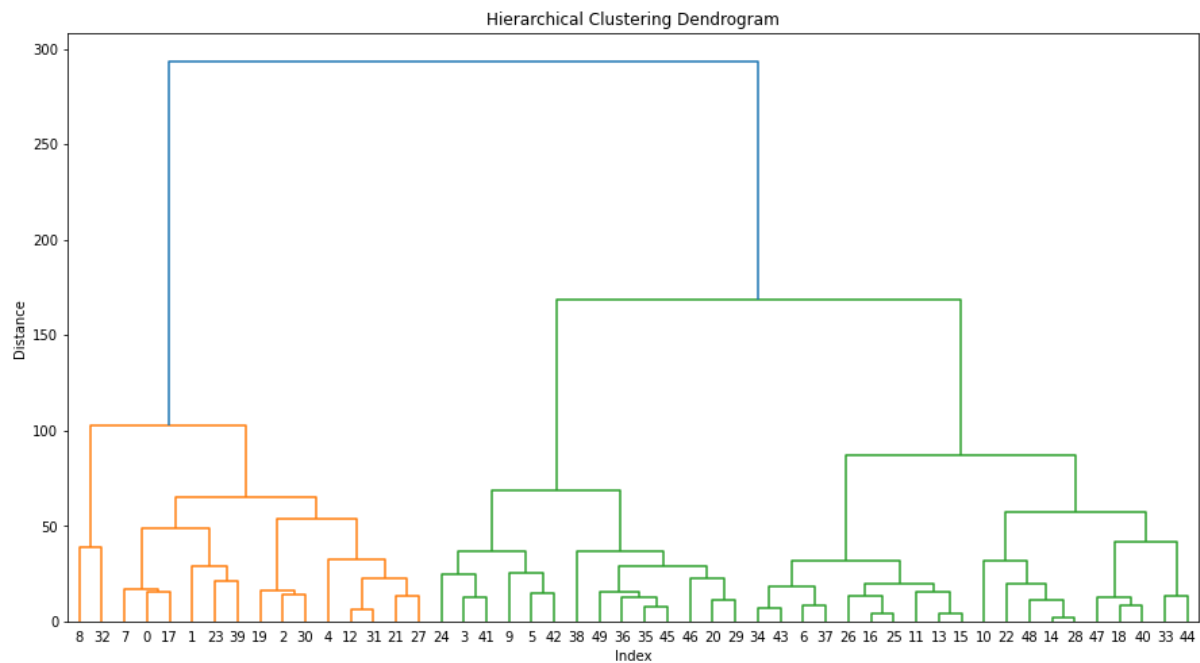Perform Clustering for the crime data and identify the number of clusters formed and draw inferences.
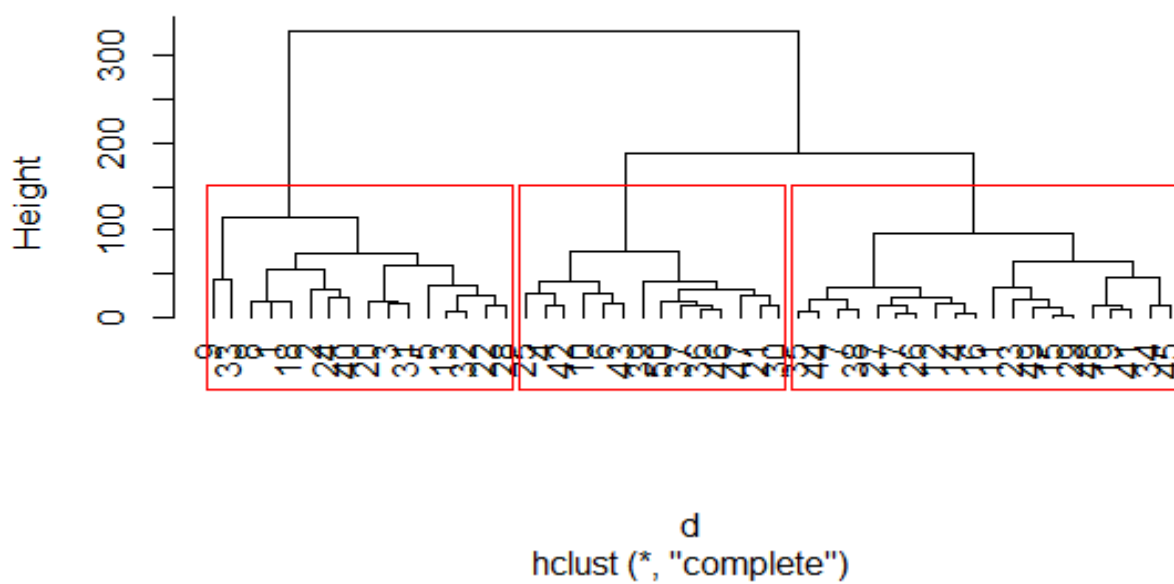
Answer:
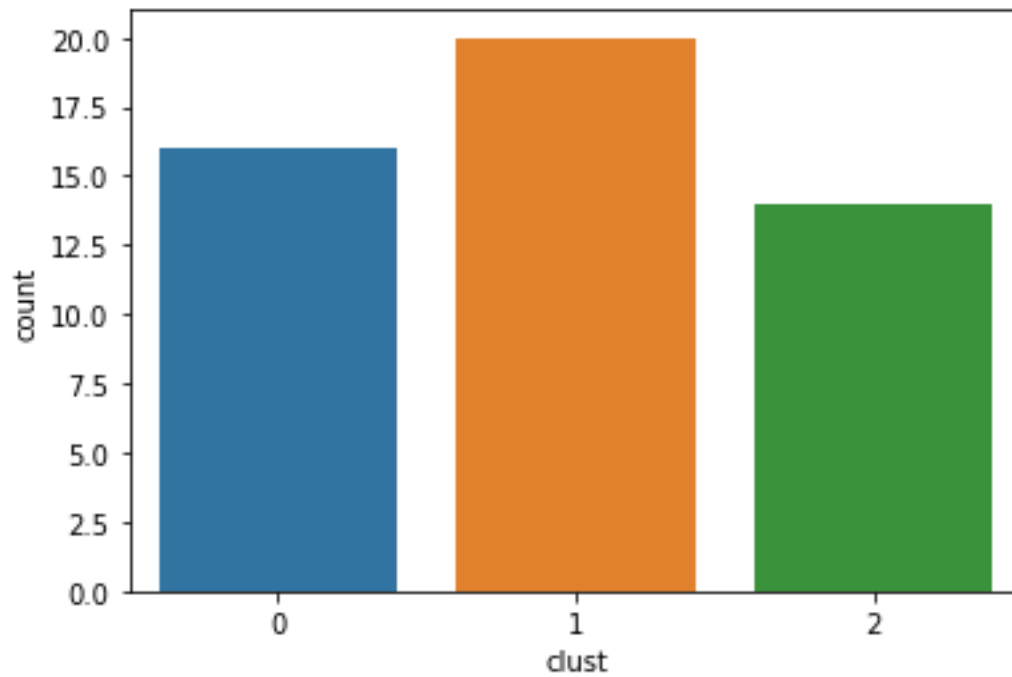
Dendogram

Hierarchical Clustering Dendrogram

Choosing 3 clusters:

Cluster Dendrogram

d
hclust (*, "complete")

Snippet of output:

Unnamed: 0	Murder	Assault	UrbanPop	Rape	clust
Alabama	13.2	236	58	21.2	0
Alaska	10	263	48	44.5	0
Arizona	8.1	294	80	31	0
Arkansas	8.8	190	50	19.5	2
California	9	276	91	40.6	0
Colorado	7.9	204	78	38.7	2
Connecticut	3.3	110	77	11.1	1
Delaware	5.9	238	72	15.8	0
Florida	15.4	335	80	31.9	0
Georgia	17.4	211	60	25.8	2
Hawaii	5.3	46	83	20.2	1
Idaho	2.6	120	54	14.2	1
Illinois	10.4	249	83	24	0
Indiana	7.2	113	65	21	1
Iowa	2.2	56	57	11.3	1

Top 3 data on mean of each cluster :

clust	Murder	Assault	UrbanPop	Rape
0	11.812500	272.562500	68.312500	28.375000
1	4.270000	87.550000	59.750000	14.390000
2	8.214286	173.285714	70.642857	22.842857