COVID-19: Bacillus Calmette-Guérin vaccine

The correlation between vaccinated and unvaccinated countries regarding deaths per million is assessed with the Kolmogorov-Smirnov test. The Odds Ratio of exposure to BCG is also assessed. The countries were divided into those providing BCG and those not providing BCG within the vaccination schedule. The deaths per million were collected per country and accumulated for the contingency table. The others group consists of the unaffected, recovered and remaining persons in both exposure groups respectively. The Kolmogorov-Smirnov non-parametric test is used after assessing variances and normality of both groups.

1. Kolmogorov-Smirnov

F-test

Ratio of variances = 0.032, p-value = 2.2e-16
95 percent confidence interval: 0.014 0.0597

Shapiro-Wilk test

BCG vaccinated p-value < 2.2e-16
BCG unvaccinated p-value = 3.028e-05

Kolmogorov-Smirnov test

Alpha = 0.001, p-value = 2.9683e-06
Distance statistic = 0.616

Rejection of null-hypothesis of samples drawn from the same distribution.

2. Odds Ratio

O.R. = 0.087
99.9 percent confidence interval: 0.079 0.095

Cases of mortality had 0.087 odds of exposure to BCG than others.

	Deaths	Others
BCG+	2074.74	123997925.26
BCG-	3664	18996336

Table: Contingency table