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Effect of grandmother's presence and work effort on fertility, survivorship, and weight in two ethnic groups in N. E. India. DL LEONETTI, University of Washington, Seattle, WA, DC NATH, NS HEMAM, Gauhati University, Guwahati, Assam, India, DB NEILL, University of Washington, WA

Hypotheses regarding the selection for extension of post-menopausal life in humans depend on showing that reproductive success is enhanced via positive effects of older persons on the fertility and offspring

viability of descendants. We investigate grandmother effects in 617 patrilineal Bengali and 772 matrilineal Khasi households in N.E. India. Direct access to resources varies. Bengali women do no field labor nor do they market or own property. Khasi women own property and are productive workers in the fields and in wage labor and manage the household resources via selling and buying in the markets.

The current living status and the presence of a grandmother at the time of each birth was noted, and the current work effort of grandmothers was estimated through surveys on the frequency of a long list of child care, domestic, and field work activities by calculating kilocalorie unit estimates of effort based on amount of energy use involved in each. Survivorship to age 6 yrs of the children born to the reproductive women of the household, and weight and height of all children currently under age 6 years were measured and z-scores computed. The data show that in both groups the pace of fertility is faster for reproductive women of higher parities who have had a living mother-in-law (Bengali) or mother (Khasi). With respect to survivorship, only Khasi grandmother's status had a significantly positive effect (present, 0.966, absent 0.857;  $p < 0.001$ ) Also only Khasi grandmother's work effort had a positive effect on child's weight ( $r = 0.305$ ,  $p < 0.05$ ).

The more pronounced effects of Khasi grandmothers may be explained by their more direct access to material resources.

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