

Introduction

Since their introduction to the European market in 2006, electronic cigarettes (e-cigarettes) that simulate smoking without burning tobacco have markedly increased in popularity. Increasing use among youth – especially non-smoking adolescents – is a matter of concern, as e-cigarette use in adolescents is associated with positive attitudes towards smoking, experimentation with several tobacco products and smoking; therefore e-cigarette use might bring adolescents one step closer to smoking. Moreover, long-term health effects are unknown. Some smokers use e-cigarettes for smoking cessation and some use them with the intention to circumvent smoking bans. At present, for Germany, data on e-cigarette awareness and use as well as on the reasons to use them are sparse.

Methods

Four cross-sectional surveys, carried out by the GfK Classic Bus in every February 2012-2015 in face-to-face interviews using the Computer Assisted Multimedia Questionnaire (CAM Quest). Respondents: 16 years and older representing the German population (n=1950 each year). Smoking status could only be included in the 2014 and 2015 data analysis.

Results

Awareness

In 2012, 85.5% of the smokers had heard of e-cigarettes and the awareness increased to 95% in 2013 and 2014. In 2012, smokers aged 16-19 were the age group the least aware of e-cigarettes (67.5%). In 2013, all youth smokers (100%) were aware of the devices and have been ever since.

In 2014, about 83% of all respondents had heard of e-cigarettes. Smokers were more aware of e-cigarettes (95.5%) than former smokers (86.8%) and non-smokers (74.9%).

Ever use of e-cigarettes

Ever e-cigarette use among smokers increased from 2012 to 2014 and then decreased in 2015 (Fig. 1). In 2012, 7.0% of smokers had ever used e-cigarettes. In 2013, the prevalence of smokers ever having used e-cigarettes had more than doubled to 14.4%. In 2014, ever e-cigarette use among smokers had almost tripled (19.8%) compared to 2012. In 2015 ever e-cigarette use decreased to the level of 2013. Prevalence is highest up to age 40 and declines with age.

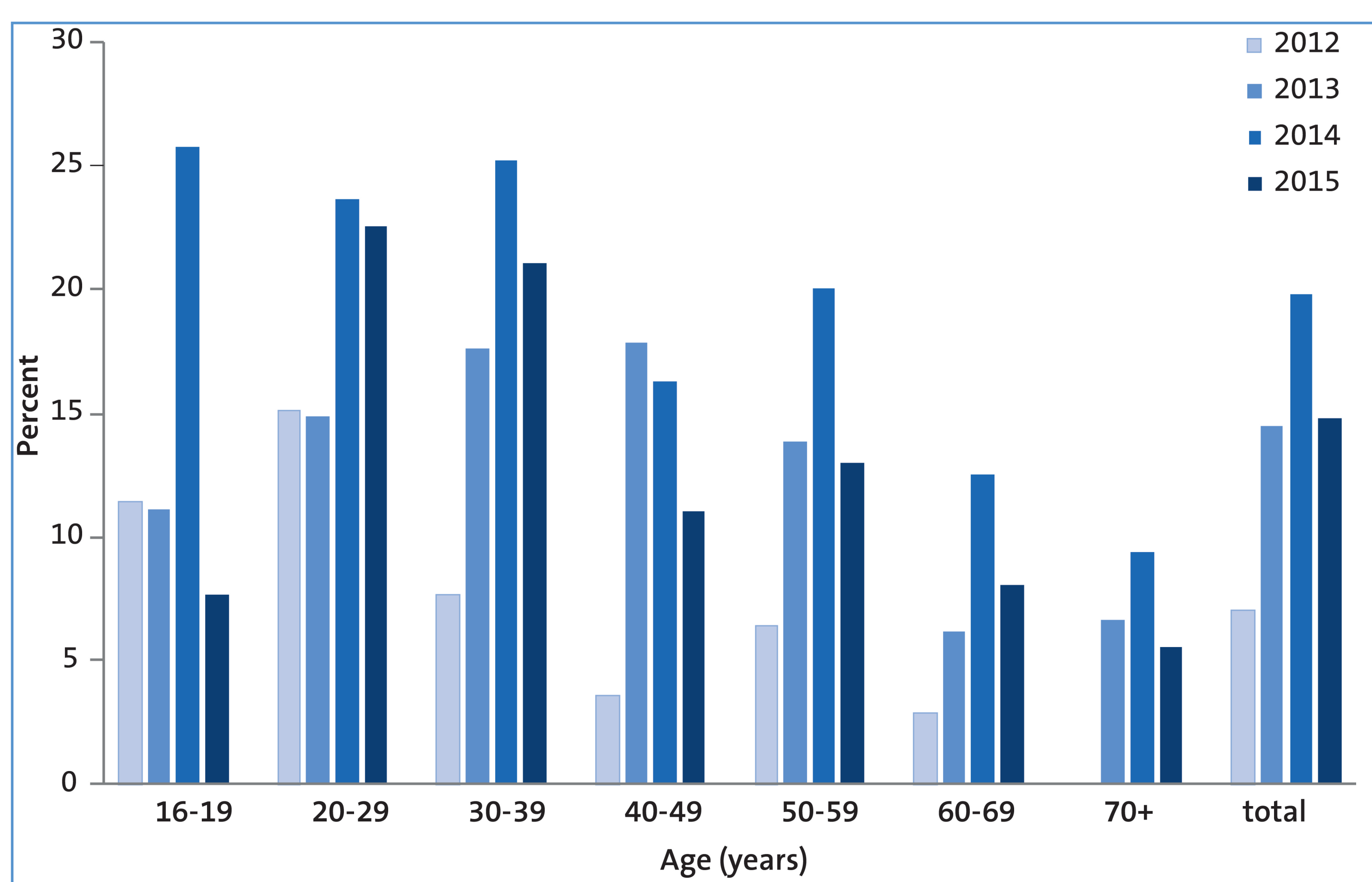


Figure 1: Ever e-cigarette use among smokers, by age and year.

Most ever users are smokers (19.8% in 2014 resp. 14.8% in 2015), but also some former smokers (3.8%) and a few non-smokers (1.5% in 2014 resp.

0.9% in 2015) have tried e-cigarettes. In 2015, the highest percentage of non-smoking ever users (3.6%) is in the youngest age group (Tab.1).

Age (years)		16-19	20-29	30-39	40-49	50-59	60-69	70+	total
Smokers	2014	25.7	23.7	25.2	16.3	20.0	12.5	9.4	19.8
	2015	7.7	22.5	21.0	11.0	12.9	8.1	5.6	14.8
Former smokers	2014	0	6.9	7.8	5.3	5.2	1.2	0.8	3.8
	2015	20.0	4.5	12.8	3.2	5.2	1.2	0	3.8
Non-smokers	2014	1.7	1.5	0.9	2.1	1.6	0.8	1.9	1.5
	2015	3.6	1.5	2.2	0	0	1.7	0	0.9
Total	2014	9.5	11.1	11.6	8.2	9.4	3.6	2.1	7.7
	2015	4.5	9.9	12.1	4.8	6.4	2.6	0.5	5.8

Table 1: Ever use of e-cigarettes in %, by age group and smoking status, 2014 and 2015.

Most ever user just try e-cigarettes and only few use them on a regular base: In 2015, only 0.3% of smokers ever having tried e-cigarettes use them weekly and 0.5% daily (Fig. 2).

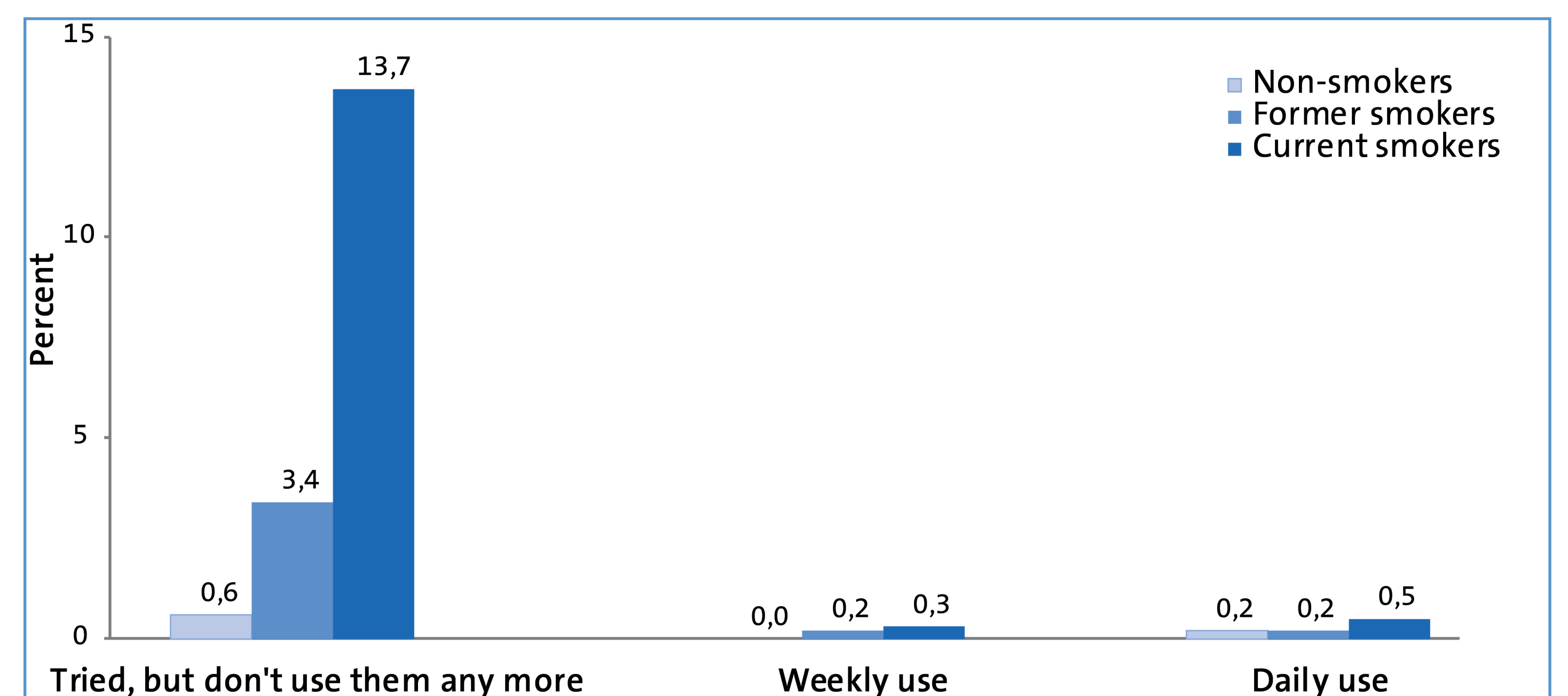


Fig. 2: Ever and regular use of e-cigarettes, by smoking status, 2015.

Reasons for e-cigarette use

In 2015, about a third of the ever users (35.4%) used them to smoke less, 28% used them as less harmful alternative to cigarettes, 18% as a cessation aid, 10.8% to circumvent smoking bans and 7.8% to protect bystanders.

But of all smokers who ever tried to stop smoking, only 2.8% used e-cigarettes as cessation aid, 6.4% used nicotine replacement products and 20.4% used no aid at all. Most former smokers (84.7%) had stopped without assistance, 4.3% used nicotine replacement products and 0.5% e-cigarettes for cessation (Fig. 3).

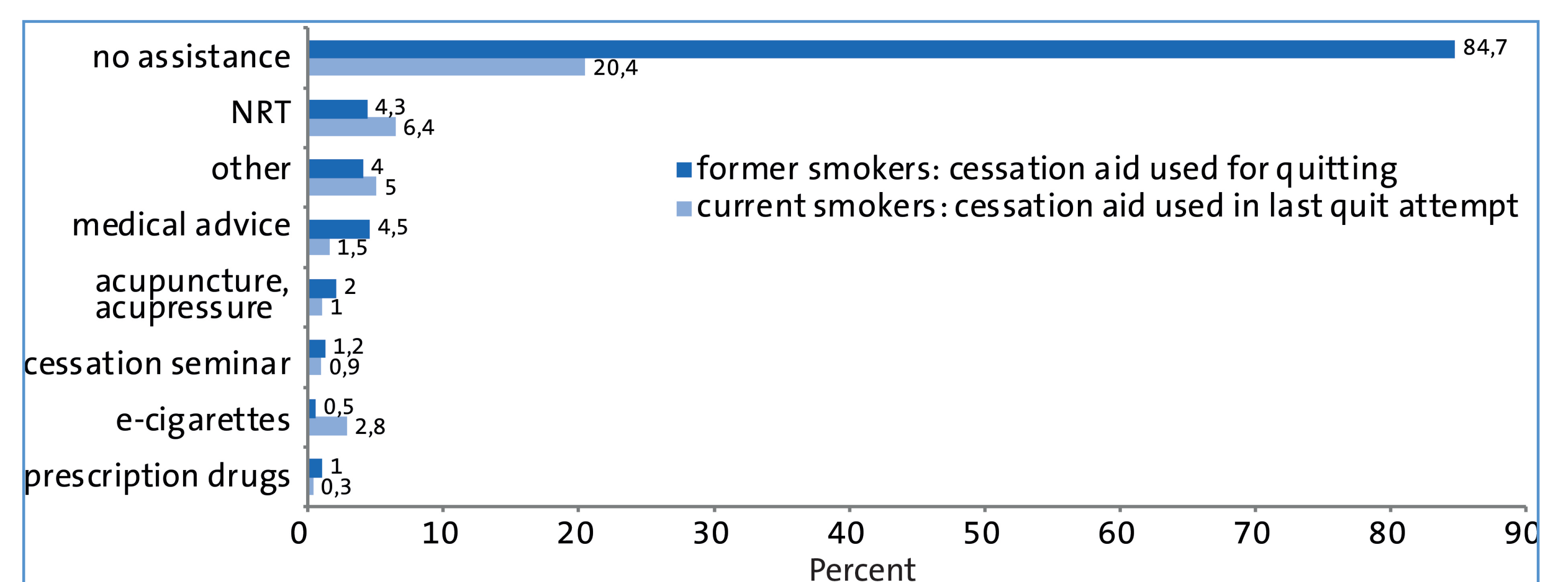


Fig. 3: Aids used for smoking cessation, by smoking status, 2015.

Conclusions

- In Germany, the almost 6% trial rate among all respondents (smokers + non-smokers) is high for a new life-style product, especially among young people. To protect youths from nicotine addiction, e-cigarettes should not be sold to minors. They should be banned in non-smoking areas because the use of e-cigarettes in smoke-free areas might re-normalize the smoking habit in society.
- About a third of consumers use e-cigarettes for smoking less or as a less harmful alternative to smoking. Unfortunately, smoking reduction has a very low health benefit.