

# Primary prevention of neural tube defects: data from the portuguese national registry of congenital anomalies (RENAC)



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## BACKGROUND

In Portugal folic acid supplementation is recommended to start at least 2-3 months before conception for primary prevention of Neural Tube Defects.

The aim of this study was to evaluate, within gestations with at least one congenital anomaly (CA), possible association between maternal socio-demographic factors and the use of folic acid.

## METHODS

Using data from the Portuguese national registry of congenital anomalies, for the 2004-2013 period, the association between folic acid use during pregnancy and maternal characteristics was studied using the chi-square test.

## RESULTS

Considering all reported cases with CA, the use of folic acid before conception was reported by 12.7% (n = 1228) of the women, 47.7% (n = 4598) started supplementation during 1<sup>st</sup> trimester, 7,1% (n = 682) did not take folic acid and in 32.5% (3134) of the records this information was missing (Fig 1).

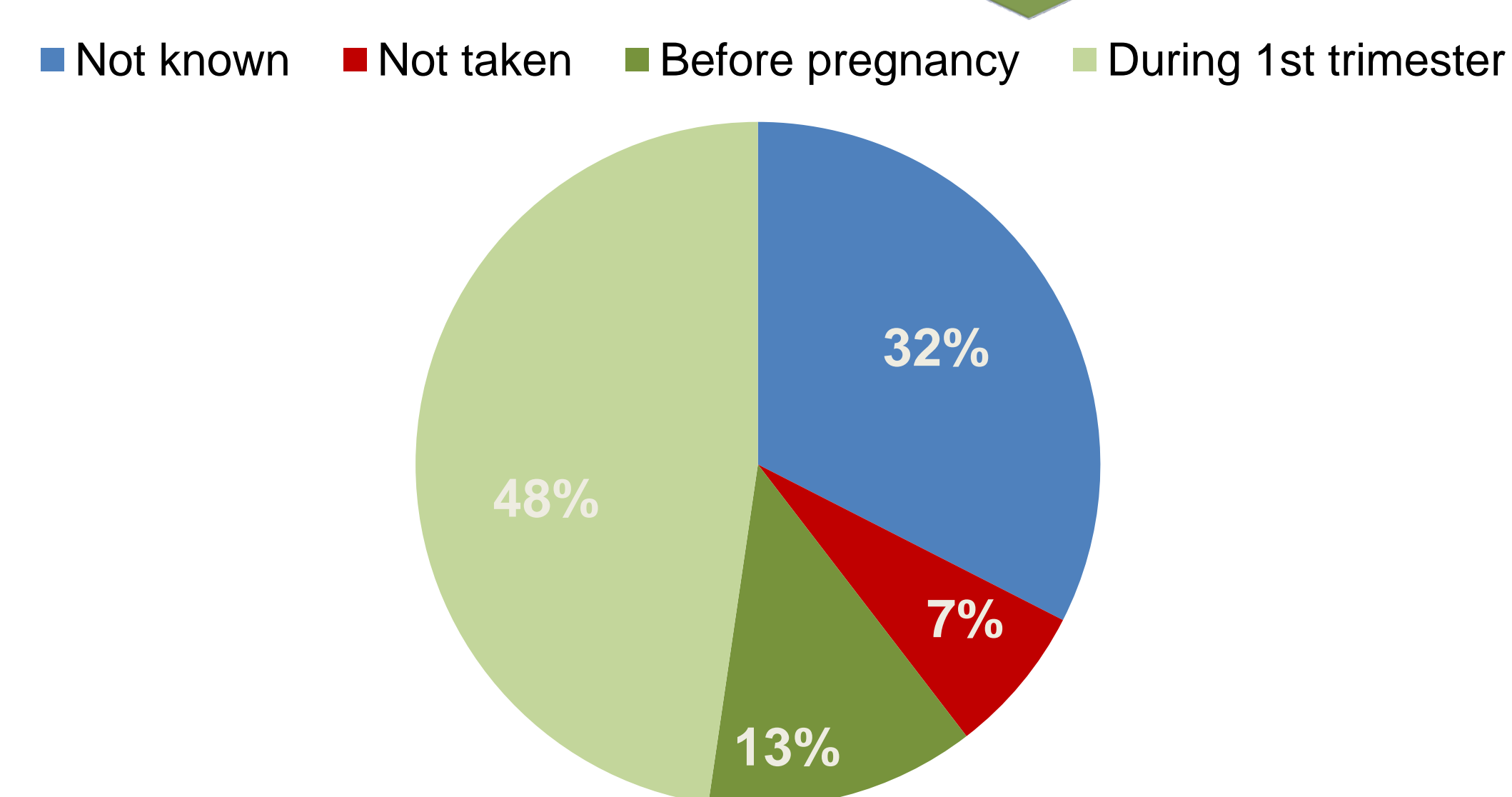


Figure 1

Folic acid intake in all cases reported to RENAC between 2004-2013

We found statistical significant association between mother's occupation, age and ethnicity and folic acid intake. Whilst women with professions, requiring higher levels of education, started the use of supplement before pregnancy (p <0.001) (Fig 2), women under 19 years old as well as women with Arabic ethnicity reported not having taken folic acid during pregnancy (p <0.001) (Table 1).

Figure 2

Frequency of folic acid intake according to mothers occupation (2004-2013)

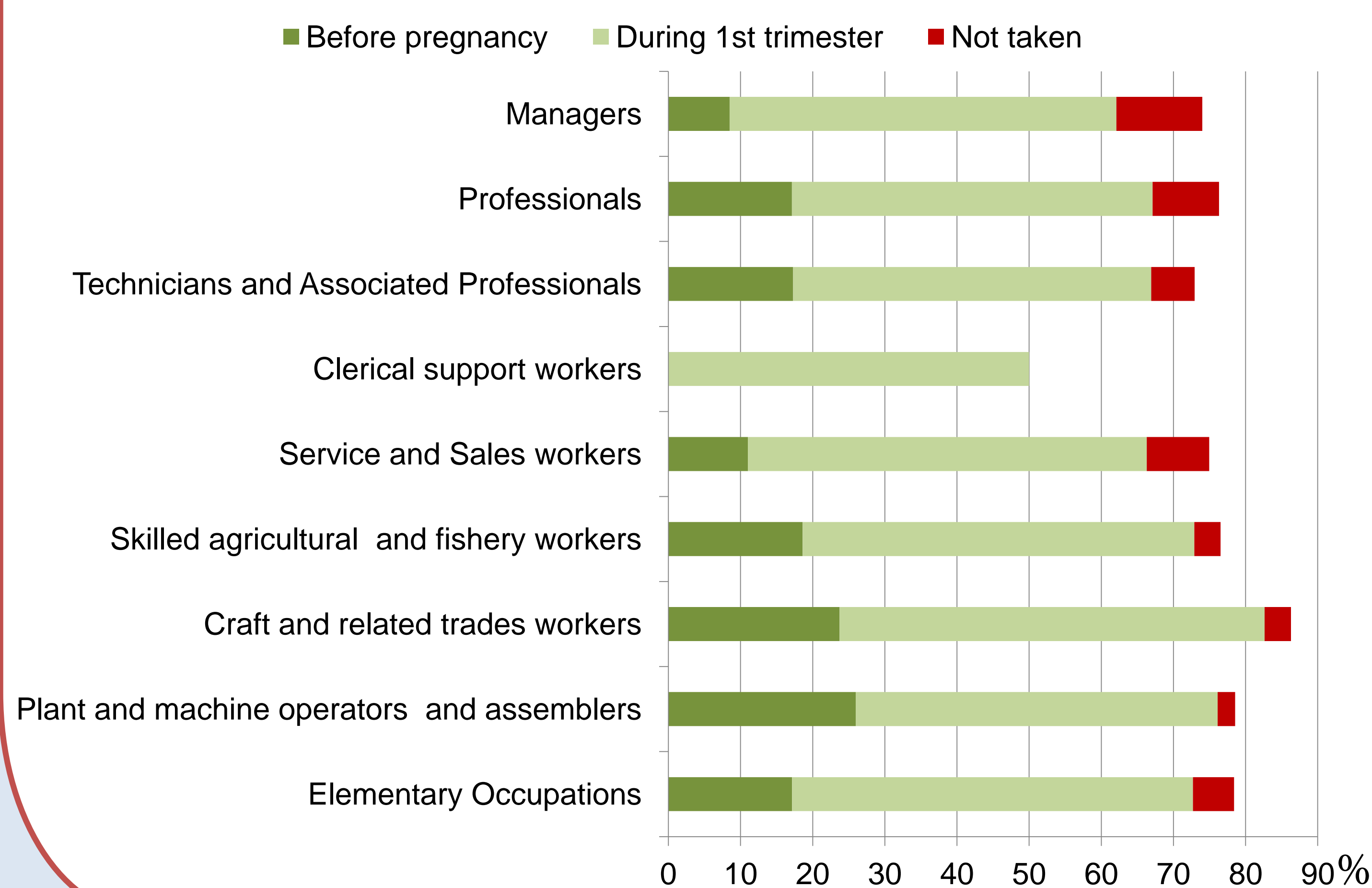


Table 1

Frequency of folic acid intake according to mothers age and ethnicity (2004-2013)

Mother Age	Not taken (%)	Before pregnancy (%)	During 1st trimester (%)
<=19	17.3	3.7	45.3
20-29	8.3	9.4	50.4
30-34	4.4	16.9	48.8
35-39	5.8	15.8	48.9
>=40	12.1	13.7	40.8
Ethnicity	Not taken (%)	Before pregnancy (%)	During 1st trimester (%)
Asian	13.0	10.9	43.5
Caucasian	7.0	14.4	52.0
Gipsy	31.9	1.9	30.0
Mixed race	19.4	17.7	53.2
Black	11.5	8.6	51.5
Other	0.0	20.0	60.0
Arabic	50.0	0.0	25.0

## KEY MESSAGES

- To increase the consumption of folic acid before pregnancy new measures are need to promote this primary prevention, among couples and health professionals.
- This study highlights some maternal characteristics and subgroups of mothers for who the measures should be reinforced.