SHORT REPORT Consanguineous marriages in Denizli, Turkey

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Consanguineous marriages in Denizli, Turkey

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Summary. For the study 1000 families were interviewed during 1996 in the city of Denizli, which is situated in Western Anatolia and has a population of 79 211 families. The overall rate of consanguinity was 11.7%, with a mean inbreeding coefficient of 0.00873. The principal type of consanguineous marriage recorded was between first cousins, which accounted for 49.6% of all unions. For both sexes, a significant negative association was observed between consanguinity and mean age at marriage and level of education.

1. Introduction

Turkey has an estimated population of 64.8 million, with a young age structure and a moderately high birth rate of 22/1000 (PRB 1998). Previous reports have shown that marriage between couples related as second cousins or closer accounts for 21.1% of the total, varying by region from 12.8% to 46.9% (Başaran, Saylı, Başaran *et al.*, 1988, Saylı 1990, Tunçbilek and Koç 1994). Social, cultural and economic variables all appear to be important factors in determining local and regional levels of consanguinity. The present study was undertaken to assess the rates and types of consanguineous marriages, and their relationship to age at marriage and educational level, in the city of Denizli, Western Anatolia, as few investigations of this type have been conducted in the Aegean region of Turkey.

2. Materials and methods

Five primary schools were chosen from five different districts of the city, representing different socio-economic circumstances. Questionnaires were given to the families of 200 students in each of these schools, i.e. a total of 1000 questionnaires. The mother or father of each child was requested to complete the questionnaire on behalf of their family, with details on characteristics such as marital age, educational level and the degree of biological relatedness of the parents.

In the study, completed education was assessed and only first marriages were included. The rates and types of consanguineous marriage, and the relationships between consanguinity and mean age at marriage, and consanguinity and parental educational level, were investigated. For the statistical analysis, levels of significance were determined by Student t-test and Pearson chi-square test.

The types of consanguineous marriage recorded were first cousin ($F = 0.0625$), second cousin ($F = 0.0156$), and less than second cousin $F \leq 0.00156$). The mean inbreeding coefficient was calculated according to the formula, $\alpha = \sum C_i F_i$, where i is the degree of consanguinity, and C is the frequency of consanguineous marriages of degree i in the sample.

3. Results and discussion

The overall prevalence of consanguineous marriage in the study sample was 11.7%, equivalent to a mean inbreeding coefficient (α) of 0.00873. Of the consanguineous marriages recorded, 49.6% were between first cousins and 27.3% between second cousins.

Consanguinity is very common in Turkey, and there is a strong preference for this traditional form of marital union. Reports to date indicate that the prevalence of consanguineous marriage is highest in Eastern Anatolia (30–40%), which is the least developed part of our country, and lowest in the most developed region of Western Anatolia (11–13%) (Başaran 1983, Ulusoy and Tunçbilek 1987, Başaran et al. 1988, Sayli 1990, Solak, Çakmak, Fıstık et al. 1997). Thus the present findings of a frequency of consanguinity for Denizli of 11.7% corresponds well with other reports. The mean value is lower than the average for Turkey of 21.1% (Başaran 1995), probably reflecting the higher socio-economic status in Western Anatolia than the country as a whole.

The mean age at marriage was significantly lower ($p < 0.01$) for women, 18.39 ± 0.232 years, and men, 21.49 ± 0.374 years, in consanguineous marriages, versus women, 19.33 ± 0.139 years and men 23.03 ± 0.180 in non-consanguineous unions. These results are in accord with the findings of Reddy and Malhotra (1991) and Sivaram, Richard and Rao (1995) in South Indian populations, but are at variance with the study of Güz, Dedeoğlu and Lüleci (1989) conducted in Antalya, on the Mediterranean cost of Turkey. However, in all populations where consanguineous marriages are traditional, younger maternal marriage in first cousins union is typical.

There was a significant negative association between consanguinity and level of education (table 1) both for women ($p < 0.001$) and men ($p < 0.01$). Analysis of the results showed that when the educational level of either men or women was at high school level or above, and they were over 20 years of age, no consanguineous marriage was evident. On the other hand, when their completed education levels were below that of high school or their ages were less than 20 years, there was a tendency toward consanguineous marriage. In conclusion, the pattern observed in our study indicates that consanguineous marriage may be considered as an indicator of traditional behaviour, and as such it is mostly practised among people who marry at a young age and who are of a lower educational level.

Table 1.   Relationship between consanguinity and parental level of education.

Groups	Sex	No education n	%	Reader–writer only n	%	Primary school n	%	Middle school n	%	High school n	%	University n	%	Total
Consanguineous marriages	Women	17	14.5	4	3.4	71	60.7	13	11.1	11	9.4	1	0.9	117
	Men	0	0.0	3	2.6	74	63.2	11	9.4	17	14.5	12	10.3	117
Non-consanguineous marriages	Women	49	5.6	27	3.0	458	51.9	64	7.2	192	21.8	93	10.5	883
	Men	6	0.7	21	2.4	380	43.1	115	13.0	154	17.4	207	23.4	883

Women	$\chi_2^2 = 34.234$	$p < 0.001$
Men	$\chi^2 = 19.897$	$p < 0.001$

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Zusammenfassung. Die vorliegende Studie basiert auf Interviews mit 1000 Familien aus der Stadt Denizil im Western Anatoliens mit einer Gesamtbevölkerung von 79211 Familien, die im Jahr 1996 durchgeführt wurden. Die Gesamtanteil blutsverwandter Ehen betrug 11.7% mit einem mittleren Inzuchtskoeffizienten von 0.00873. Der häufigste Typ konsanguiner Ehen betraf Heiraten zwischen Cousins 1. Grades, sie machten 49.6% aller Verbindungen aus. Für beide Geschlechter wurde eine signifikante negative Assoziation zwischen dem Verwandtschaftsgrad und dem mittleren Heiratsalter sowie dem Bildungsgrad beobachtet.

Resumé. En 1996, 1000 des 79211 familles de la ville de Denizli en Anatolie Occidentale ont été interrogées. La consanguinité représentait 11.7% des unions, avec un coefficient moyen de parenté de 0,00873. Le type de mariage consanguin le plus représenté est entre cousins germains, avec 49.6 % de toutes les unions. On a observé une association négative entre la consanguinité, l'âge moyen au mariage et le niveau éducatif dans les deux sexes.