

Management, Resources and Reproductive Biology

Bernard WALLNER

**Department of Anthropology and Department of Behavioural Biology, University of Vienna
Vienna, 1090, Austria**

and

Martin FIEDER

**Department of Anthropology, University of Vienna
Vienna, 1090, Austria**

ABSTRACT

This work presents a relationship between environmental conditions and reproductive performance in modern humans. Birth rates and sex ratio (SRB) at birth were analyzed from large data scales. The results include data from people working or living under different job respectively socio-economic conditions, such as employees working in the academic field, employees under supervisory or hire and fire conditions, and people who have better access to resources. The results show that employees who have better jobs and earn more money do have more children and females under better socio-economic conditions do give birth to more sons.

In conclusion, it is suggested that different socio-economic environmental conditions may have an impact on female and male birth rates and SRBs, which may be related to stress perception rates.

Keywords: Birth Rate, Sex Ratio at Birth, Socio-Environmental Conditions

1. INTRODUCTION

Concepts in organizational behavior (OB) focus mainly on individual behavior in relation to optimal working conditions and their impact on the organization's success. Therefore, the field of OB established an interdisciplinary research approach including subfields such as anthropology, biology, psychology or sociology. However, many concepts in OB do lack basic evolutionary traits such as the development of social hierarchies in relation to the reproductive success of individuals. In particular, the question of birth rates seems to be of great interest in industrialized countries because most western states do show significant reduced number of births compared to emerging markets or Third World Countries.

2. METHODS

This research investigated the reproductive success of women and men under different environmental and social conditions such as status, power, and career in modern societies. For that reason large scale data sets from the Wisconsin Longitudinal Study (N = 9,817) [1], from the University of Vienna (N = 4,766) [2], from the University of Vienna (N = 1,184) [3], and from IPUMS international, 2000, (N = 438,640) [4] were analyzed by applying different multivariate models.

3. RESULTS

In male and female employees of an Austrian academic sample, offspring count differed significantly among three employee categories. Academics in leading positions with high salary fathered significantly more children compared to individuals of academics with intermediate salary and in other than leading positions or individuals of non-academics in non-leading positions with lower salary. In contrast women of categories 1 and 2 had significantly lower numbers of children compared to category 3. A further study on US men and women showed that men in supervisory respectively in hire and fire job positions had significantly more offspring compared to those who had not such duties. However, such job positions had no influence on women's reproductive performance.

Environmental and socio-demographic factors can even influence the variation of SRB (number of males/number of males plus females) as well. Regarding to this topic two different samples, a Viennese and Ugandan, were analyzed. The first study investigated the influence of mothers' educational levels, academics versus non-academics, on their SRB in a University sample. The results showed no differences of SRB and total birth rates. But academic women gave significantly more birth to sons during the springtime compared to non-academic mothers.

The Uganda sample revealed that mothers who owned dwellings gave significantly more birth to sons compared to those who did not own a dwelling.

4. CONCLUSION

From the results of these studies we conclude that career development in women and men seems to have a different impact on the reproductive physiology in both sexes. Regarding to the number of birth men of high status do reproduce better than those of low status. But in women, the association between social status and reproduction is usually null or negative: high status women tend to have fewer children. Moreover, the SRB results show that the socio-economic environment does influence the ratio of male to female births significantly. In the academic sample better educated mothers do give birth to more sons during seasonally favored conditions such as springtime, whereas the number of male birth in the Ugandan study is

associated with a more favorable economic condition. In conclusion, it is suggested that different socio-economic environmental conditions may have an impact in female and male psychological stress perception which has an impact in lower birth rates and SRBs. The latter assumption do correspond with other scientific results, where elevated physiological stress measured in increased cortisol concentrations do impair reproductive performance [5]. On the other hand environmental disasters such as war, bad economy, or volcanic eruptions [6-8] act as psychosocial stressors as well and can lead to elevated female births. In such a scenario increased cortisol secretion rates caused by stressors do have a negative impact to the energy balance of an organism. This might affect decreased SRB rates, because findings from Loos et al. [9] showed that males had significantly elevated birth weights compared to females indicating higher energetic demands for male ontogenetic development.

9. REFERENCES

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