Early Childhood Development: Situation Analysis for Zambia

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Teenage pregnancies have potential negative consequences for the next generation. Children born to adolescent mothers are particularly at a disadvantage with regard to their health, nutrition, cognitive, and socioemotional development. The early years, especially the first 1,000 days, are crucial for lifetime health, learning, and productivity. Particularly for the most vulnerable children and families, early childhood development (ECD) is a high-return investment. This policy brief presents evidence on the health, nutrition, and overall development of children in Zambia with a focus on those born to adolescent mothers.

Trends in Health and Nutrition

The infant and child mortality rates in Zambia have been declining steadily since 1990 (figure 1). Despite the declines in child mortality overall, children born to adolescent mothers experience higher mortality than children born to mothers in their

Figure 1. Under-5 Mortality Rates, Overall and by Mother’s Age at Birth, 1992–2014

Source: Demographic and Health Surveys.

Note: Neonatal mortality is death in the first 28 days of life; infant mortality is death before one year of age.
Infant mortality (deaths of children under the age of 1 year) and childhood mortality (deaths of children under the age of 5 years) have fallen substantially and are expected to continue to decline. The infant mortality rate is now an estimated 75 deaths per 1,000 live births, and the under-5 mortality rate is an estimated 75 deaths per 1,000 live births—down from 107 and 191, respectively, in 1992.1 However, neonatal mortality (deaths within 28 days of birth) is 62 percent higher for babies born to mothers under 20 years of age than for babies born to mothers in their 20s. The same elevated risk exists for infant and child mortality. This trend is especially concerning given the proportion of adolescents in the population (24 percent) and the increasing number of adolescent girls in Zambia (an estimated 1.8 million by 2015 and 4.8 million by 2050). If the current patterns of teenage pregnancy and age structure continue, the overall impact on mortality will be notable. After controlling for key demographic and socioeconomic variables, the odds of mortality are approximately 40 percent higher for infants with adolescent mothers than for infants with older mothers; similar elevated odds exist for children under 5 years of age.²

Children born to women with higher educational attainment have lower mortality than children born to women with less education (figure 2). In 2013–14, the infant mortality rate was 59 for babies born to women with no education, compared with 43 for babies born to women with at least a secondary education; the under-5 mortality rates for these groups were 109 and 67, respectively.

Children born to adolescent mothers are at higher risk for stunting, especially severe stunting, which can affect their cognitive development and educational outcomes in childhood and adolescence (figure 3). High stunting rates may be explained by the strong intergenerational relationship between stunting and poor maternal health and nutrition before, during, and after pregnancy. Children of adolescent girls suffering from undernutrition in Zambia are more affected by stunting than all children on average. The odds of being stunted are 30 percent higher for a child born to an adolescent mother than for a child born to a mother over age 20.³

Children born to adolescent mothers are more likely to be ill than are other children. They are more likely to have a fever, the primary symptom of malaria. According to DHS reports, fevers were reported to have increased overall between 2007 and 2013–14, from 22 to 25 percent among children of adolescent mothers (versus 18 to 21 percent among mothers of all ages). Likewise, children of adolescent mothers are more likely to experience diarrhea than are children of older mothers. Reporting of diarrhea increased for children of adolescents between 2007 and 2013–14, from 18 to 23 percent, but remained constant for children of older women at 16 percent (figure 4). Whereas reported coughs declined overall for children in Zambia, from 25 percent in 2007 to 23 percent in 2013–14, it increased for children of adolescent mothers, from 27 to 30 percent.⁴

After controlling for important factors, analyses that assessed whether these morbidities were associated with adolescent motherhood found that children of adolescent mothers are significantly more likely to have experienced a recent case of cough or diarrhea (approximately 10 percent higher odds than for children of older mothers), but found no significant relationship for recent fever.⁵

Figure 2. Infant and Under-5 Mortality in Zambia, by Mother’s Level of Education, 2013–14

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Under-5 Mortality Rate</th>
<th>Infant Mortality Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>No education</td>
<td>109</td>
<td>59</td>
</tr>
<tr>
<td>Primary</td>
<td>82</td>
<td>49</td>
</tr>
<tr>
<td>Secondary or higher</td>
<td>67</td>
<td>43</td>
</tr>
</tbody>
</table>

Source: 2013–14 Demographic and Health Survey.

³ Results of a multivariate regression model using a pooled cross-sectional dataset on whether stunting is associated with adolescence, marital status, religion, region of residence, urban-rural residence, household wealth quintile, level of educational attainment, sex of the child, birth order, and survey year. The full findings are available from the authors upon request.

⁴ Differences between groups were not tested for statistical significance.

⁵ Results of a multivariate regression model using a pooled cross-sectional dataset on cough in the last two weeks (or fever or diarrhea modeled separately) was associated with adolescence, woman’s educational attainment, and H

1 Results of a multivariate regression model using a pooled cross-sectional dataset on whether infant and under-5 mortality is associated with mother’s adolescence, marital status, religion, region of residence, urban-rural residence, household wealth quintile, level of mother’s educational attainment, sex of the child, birth order, and survey year. The full findings are available from the authors upon request.

2 Data in this brief are from the 1992–2013/14 Demographic and Health Survey (DHS), unless otherwise noted.
Seeking treatment for diarrhea has increased nationwide, and in 2013–14, 66 percent of children with a recent case of diarrhea reportedly had received care at a health facility, as had 73 percent of children of adolescent mothers. There are similar rates of seeking care for recent cases of acute respiratory infection (fever or cough): 62 percent for all mothers and 73 percent for adolescent mothers. After accounting for socioeconomic and demographic factors (such as household wealth, region of residence, women’s education, and child’s sex and birth order), there is no significant relationship between adolescent motherhood and seeking care for diarrhea or respiratory infection, suggesting that factors other than age may be more important in motivating mothers to seek care. For example, there may be differences in quality of care received by teenage mothers or in timeliness with which they seek care, which may in part explain poorer health outcomes for their children.

Although they seek treatment for their children’s illnesses, adolescent mothers do not sufficiently take preventive steps to avoid illness. For example, antenatal tetanus toxoid vaccination protects the mother from contracting tetanus, prevents preterm birth, and protects the newborn. In Zambia, it is relatively uncommon for adolescent mothers to receive antenatal tetanus toxoid vaccination. In 2013–14, only 15 percent of adolescent mothers had been vaccinated. Use of bed nets is also low for children of adolescent mothers. Only 44 percent had slept under a bed net compared to 50 percent nationwide (figure 5). Even after adjusting for socioeconomic and demographic factors, children of adolescent mothers had 10 percent lower odds of sleeping under a bed net compared to all children.

Trends in Learning, Cognitive Development, and Achievement

Poor health and nutrition adversely affect learning, cognitive development, and achievement. Among children entering grade 1, 43 percent do so after the age of 7 years, which sets them on a challenging learning trajectory (2013 Education Management Information System). Some of this late entry may be due to stunting or lack of maturity (parents may consider children too small or not ready to start grade 1), lack of required documentation to register in time for the school year, or lack of information among parents about the importance of starting school at the right age. Late entry into primary school, however, has many negative implications, including higher likelihood of dropping out or repeating grades.

Another indicator of school readiness is preschool experience, which few Zambian children have. Only 14.5 percent of students entering grade 1 have any preschool experience. There is some variation by province,
The percentage of 1st graders with any preschool experience.

43%

The percentage of 1st-grade entrants who are older than 7.

Figure 5. Share of Children under 5 Who Slept under a Bed Net the Previous Night in Zambia, by Mother’s Age, 2007 and 2013–14

Policy Framework in Zambia

Zambia has various policies to address ECD, but existing ECD programs are limited in scope. Programs addressing the overall development of children (including physical, cognitive, linguistic, and socioemotional development) are extremely limited. Childcare for younger children is even less prevalent, which can prevent adolescent mothers from reengaging in learning or income-generating activities once the child is born, especially if they lack a strong family support network. Although some parenting programs seek to enhance early stimulation at home (mostly through nongovernmental organizations and foundations), their scope remains limited compared to the needs.

Policies such as the National Population Policy and National Health Policy include ECD and collectively aim to reduce fertility (especially among adolescents); burden of disease; and maternal, infant, and child mortality. These policies and programs could benefit by tailoring their approaches to the specific needs of adolescent mothers. Several relevant sector-specific policies are under review or finalization, including the National Child Health Policy, National Food and Nutrition Policy, National Child Policy, National Education Policy, and National Early Childhood Education Policy.

Key Findings and Conclusions

Teenage pregnancies have negative consequences for the next generation:

- Children of adolescent mothers are at higher risk of mortality, poor nutrition, and onset of illness than are children of older mothers.
- Teenage mothers are less likely to take preventive measures for ensuring better health of their children.
- Poor health and nutrition adversely affect cognitive and socioemotional development and learning, putting children of teenage mothers at higher risk of poor development outcomes.

To improve outcomes of children of teenage mothers, services need to be tailored to reach them. ECD policies and programs need to be comprehensive and of better quality to address the many challenges facing adolescents and their children. For Zambia to reap its full demographic dividend, it will be necessary to ensure improved health and early childhood development outcomes—particularly given the large number of children born to adolescent mothers currently and in the coming decades.

References
