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Prevalence of Daily Smoking in the Gulf Cooperation Council Countries: Projections to the Year 2040

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Abstract

Background and aims: Although projections of age-standardized prevalence of daily smoking are subjective and unreliable, they do provide a necessary baseline for future planning of tobacco research resources. The aim of this study is to provide the Prevalence of daily smoking projections in the Gulf Cooperation Council countries up-to 2040.

Methods: Prevalence of daily smoking data for the Gulf Cooperation Council countries was downloaded from Our World in Data (see <https://ourworldindata.org/grapher/prevalence-of-daily-smoking-sdgs>) website. Univariate linear models were performed using generalized least squares for each Gulf Cooperation Council country with the prevalence of daily smoking as an outcome variable. The predictor variable (year) was fitted as quadratic in all models. Future prevalence of daily smoking data was projected up to 2040, and linear effects were extrapolated into the future, tolerated the drift to continue but attenuated it, and stopped all nonlinear effects. Relative change in age-standardized prevalence of daily smoking was estimated between 2016 and 2040 for each GCC country. All statistical analyses were performed in R software version 4.1.0.

Results: Figure 1 shows the observed and projected age-standardized prevalence of daily smoking in the GCC countries. Table 1 presents estimated relative changes in the age-standardized prevalence of daily smoking between 2016 and 2040 for the GCC countries. The prevalence of daily smoking is projected to increase between 2016 and 2040 in Qatar, Bahrain, and KSA with an estimated relative change of +11%, +4%, and +2% respectively (Table 1 and Figure 1). Furthermore, the prevalence of daily smoking is projected to decrease between 2016 and 2040 for Oman, UAE, and Kuwait an estimated relative change of -1%, -8%, and -26% correspondingly (Table 1 and Figure 1).

Conclusions: Without considering current or additional tobacco control measures, we observe that of the age-standardized prevalence of daily smoking may increase in Bahrain, Qatar, and Saudi Arabia. The decline in of age-standardized prevalence for Kuwait, Oman, and the United Arab Emirates may be due to a combination of smoking cessation and population growth of never-smokers. Reduction in smoking prevalence can be achieved by implementing and enforcing effective tobacco control policies.

Figure 1: Observed (solid line), fitted (dotted line) and projected (dashed line) age-standardized prevalence of daily smoking of Daily Smoking in the GCC countries.

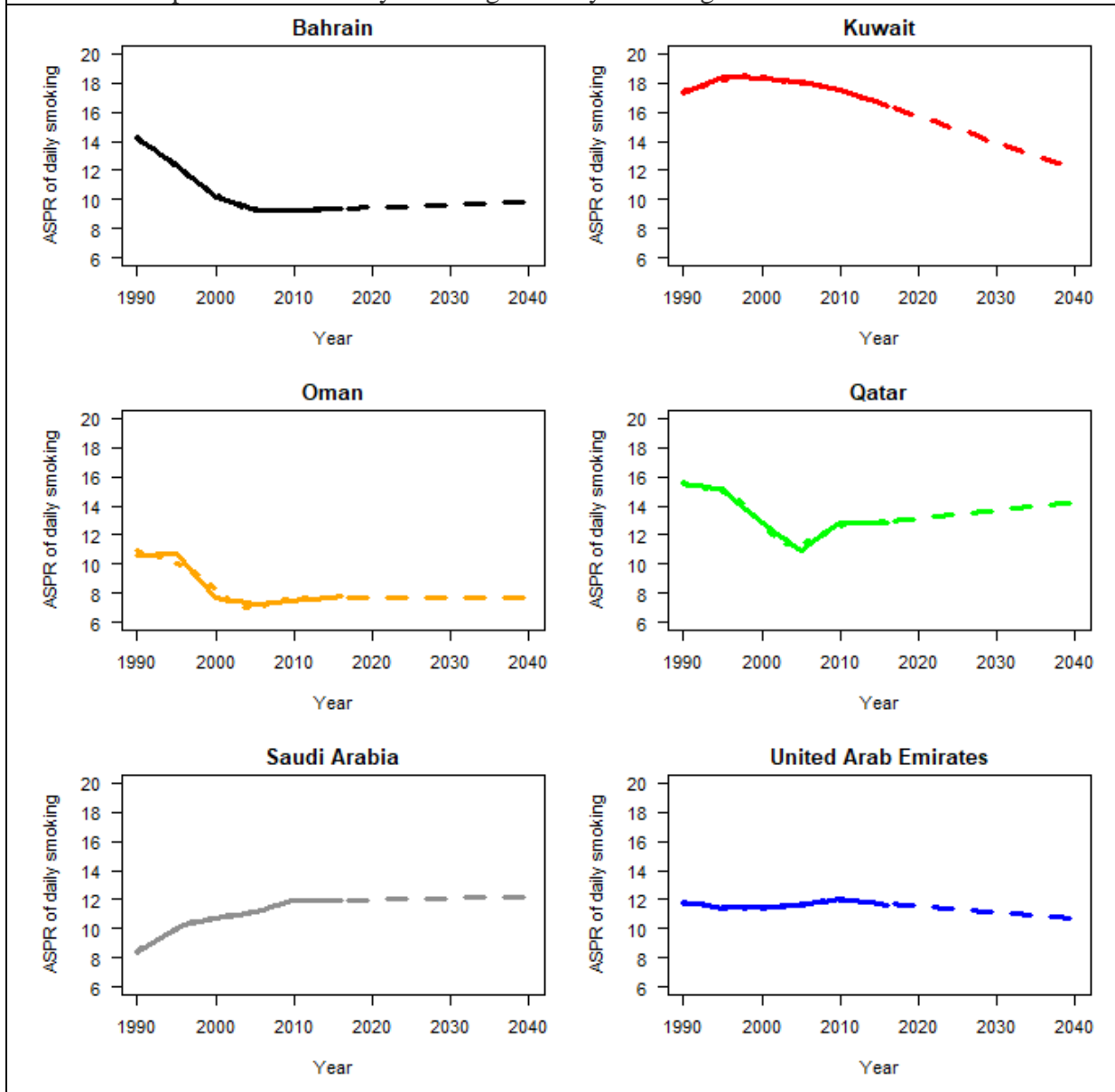


Table 1: Projected Age-standardized prevalence of daily smoking in populations aged 10 and older (%)

Country	2016	2040	Relative Change
Qatar	12.79%	14.26%	+11%
Bahrain	9.40%	9.82%	+4%
KSA	11.91%	12.21%	+2%
Oman	7.75%	7.71%	-1%
UAE	11.64%	10.70%	-8%
Kuwait	16.45%	12.11%	-26%

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