

14 The pre-release material includes data concerning crude death rates in different countries of the world. Fig. 14.1 shows some information concerning crude death rates in countries in Europe and in Africa.

	Europe	Africa
n	48	56
minimum	6.28	3.58
lower quartile	8.50	7.31
median	9.53	8.71
upper quartile	11.41	11.93
maximum	14.46	14.89

Fig. 14.1

- (a) Use your knowledge of the large data set to suggest a reason why the statistics in Fig. 14.1 refer to only 48 of the 51 European countries. [1]
- (b) Use the information in Fig. 14.1 to show that there are no outliers in either data set. [3]

The crude death rate in Libya is recorded as 3.58 and the population of Libya is recorded as 6411 776.

- (c) Calculate an estimate of the number of deaths in Libya in a year. [1]

The median age in Germany is 46.5 and the crude death rate is 11.42. The median age in Cyprus is 36.1 and the crude death rate is 6.62.

- (d) Explain why a country like Germany, with a higher median age than Cyprus, might also be expected to have a higher crude death rate than Cyprus. [1]

Fig. 14.2 shows a scatter diagram of median age against crude death rate for countries in Africa and Fig. 14.3 shows a scatter diagram of median age against crude death rate for countries in Europe.

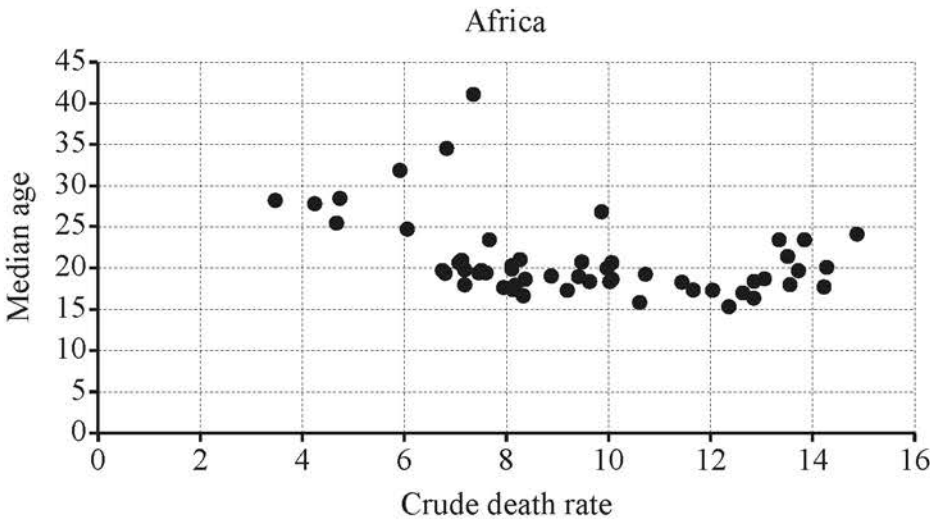


Fig. 14.2

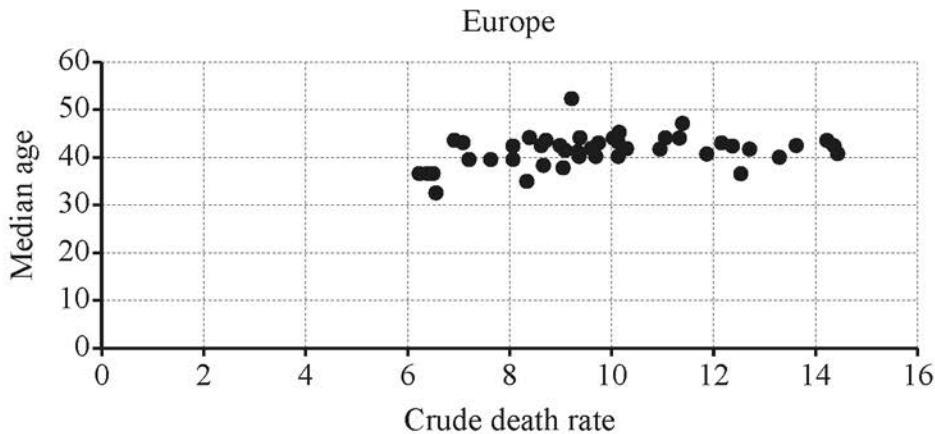


Fig. 14.3

The rank correlation coefficient for the data shown in Fig. 14.2 is -0.281206 .

The rank correlation coefficient for the data shown in Fig. 14.3 is 0.335215 .

- (e) Compare and contrast what may be inferred about the relationship between median age and crude death rate in countries in Africa and in countries in Europe. [2]