

## Opportunity for Natural Selection: The Hmar of Manipur, India

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**ABSTRACT** In the present study an attempt has been made to deal with the opportunity for natural selection among the Hmars (the lesser known tribe of India) of Churachandpur (Manipur) based on the differential fertility and mortality from 35 ever-pregnant women aged of 45 + years. The value of  $I_m$ ,  $I_f$  are 0.072 and 0.250. Observed that the  $I$  value is 0.379 indicates the selection is operating or reported moderate in the population.

An attempt has been made in this communication to study selection intensity among the Hmars of Manipur.

### MATERIALS AND METHODS

Demographic data from 100 Hmar households of Khawmawi village in the Churachandpur district (Manipur) were collected during February-March, 1995. Information on age, sex and marital status of each offspring; reproductive wastages (including abortion and still birth) has been collected through indepth interviews with the head of the family using household census schedules. Estimation of ages with reference to certain local and important events could not be avoided in case of those subjects who did not know their real age. The Index of opportunity of selection ( $I$ ) and its mortality and fertility components ( $I_m$ ,  $I_f$ ) were computed following the original formula of Crow (1958) and modified version suggested by Johnston and Kensinger (1971).

### RESULTS AND DISCUSSION

The reproductive performances of Hmar mothers are shown in table I. It indicates that the mean number of live-births per mother aged 45 years and above is 5.08 with a variance of 6.47; whereas the frequency of premature deaths (those individuals who died before 15 years of age) is 6.74%. The indices of selection due to mortality ( $I_m$ ), fertility ( $I_f$ ), and both fertility and mortality

**Table 1: Parameters used in calculating the Index of total selection intensity.**

Total number of mothers aged 45 years and above = 35
Number of reported pregnancies = 183
Number of live-births = 178
Proportion of premature deaths (Pd) = 0.0674
Proportion of embryonic deaths (Ped) = 0.0281
Proportion of survivors up to birth (Pb) = 0.9719
Mean number of live-births per women aged 45 years and above ( $\bar{X}$ ) = 5.0857
Variance of live-births (Vf) = 6.4698

are 0.072, 0.250 and 0.375, respectively.  $I_f$  contributes more to the total selection intensity in comparison with the  $I_m$  and the value of  $I$  is operating very low intensity in the present population. It is found to be very much lower than many populations in India in general (Reddy and Chopra, 1990; Basu et al., 1995) and in North Eastern region in particular (Khongsdier, 1990, 1994; Chowdhury et al., 1994; Sengupta and Kalita, 1996; Buzarbarua and Rizvi, 1996; Basu, 1996). It is, of course, comparable with those reported like the Khamti (Sarkar et al., 1994), the Kaibarta (Sengupta and Gogoi, 1995), Sonowal Kachari (Deka, 1980) and Christian War Khasi (Khongsdier, 1994).

**Table 2: Indices of selection intensity**

Calculated according to Crow's (1958) formula			Calculated according to Johnston and Kensinger (1971)			
$I_m$	$I_f$	$I$	$I_{m\&f}$	$I_{m\&f}$	$I_f$	$I$
0.072	0.250	0.340	0.028	0.072	0.250	0.379

The low contribution of mortality component towards total selection intensity in this population may be an indication of improvement in medical facilities and other socio-economic conditions. But this improvement in socio-economic condition is trivial in relation to fertility rate of the present population.

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