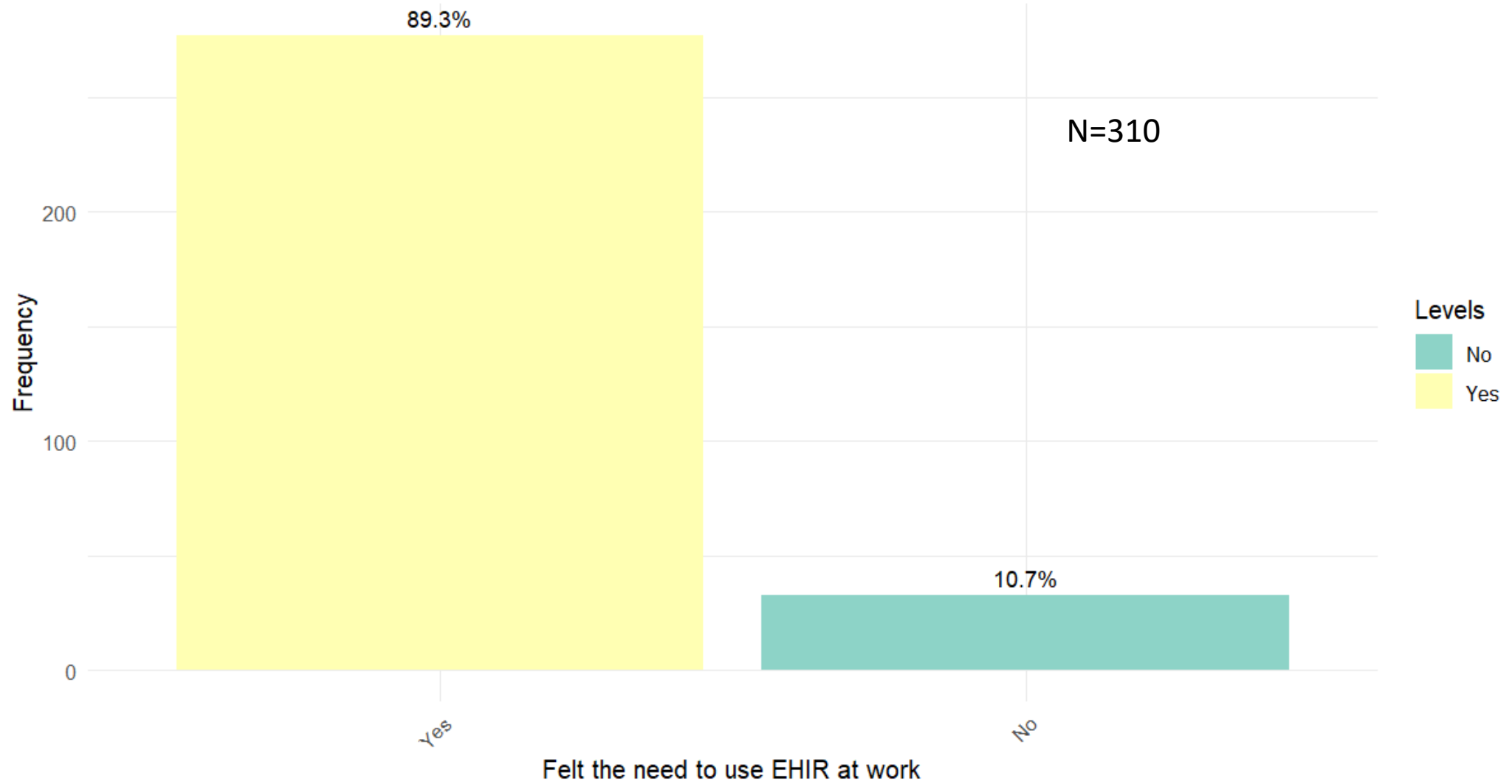
Awareness of electronic health information resources



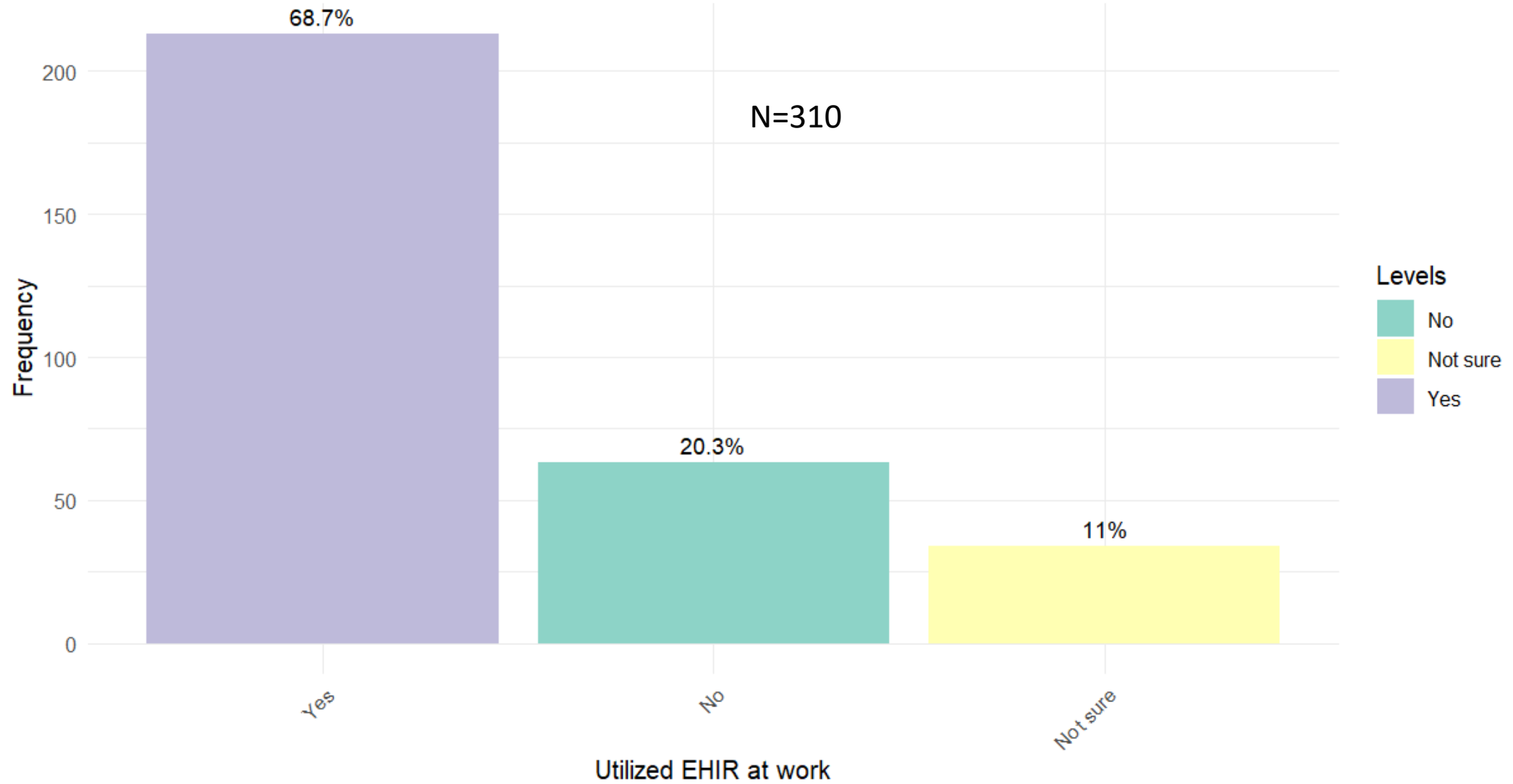
Institute provide resources for electronic health information



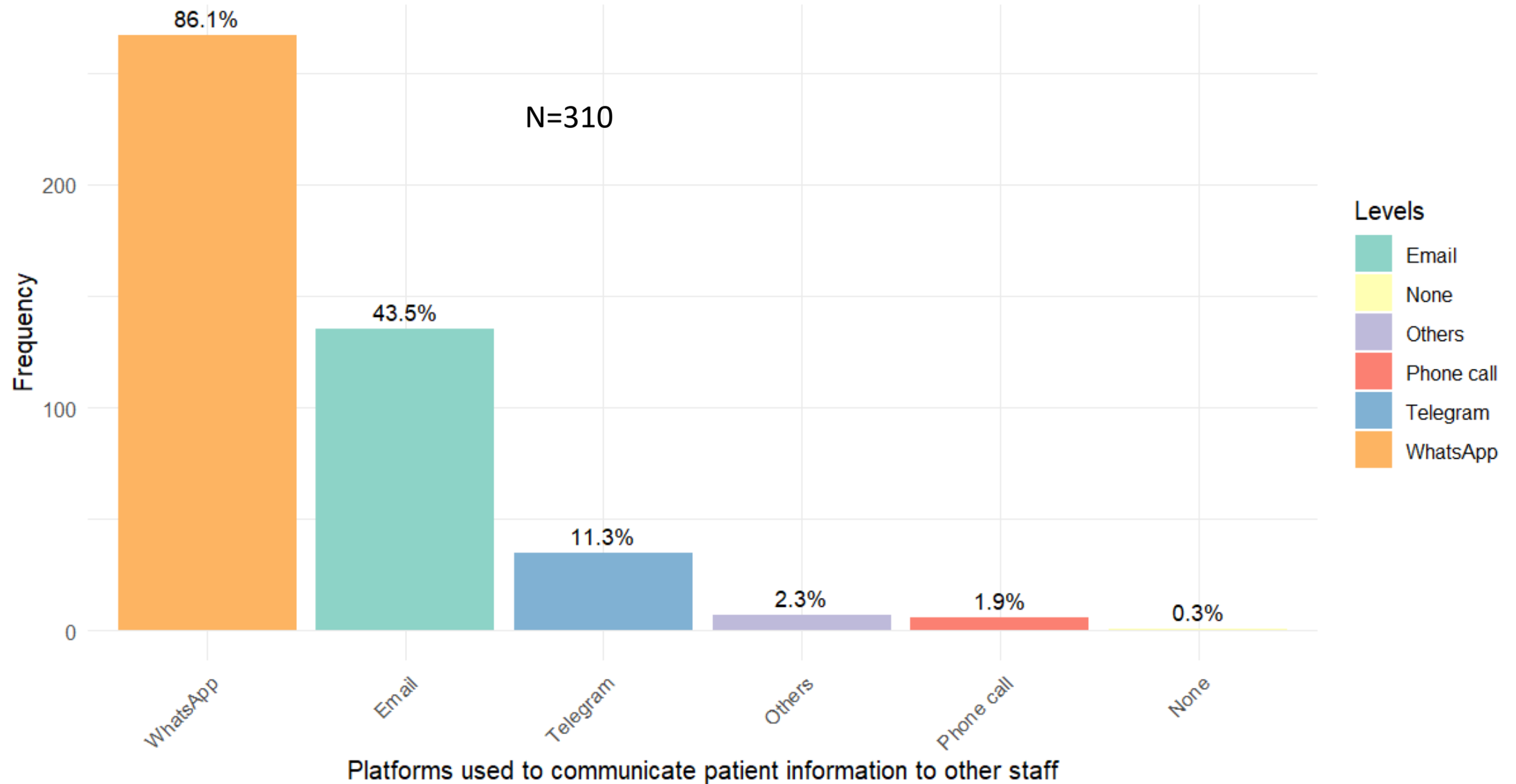
Felt the need to use electronic health information resources at work



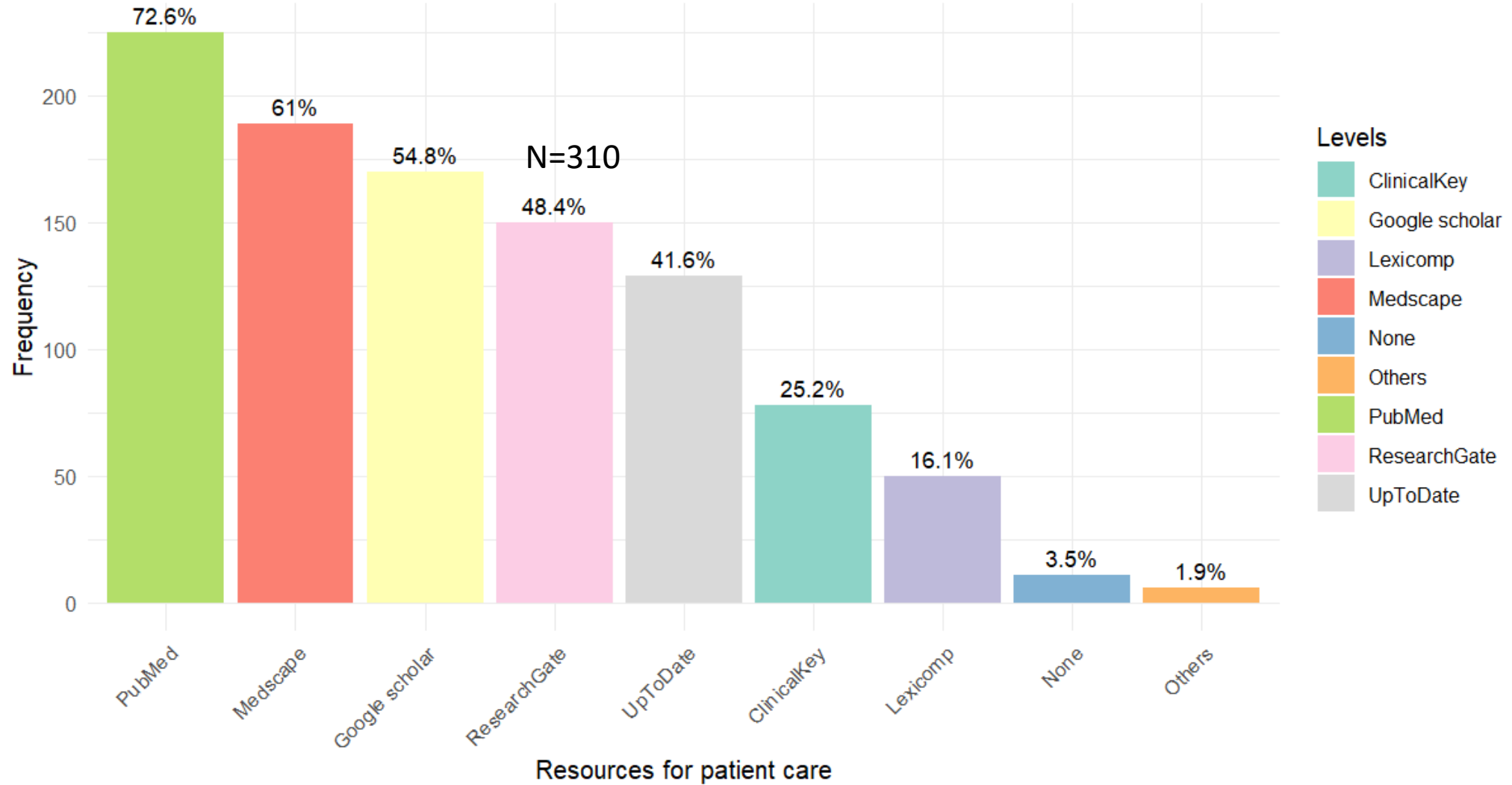
Utilized electronic health information resources at work



Platforms used to communicate patient information to other staff



Usage of EHI resources for patient care



Discussion

Privacy & Confidentiality

- 50% → EHI systems → patient confidentiality
- Informal data sharing → encryption on staff devices

Similar findings were reported by *Gariépy et al., 2021*

Gariépy-Saper K, Decarie N. Privacy of electronic health records: a review of the literature. J Can Health Libr Assoc. 2021 Apr 2;42(1):74-84. doi: 10.29173/jchla29496. PMID: 35949500; PMCID: PMC9327609.

Discussion

Patient Consent & Data Ownership

- Majority → Consent: EHI & sharing.
- >50% opposed data deletion → long-term access for care continuity.

Similar findings were reported by *Uslu et al., 2021*

Uslu A, Stausberg J Value of the Electronic Medical Record for Hospital Care: Update From the Literature J Med Internet Res 2021;23(12):e26323 DOI: 10.2196/26323

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Legal & Regulatory Standards

- ≈ 76% → standardized EHI regulations & laws.

Ethical Responsibility & Professional Involvement

- Most respondents → role for healthcare providers → ethical EHI policies.

Conclusions

- **Critical need:** standardized laws → **Ethical use of EHIR**
- **Strong support:** patient consent & privacy.
- **Prioritizing Security:** Strong consensus → device encryption.
- **Improvement in Technology:** Neutral response → Gap training or exposure to EHIR.
- **Gaps Identified:** Lack of Training
- **Positive Perception:** Enhancing patient care & clinical research.