

Genetic and environmental influences on exercise participation: a comparative study of twin cohorts in five countries



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Aim

1) compare the prevalence of exercise participation (≥ 4 METs for at least 60 minutes a week) in five countries participating in the GenomEUtwin project.

2) assess the relative contribution of genetic and environmental influences on the variation in exercise participation in these five countries.

Method

Self-reported data from complete twin pairs (20-39 years of age) from Australia (N=1907), Denmark (N=7609), Finland (N=8024), the Netherlands (N=2386) and Norway (N=3620) were used

Results

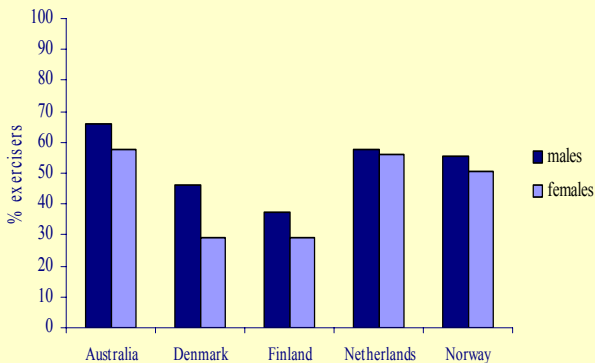


Figure 1. Prevalence of exercise participation

Acknowledgement

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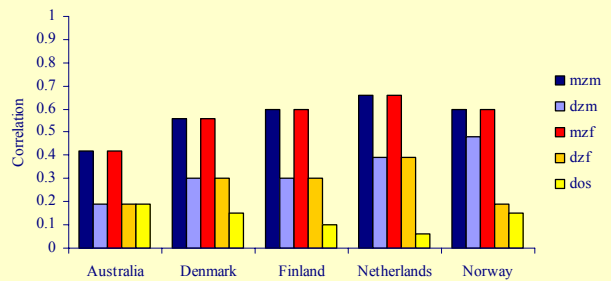


Figure 2. Twin correlations for exercise participation

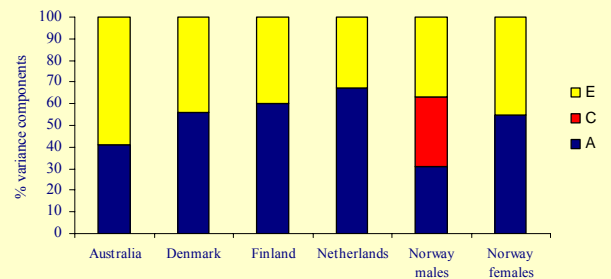


Figure 3. Parameter estimates for exercise participation

Conclusion

1) There is geographical variation in exercise participation rates for males and females across the five countries.

2) Genetic effects play an important role in explaining individual differences in exercise participation. Heritability estimates of exercise participation range from 31% to 67% for males and from 41% to 67% for females.

3) First results suggest that different genes are expressed in males and females