

less (Table 1). In addition to the above, educated mothers experience further reduced child mortality risks than do educated fathers. The study shows that the majority of child deaths are concentrated in families where the parents are both illiterate. Due to illiteracy, parents are unaware of the modern facilities preferring to use traditional methods for health care.

Working mothers also have lower child mortality risks than the mothers engaged in family business or working as housewives as shown in Table 2. But there are very few employed mothers and, therefore this association is questionable. As regards the father's occupation, those who are salaried employed have lower risks of child mortality than those engaged in agriculture or who are unemployed. Thus educated parents and those employed in the formal sector face less risks of child mortality than do those who are working in the traditional sector.

Table 1

Proportion of Children Dead—Education of Mother – Education of Father and Age of Mother

Age of Mother	Mother with Some Education	Mother with Some Education	Father with Some Education	Father with no Education
15-19	0.171 (32)	0.112 (217)	0.126 (128)	0.111 (121)
20-24	0.100 (233)	0.153 (870)	0.122 (591)	0.166 (512)
25-29	0.094 (335)	0.172 (1232)	0.125 (847)	0.194 (718)
30-34	0.092 (192)	0.162 (945)	0.128 (558)	0.180 (576)
35-39	0.132 (182)	0.176 (942)	0.159 (552)	0.179 (572)
40-44	0.144 (83)	0.217 (766)	0.185 (340)	0.227 (509)
45-49	0.159 (55)	0.242 (491)	0.200 (190)	0.253 (356)
All Ages	0.115 (1112)	0.189 (5463)	0.150 (3206)	0.202 (3364)

Source: PCPS 1984-85.

Note: Mother's having no live births were excluded.
Number of cases are in brackets.

Table 2

Proportion of Children Dead – Work Status of Mother and Occupation of Father and Age of Mother

Age of Mother	Mother Work Status			Father's Occupation		
	Works for an Employer	Works for Family Business	House Wife	Agriculture	Salried Employee	Un-Employed
<25	0.118 (12)	0.187 (198)	0.132 (1141)	0.154 (414)	0.136 (881)	0.080 (54)
25–34	0.135 (43)	0.182 (9398)	0.152 (2256)	0.176 (769)	0.148 (1858)	0.151 (74)
35–49	0.221 (51)	0.219 (427)	0.195 (2035)	0.218 (876)	0.188 (1503)	0.208 (132)
All Ages	0.188 (106)	0.204 (1023)	0.174 (5432)	0.199 (2059)	0.168 (4242)	0.187 (260)

Source: PCPS 1984-85.

Note: Mothers having no live births were excluded.
Number of cases are in brackets.

MATERNAL HEALTH CARE AND CHILD MORTALITY

Mothers who have had hospital care at the time of delivery are likely to experience a smaller risk of child mortality. The findings from Table 3 suggest that educated mothers who had their delivery at hospital had a smaller proportion of dead children than those who delivered at home. In the case of educated fathers where women are aged less than 35, whose child was born at hospital, the proportion of children dead are lower. However, for age cohort above 35 father's education seems to have a minimal impact on mother's health care leading to the very slight differentials in child mortality.

The urban-rural differentials from Table 4 suggest that urban educated mothers who have had their last delivery at hospital experience substantially lower child mortality than mothers with no education. The differentials persist among rural educated mothers and those with no education. But when controlled for delivery at hospital or at home the differentials are not significant for younger mothers by their residence. In comparison, older mothers who had their delivery at hospital had lower child mortality. However, in rural areas very few mothers had a birth in a hospital or clinic.

Table 3

*Proportion Children Dead—Site of Last Delivery—Education
of Mother and Father and Age of Mother*

Age of Mother /Site of Last Delivery	Mother with Some Education	Mother with no Education	Father with Some Education	Father with no Education
<i>< 25</i>				
Delivery at Clinic/Hospital	0.090 (60)	0.114 (934)	0.098 (581)	0.124 (538)
Delivery at Home	0.094 (185)	0.137 (44)	0.107 (79)	0.127 (25)
<i>25–34</i>				
Delivery at Clinic/Hospital	0.078 (128)	0.156 (1674)	0.116 (941)	0.175 (1007)
Delivery at Home	0.089 (278)	0.188 (86)	0.088 (172)	0.127 (42)
<i>35–49</i>				
Delivery at Clinic/Hospital	0.102 (31)	0.174 (894)	0.156 (369)	0.177 (600)
Delivery at Home	0.114 (75)	0.130 (43)	0.112 (50)	0.136 (24)
<i>All Ages</i>				
Delivery at Clinic/Hospital	0.086 (266)	0.126 (173)	0.098 (301)	0.131 (91)
Delivery at Home	0.096 (538)	0.158 (3502)	0.127 (1891)	0.170 (2145)

Source: PCPS 1984-85.

Note: Mothers having no live births were excluded.
Number of cases are in brackets.

Table 4

*Proportion of Children Dead by Site of Last Delivery—Education
of Mother—Age of Mother and Urban-rural Residence*

Age of Mother /Site of Last Delivery	Urban		Rural	
	Some Education	No Education	Some Education	No Education
<35				
Delivery at Hospital/Clinic	0.074 (164)	0.109 (93)	0.122 (24)	0.167 (37)
Delivery at Home	0.073 (281)	0.193 (744)	0.120 (182)	0.151 (1864)
35+				
Delivery at Hospital/Clinic	0.076 (26)	0.117 (33)	0.194*	0.173 (10)
Delivery at Home	0.110 (50)	0.152 (286)	0.122 (25)	0.184 (608)
All Ages				
Delivery at Hospital/Clinic	0.075 (190)	0.145 (1030)	0.145 (29)	0.169 (47)
Delivery at Home	0.084 (331)	0.113 (126)	0.120 (207)	0.164 (2472)

Source: PCPS 1984-85.

Note: Mothers having no births were excluded.

Number of cases are in brackets.

* Less than 10 cases.

Table 5 shows that educated younger mothers who have immunised their child had lower child mortality than the mothers aged 25+. The differentials by father's education showed substantially lower child mortality. The earlier evidence suggests that the education of the mother is more important both for maternal and child health care but in the case of child immunisation father's education emerged as a stronger determinant. Keeping in view that the full course of immunisation needs regular visits to a clinic or doctor therefore mothers may have not completed

Table 5

*Proportion of Children Dead by Education of Mother and
Father-Child Immunisation Status and Age of Mother*

Age of Mother /Site of last Delivery	Mother with Some Education	Mother with no Education	Father with Some Education	Father with no Education
<i>< 25</i>				
Immunised	0.064 (160)	0.098 (383)	0.79 (331)	0.100 (121)
Not Immunised	0.144 (85)	0.126 (591)	0.119 (327)	0.136 (349)
<i>25-34</i>				
Immunised	0.091 (292)	0.151 (692)	0.107 (592)	0.173 (392)
Not Immunised	0.075 (114)	0.156 (1063)	0.117 (518)	0.174 (405)
<i>35-49</i>				
Immunised	0.115 (77)	0.159 (364)	0.143 (223)	0.157 (218)
Not Immunised	0.103 (30)	0.180 (571)	0.157 (196)	0.185 (405)
<i>All Ages</i>				
Immunised	0.093 (529)	0.148 (1439)	0.117 (1146)	0.158 (822)
Not Immunised	0.097 (229)	0.162 (2225)	0.130 (1041)	0.175 (1409)

Source: PCPS 1984-85.

Note: Mothers having no live births were excluded.
Number of cases are in brackets.

the full course compared to fathers who make more regular visits. The survival chances of children are less in case of incomplete immunisation.

The study also analysed the child mortality differentials by urban-rural and educated mothers who had immunised their children. The differentials showed substantially lower proportions of dead children for educated mothers as coma

compared to uneducated mothers. The differentials were more pronounced for younger educated urban mothers, who immunised their infants. In the case of rural mothers differentials by education were substantial but child immunisation did not emerge as a significant variable in affecting child survival. This could be due to incomplete course or lack of information on the part of rural mothers about immunisation. This also shows a great contrast in the health facilities available in urban and rural areas, because in rural areas modern health services are hardly available and therefore mothers are unable to take independent decisions about their infant's and their own health care.

The child mortality differentials were also found more pronounced among educated urban mothers 35+ who treated their babies by ORS compared to other drugs. Among the rural educated mothers differentials were even more substantial between both younger and older mothers who treated their babies by ORS as compared to educated mothers using other than ORS drugs. The lower child mortality risks for younger educated urban mothers who used other drugs for child care comprise of a small sample size but may be using other effective medicines which may have reduced child mortality risks.

CONCLUSIONS

The study clearly supports the argument that if parents are provided better facilities for education and health, they would certainly prefer to utilise these for MCH¹ leading to better chances of child survival. Educated mothers particularly have shown that given the resources at their control, their preference is certainly for better health care. This suggests that mothers when able to make independent decisions do emphasise child health care. The majority of the rural population which is nearly 70 percent of the total population have the highest child mortality. This may not only reflect maldistribution of trained manpower and other facilities, but may also be due to low levels of literacy, poor sanitation, low incomes and lack of access of relevant health facilities. The factors such as, post delivery maternal care, prenatal care, postnatal care were also analysed and showed that child risks were substantially less particularly for urban educated mothers. Thus, the differential, in the urban vs rural health care can be reduced further by improving overall living conditions rather than further advances in medical care [Rohde (1983)]. The mortality transition that the developed countries experienced in the past was characterised by socio-economic progress [Palloni (1981)]. Therefore, development programmes which enable health or education reach the majority of the

¹Maternal and child health.

population are preferable. This perhaps can be achieved through conscious policies backed by political will and mobilisation of resources.

REFERENCES

- Pakistan, Government of (1986) *Pakistan Contraceptive Prevalence Survey 1984-85*. Islamabad: Population Division, Monitoring and Statistics Wing.
- Palloni, A. (1981) Mortality in Latin America : Emerging Patterns. *Population and Development Review* 7:4.
- Rohde, J. E. (1983) Why the Other Half Dies. *Assignment Children* 61/62.
- World Bank (1985) *World Development Report*. Washington, D.C.: The World Bank.

**Comments on
“Differentials on Child Mortality and Health Care in Pakistan”**

The paper though simple is a good initiative. It estimates the child mortality differentials in terms of some important socio-economic characteristics like parents education, urban/rural classification, parents work status, availability of MCH care, immunisation status and diarrhoeal treatment availability which is a basic cause of death among infants and children. These differentials are estimated for various cohorts classified by the age of the mother.

Literacy comes out as a major factor influencing child survival. Risks of child mortality is less in case of educated parents and particularly the impact of mother's education is more pronounced. Similar results have been found for fertility differentials also in earlier studies. I however, have a few comments to make on the paper.

1. Demographic research to date has indicated a high degree of correlation between fertility and infant and child mortality. The causation is however, yet not clear as to whether higher fertility causes higher mortality or vice versa or both are influenced by a third set of socio-economic variables like literacy, poverty etc. It would have been interesting if some analysis was presented in the paper as to whether the lower proportion of child mortality in case of educated parents is due to their having fewer children with large number of surviving children or large number of total children with fewer surviving children. To be more precise, it is not brought out clearly whether education has a direct bearing on child mortality or its effect is translated through lower fertility. The paper could have included some discussion on this aspect.

2. Although education comes out as a significant factor but as income and socio-economic status are not control variables, therefore, the impact of education may be capturing the influence of some other socio-economic variables like affordability and accessibility of health care even within the urban context because education and income/employment status and affordability tend to be positively correlated in a narrower sense. This point is being raised due to the fact that curative health facilities in Pakistan tend to be more privatised and concentrated in urban areas and both affordability and quality of medical care becomes issues at question given the state of medical care in the public sector. Therefore, it might not be increased consciousness due to education but also the economic factor being captured by education.

Similarly, the findings indicate that the working mother also has lower child

mortality risks than mothers engaged in family business or working as housewives. Here again, work status captures the mobility aspect of women particularly in the rural context.

Similarly, as regards father's occupation, those who are salaried employees have lower risks of child mortality than those engaged in agriculture. Here again, availability and accessibility to medical care is captured by the difference in occupational status as salaried class tend to have full or partial medical benefits in their salary package.

3. The study brings out an interesting result in terms of some association between maternal health care and infant/child mortality. Both urban and rural educated mothers who had received post-natal care from a clinic have lower child mortality than those who received post-natal care from a source other than a clinic. There is no explanation for the differences as to what is meant by "clinic" and "other than a clinic". Does it refer to the difference in terms of traditional/modern or government/private or captures the difference in quality of medical care?

4. The findings indicate that whereas in case of maternal and child health care, mother's education emerged as an important variable; in case of child immunisation, father's education emerged as a stronger factor. Again mobility could be a factor explaining this difference. The earlier result that maternal health is related to child care and the present result together suggests that even educated mothers were not independent decision-makers in terms of immunisation. This provides strong evidence for not only female education but also the essential need for acknowledging the productive roles of women in all sectors in monetary terms and creating economic opportunities for women to enhance their decision making role towards the health and well-being of their children and family.

It is also important to note that in case of rural mothers child mortality differentials by education are substantial but child immunisation does not emerge as a significant variable in affecting child survival. This could depict the lack of information on the part of rural mothers about immunisation as well as incomplete course of immunisation. This finding also points to the urban bias and skewedness in the distribution of health facilities and this factor alone has strong policy implications in terms of availability and accessibility of services through outreach and extension services which is a missing component and a major drawback of both Primary Health Care and Population Programmes. The rural areas lack service availability in general and mobility becomes a constraining factor for women in particular to be able to avail distant health facilities besides their restrictibility to take independent decisions to avail MCH care.

5. The paper does not attempt to distinguish between female and male chil-

dren mortality which loses out an important dimension of the issue.

Despite these limitations the paper is a commendable exercise in pointing out the factors responsible for child mortality differentials which has both short-term and long-term policy implications.

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