

# National Consumption of Chocolate and Rates of Personal Violence (Suicide and Homicide)

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It has been suggested that cravings for chocolate and/or sweets are mood related. People eat more chocolate specifically in response to dysphoric mood, especially depression (Liebowitz and Klein, 1979). Liebowitz and Klein have suggested that this link may have a biological basis.

Recently, Schuman et al (1987) devised an inventory to assess appetite for sweets and chocolate found scores related to hysteroid dysphoria, an atypical depression.

To explore this at a national level, the per capita consumption of confectionary chocolate and sugar of fourteen European

nations was compared with their rates of suicide and homicide for the year 1980 using data from Pohlman (1989) and the World Health Organization (1980-1988). The raw data are shown in Table 1. Analysis of the data showed that per capita consumption of confectionary chocolate and sugar was not related to suicide rates (Pearson  $r_s = 0.26$  and  $-0.17$  respectively), but that, in nations where more chocolate was consumed, the homicide rate was lower ( $r = -0.65$ , one-tailed  $p < 0.01$ ;  $-0.30$  for sugar consumption). Using a ratio of the suicide rate divided by the suicide plus

**Table 1**  
**Raw Data For 14 European Nations**

	per capita consumption kilos/capita		rates of violence *		
	chocolate in confectionary	sugar in confectionary	suicide	homicide	suicide/ suicide+homicide
Austria	6.3	2.4	26.0	1.3	0.952
Belgium/ Luxemburg	6.0	3.8	21.3	1.6	0.930
Denmark	4.8	4.6	29.1	1.2	0.960
Finland	2.4	4.1	24.7	2.9	0.895
France	4.0	2.8	19.2	1.0	0.950
Germany, FDR	6.6	5.7	21.4	1.2	0.947
Ireland	5.9	5.3	6.2	1.2	0.838
Italy	0.9	2.2	7.1	1.8	0.798
Netherlands	4.9	5.3	10.2	0.8	0.927
Norway	6.7	3.9	12.4	1.1	0.919
Sweden	5.3	3.8	19.1	1.3	0.936
Switzerland	8.4	3.0	24.7	1.0	0.961
UK	5.5	5.1	8.7	1.0	0.897
Yugoslavia	2.6	2.4	14.8	2.1	0.876

\* The rates are per 100,000 per year and obtained from the World Health Organization's *Statistics Annual*.

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homicide rates, it was found that the relative suicide rate was related to the per capita chocolate consumption ( $r = 0.63$ ) but not to the per capita sugar consumption ( $r = 0.12$ ).

The results indicate that homicide is less common and suicide relatively more common when expressed as a proportion of total personal violence in European nations where chocolate is consumed more, supporting the link between chocolate consumption and dysphoric mood.

Possible explanations for a link between chocolate consumption and depression have focused on its caffeine and phenethylamine content which have stimulant effects (Liebowitz and Klein, 1979) or on chocolate as an addictive substance (since alcoholic animals will choose sweet-tasting fluids over ethanol [Falk, 1977]).

## References

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