Hypertension prevalence and awareness in older Irish adults: Evidence from the Irish Longitudinal Study on Ageing (TILDA)

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Introduction

Hypertension prevalence is increasing due to population growth, ageing and an increase in behavioural risk factors. Hypertension is a major modifiable risk factor for cardiovascular disease and contributes to disability and premature mortality. The aim of this study is to determine the prevalence of hypertension and to identify determinants of awareness of hypertension in older Irish adults.

Method

- Cross-sectional study using data from the first wave of TILDA
- Representative sample of community living older adults aged 50 years and older
- Data were collected from 2009 to 2011
- Face to face computer aided personal interviews were conducted by interviewers in the participant's own home
- Health assessments were conducted by nurses in the participant's home or in a designated health assessment centre
- Survey weights were applied to adjust for selection and non-response bias
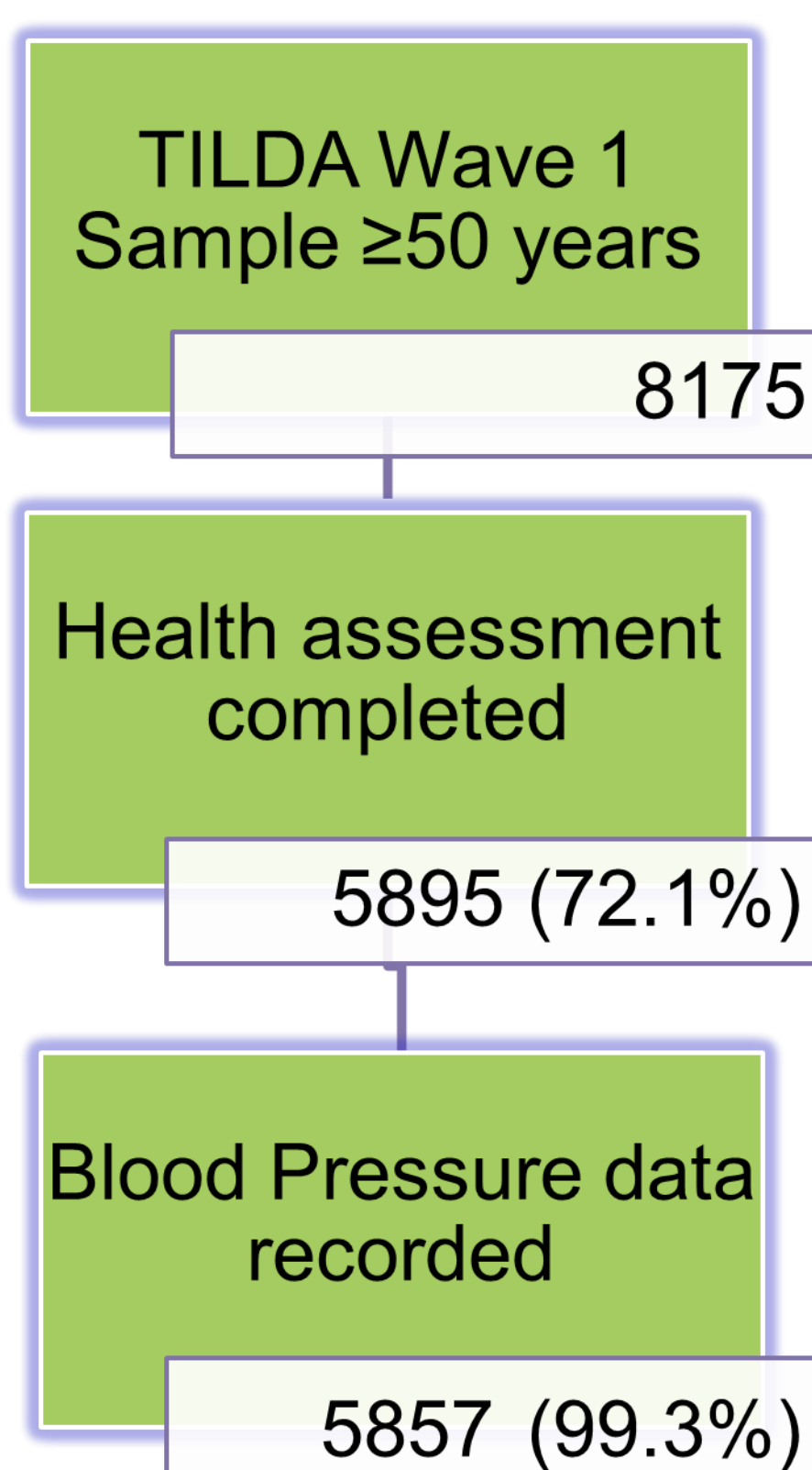

TILDA Wave 1 Sample ≥50 years
8175

Health assessment completed
5895 (72.1%)

Blood Pressure data recorded
5857 (99.3%)

Figure 1: Flow chart of the number of participants included in the analysis

Measurements

Blood pressure was recorded twice while seated according to a standard protocol. The mean systolic and diastolic readings were obtained.

Hypertension was defined as a mean systolic blood pressure (SBP) ≥140mmHg or a mean diastolic blood pressure (DBP) ≥90mmHg and/or currently taking antihypertensive medications.

Current antihypertensive medication use was recorded during the home based interview. Antihypertensive medication included anti-adrenergic agents (C02), diuretics (C03), beta blocking agents (C07), calcium channel blockers (C08) and agents acting on the renin-angiotensin system (C09).

Figure 2: Hypertension prevalence in Irish adults aged 50 years and older
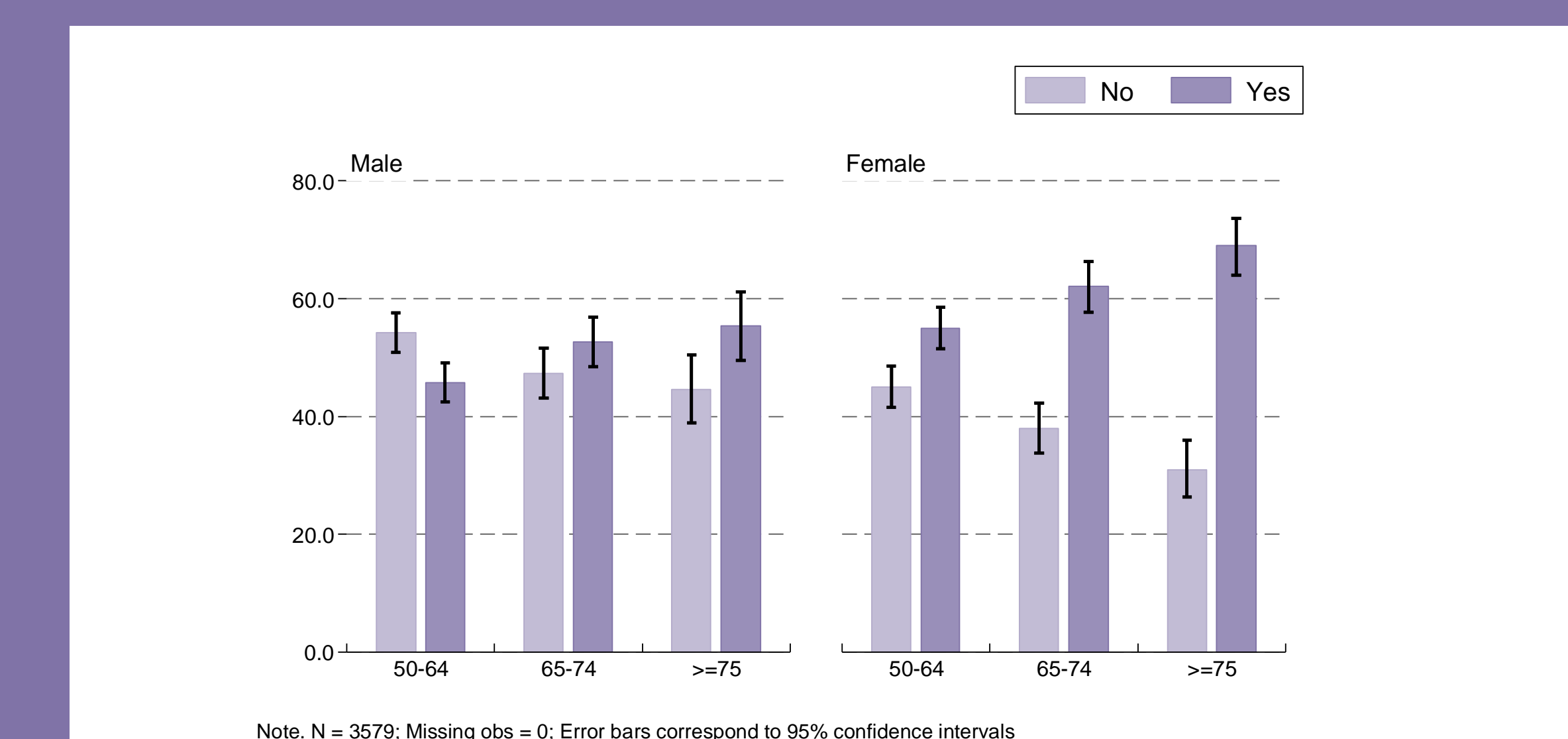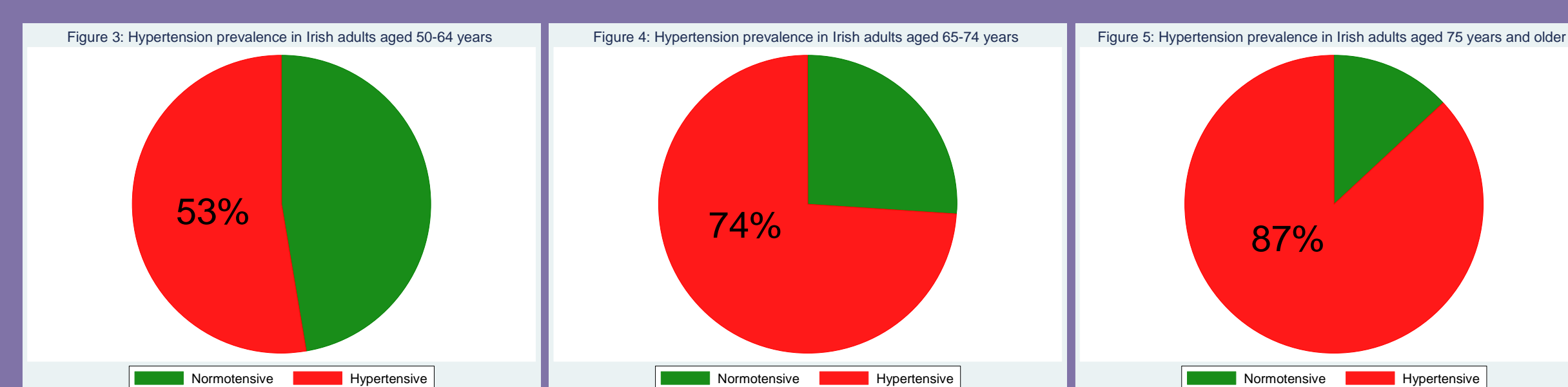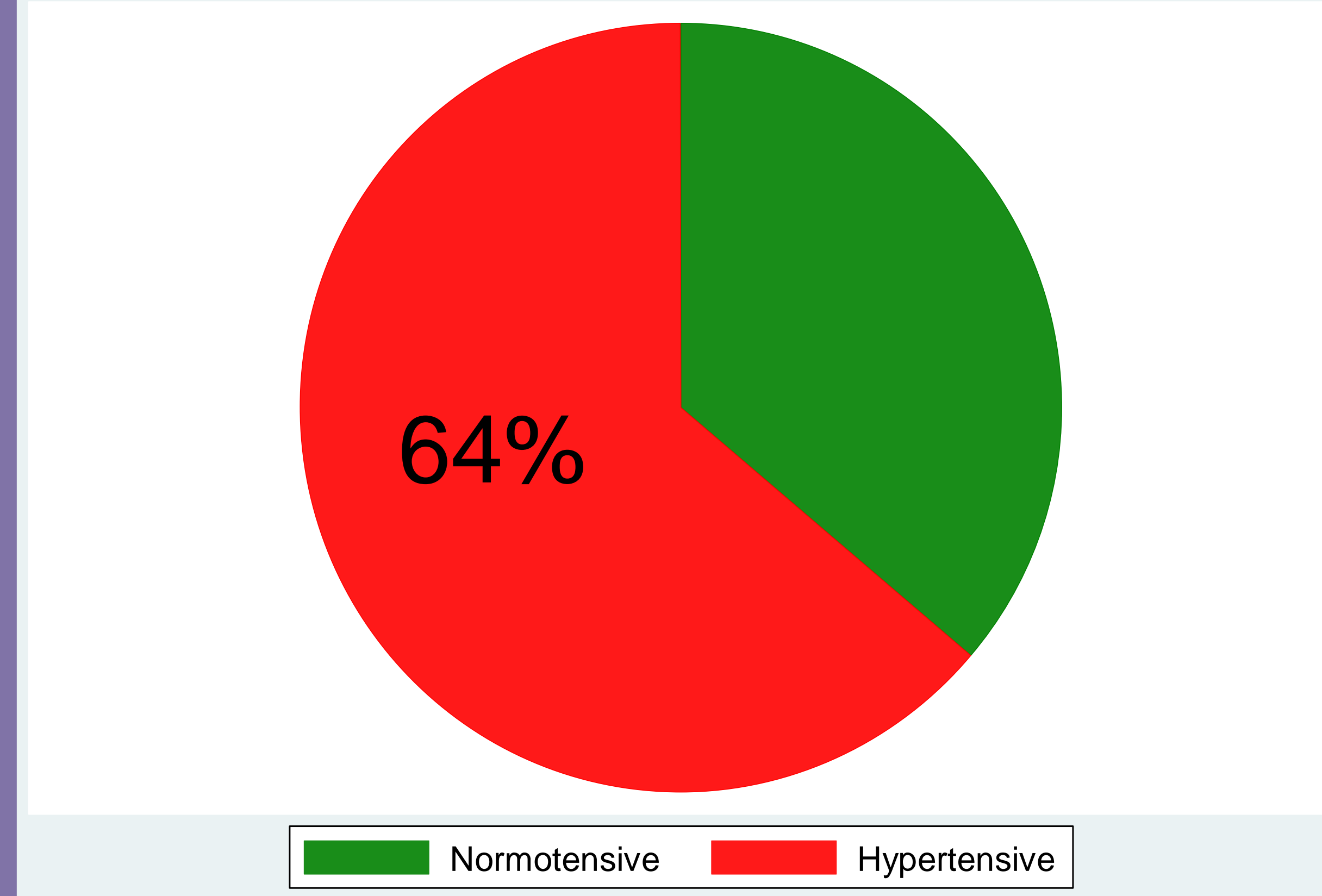

64%

Normotensive   Hypertensive

Figure 3: Hypertension prevalence in Irish adults aged 50-64 years — 53%

Figure 4: Hypertension prevalence in Irish adults aged 65-74 years — 74%

Figure 5: Hypertension prevalence in Irish adults aged 75 years and older — 87%

Normotensive   Hypertensive

No   Yes

Note. N = 3579; Missing obs = 0; Error bars correspond to 95% confidence intervals

Figure 6: Awareness of hypertension by age and sex in adults with hypertension

Table 1: Multivariable logistic regression model for awareness of hypertension in adults with hypertension

		Awareness
		Adj OR (95% CI)
Socio-demographic characteristics	**Sex**	
	Male (ref)	1.0
	Female	1.64 (1.39-1.93)***
	Age group	
	50-64 (Ref)	1.0
	65-74	1.08 (0.99-1.61)
	≥75	1.26 (0.99-1.61)*
	Education	
	Primary (Ref)	1.0
	Secondary	0.79 (0.65-0.96)*
	Tertiary	0.98 (0.80-1.21)
	Location	
	Dublin City or County (Ref)	1.0
	Another town	0.94 (0.77-1.16)
	Rural area	0.95 (0.79-1.15)
Behavioural characteristics	**BMI**	
	Normal (Ref)	1.0
	Overweight	1.56 (1.25-1.94)***
	Obese	2.13 (1.70-2.67)***
	Physical Activity	
	Low physical activity (Ref)	1.0
	Moderate physical activity	0.90 (0.75-1.09)
	High physical activity	0.84 (0.69-1.03)
	Current smoker	0.86 (0.68-1.08)
	Alcoholic drinks/ week	1.00 (0.99-1.01)
Comorbidity	Diabetes	1.93 (1.46-2.55)***
	CVD history	1.55 (1.23-1.94)***
Insurance and health service use	Med card	1.07 (0.89-1.28)
	GP visit in last year	2.66 (2.02-3.51)***
Number Analysed		**2968**
H&L		**p> chi2=.50**
Area under the ROC		**0.64**

P *<.05, **<.01, ***<.001

Awareness was defined as a self-report of ever having a doctor's diagnosis of hypertension.

Results

The household response rate was 62%.

The overall prevalence of hypertension was **64%** (95% CI 62-65%) in those aged 50 years and older (Figure 2). Prevalence was higher in men than in women (69% vs 59%, p<.001). Prevalence increased with age (Figure 3,4,5).

Of those classified as hypertensive **55%** (95% CI 53-57%) were aware of their hypertension. Awareness was higher in women than in men and increased with age (Figure 6).

Determinants of awareness in the multivariable logistic regression model include female sex, older age, being overweight or obese, existing comorbidities (diabetes/CVD) and GP service use in the previous 12 months (Table 1).

Conclusions

This study provides the most comprehensive estimate of hypertension prevalence (64%) in older adults in Ireland to date. The highest reported prevalence for a nationally representative survey of adults aged 50 years and older was 78% in South Africa (Lloyd-Sherlock et al, 2014).

Awareness of hypertension is low compared to awareness levels of 64% in England and 86% in the USA (Ikeda et a; 2014).

Female sex and older age were strong determinants of awareness of hypertension raising concerns about the lack of awareness of this condition in males and in the younger age groups.

Obesity, comorbidity and recent contact with a GP were found to be predictors of awareness in older Irish adults highlighting the importance of screening in GP practice.

This information is important for public health strategy, primary care practice and allocation of resources in the context of an ageing population and a disease that can remain silent and undetected. In order to decrease the burden of hypertension the Irish health system needs to deliver interventions to prevent and detect hypertension across the population as a whole.

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The Irish Longitudinal Study on Ageing