

Family structure changes and the development of children in selected disadvantaged areas in the Philippines

by

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Introduction

The child's environment is a major influence in determining its development. Bronfenbrenner's ecological model (1979) showed the different types of environment that influence child development. One of these environments is the home, which is largely influenced by the family structure, the composition and relationship to members in the households (Schneider et al., 2005).

Studies that focused on changes in family structure have yielded diverse results. Some have shown that children of intact families where both parents were present had less behavioral problems (Morrison and Cherlin 1995 in Aughinbaugh, et al., 2005) and performed better in cognitive and other achievement tests (Baydar and Brooks-Gunn, 1994, McLanahan, 1997 in (Aughinbaugh, et al., 2005). However, results of the National Longitudinal Survey of Youth 1997 showed that changes in family structure due to the marital status of parents were not significant factors associated with youth achievement (Aughinbaugh, et al., 2005) and divorce did not affect the cognitive stimulation nor emotional support of young children (Kowaleski-Jones and Dunifon, 2004). However, other studies have also shown that changes in family structure explained income inequality in families with children (Martin 2006). Similarly, family transitions involving the stability of relationships between parents (Brown, 2006) or growing with single divorced mothers (Biblarz and Gottainer, 2000) or in cohabitating relationships (Kalil et al., 2001?) affected the development of children.

Changes in family structure due to the addition of a sibling or family size may also affect the development of children. A study among Australians showed that children from small families did better in education, and earned more in their adulthood (Parr, 2006). According to Blake (1981), children of large families have a negative influence on their education because the dilution of per child parental time, attention, and interaction and the dilution of material resources and provision of extra care for children. Studies in Australia have shown that more children meant the need for more resources (Percival and Harding, 2002). In addition, a study of mother and child pairs also showed that impending births were associated with increased emotional support provided to the children while a concurrent birth was associated with decreased emotional support (Kowaleski-Jones and Dunifon, 2004)

Another factor influencing the family structure is the presence of relatives who interact with the children. In a society where children are valued highly, the presence of relatives particularly grandparents in the family may contribute to the development of children. Limited studies have shown that the cognitive development of children living with single divorced parent and a grandmother was higher than those living only with a single divorced mother (Dunifon et al., 2007) and the positive effect of relatives as co-residents in the intellectual development of children (Avan et al, 2007). However, some studies found children reared by custodial grandmothers were delayed in their intellectual development (Pittman and Boswell, 2007).

Contribution of this study

Although studies on changes in family structure particularly on the changes in marital status or the addition of a sibling may have been well explored in developed societies and to a limited extent in some developing societies, studies on children from disadvantaged environments have been limited. Moreover, local studies (e.g. Save the Children, nd) that examined the psychosocial development of children are limited and have not accounted for the changes in family structure due to transitions in marital status of parents, additional siblings or the presence or absence of relatives on the psychosocial and cognitive development of children. This study seeks to provide additional evidence on the effect of changes of family structure on child well being by focusing on the development of children in disadvantaged settings.

Major Objective

The major objective of this study was to determine the influence of changes on family structure on the well being (i.e. overall development) of children from selected disadvantaged areas in the Philippines.

Methodology

Data

This study focused on a sample of 2, 190 children who were followed up from 2001 to 2005 and were aged three to five years old living in the barangays (villages) in Western, Central and Eastern Visayas, one of the three major island groups in the Philippines. These barangays were those identified to be at risk and in need¹ by the Philippine government's Department of Social Welfare and Development (Council for the Welfare of Children, 1999). Thus, the sample children from these *barangays* provide a different insight into the school readiness of children living in a disadvantaged setting.

Variables

Outcome variable: In this paper, we used percent change in the overall development of children. This was derived by taking the proportion of change accounted for by the difference between the 2001 and 2005 scores for overall development (which is the sum of several psychosocial and cognitive domains) in relation to the overall development score in 2001. .

Main exposure variables: Changes in family structure were measured using the following:

1. Stability of unions was the mother's last marital status. This would refer to stable unions (continued to be married either by law or by the Church in all rounds) or unstable (being consensual or having no spouse in any round, or changed marital status in any round).
2. Sibling size referred to the addition (new births) or loss (deaths) of siblings during the period 2001-2005.
3. Change due the presence or absence of family relations referred to change from a nuclear to an extended type of families or vice versa during the period 2001-2005 or no change (continue being nuclear or extended family type.)

¹ Those in need include populations with children aged 0-5 who are at risk of dying or populations with children 6-12 years old who have dropped out of elementary school or who are underweight (less than 75% of the standard). Those at risk include populations with children aged 0-5 who are living in households with limited information, in households with low income per capita income or in a community with limited social services (Council for the Welfare of Children, 1999).

Covariates

Individual, household and community characteristics that may influence the development of children were also included in the analysis. Characteristics like age and sex of the child, health status (presence of worms), nutritional status (stunting) and attendance to day care or preschool activities and maternal characteristics (education and work status of mothers in any of the rounds) were included. Household level variables, which measured the household environment, included the ownership of land and television sets at the onset. The community level attributes of being urban or rural and being a program area or not at the onset (2001) were also considered.

Tools for Analysis

Several statistical techniques were used in the analysis. Frequencies and cross tabulations were used to explore the characteristics of the sample children, the changes in the different domains of psychosocial and emotional development, changes in the family structure due to stability of mother's marital status, addition of siblings and addition or departure of relatives from the family set up. Multivariate regression models were carried out to determine the effects of the exposure variable on the outcomes and the effects of the other co-variates. STATA Statistical Software was used to carry out the statistical analysis.

Results of the study

The children included in this study were on average five years old with slightly more boys than girls and many of these children were not healthy (had worms). Although these children were from disadvantaged areas, more than six of every ten were able to attend day care or preschool.

These children had mothers more than half of whom had some high school education but less than half had experienced working. Only a few of these children experienced changes in the household size and less than half were living in households with television appliances and whose parents owned the land on which their house was built. Almost all of these children are from rural areas and a moderate proportion is from program areas where early childhood development initiatives were introduced.

As shown in Table 2, on average, there has been an improvement on the overall development score of the children since 2001. A closer look revealed that a considerable proportion of children suffered some set backs or did not improve in their overall development while two thirds showed signs of improvement.

Changes in the family structures as shown in Table 3, revealed that majority of the children were living with mothers whose unions were stable, and had additional siblings. Moreover, majority of the children continued to live in either an extended or nuclear type of family.

Examining the influence of these changes in family structure on the overall development of children revealed that these had no influence on the development of children. One's age and sex were more important. Likewise, living in households where there has been less additions of persons and where parents owned the house lot, were more important in providing children the environment that influence their overall development.

Work is underway to examine the influence of changes in family structure on each psychosocial, cognitive and emotional domain. We will also explore how robust these results are to alternative assumptions (like changes in family structures are treated as endogenous by using instrumental

variable methods with community characteristics among the instruments) and whether they vary by gender and age.

Table 1. Selected Characteristics of the sample children, their mothers, household and community (N=2,190)

| Characteristics | Mean | SD |
|---|-------------|-----------|
| <i>Individual</i> | | |
| Mean age in months | 65.91 | 9.07 |
| Sex (Female) | 0.46 | 0.50 |
| Health (Presence of worms) | 0.43 | 0.50 |
| Attendance in daycare | 0.56 | 0.50 |
| | | |
| Mothers' education (high school) | 0.55 | 0.50 |
| Mothers' work status | 0.47 | 0.50 |
| <i>Household</i> | | |
| Persons (Difference in the number of persons from round 1 to 4) | 0.17 | 1.90 |
| Television ownership | 0.49 | 0.50 |
| Land ownership | 0.33 | 0.47 |
| <i>Community</i> | | |
| Rural residence | 0.92 | 0.27 |
| Program area | 0.62 | 0.49 |

Table 2. Overall development of 3-6 year old children (N=2,190)

| Variables | Mean | SD |
|--|-------------|-----------|
| <i>Overall Development</i> | | |
| Year 1 | 98.07 | 16.09 |
| Year 4 | 102.73 | 13.32 |
| Per cent | | |
| Suffered setbacks in overall development | 37.49 | |
| No change in overall development | 1.96 | |
| Improved overall development | 60.55 | |

Table 3. Distribution of Family Structure Variables (N=2,190)

| Variables | Mean | SD |
|---|-------------|-----------|
| <i>Stability of Mothers' marriage</i> | | |
| Stable | 0.69 | 0.46 |
| Unstable | 0.31 | 0.46 |
| <i>Sibling Size</i> | | |
| Increased | 0.58 | 0.49 |
| No change | 0.41 | 0.49 |
| Decreased | 0.01 | 0.49 |
| <i>Family type</i> | | |
| Remained nuclear | 0.67 | 0.47 |
| Experienced change (from nuclear to extended or vice-versa) | 0.12 | 0.33 |
| Remained extended | 0.21 | 0.40 |

Table 4. Regression results showing the influence of family structure and co-variates on the overall development of 3-6 year old children (N=2,190)

| Variables | Model 1 (Unadjusted) | | | Model 2 (Adjusted) | | |
|---|-------------------------|--------------|----|-----------------------|--------------|----|
| | Beta | 95 % CI | | Beta | 95 % CI | |
| <i>Family structure</i> | | | | | | |
| Stability of marital union | 1.66 | -0.51, 3.83 | | 1.50 | -0.67, 3.67 | |
| Sibling size | -1.38 | -2.61, -0.14 | * | -0.24 | -1.62, 1.14 | |
| <i>Family type</i> | | | | | | |
| Experienced changes ^a | 1.93 | -1.18, 5.04 | | -0.75 | -3.44, 1.94 | |
| Extended family type | 0.95 | -1.58, 3.47 | | -0.02 | -3.23, 3.19 | |
| <i>Covariates</i> | | | | | | |
| Age of children | 0.11 | -0.00, 0.22 | * | 0.12 | -0.00, 0.23 | * |
| Sex (Female) | 2.37 | 0.36, 4.37 | * | 2.73 | 0.74, 4.73 | ** |
| Health (presence of worms) | -1.02 | -3.04, 1.00 | | -0.01 | -2.15, 2.13 | |
| Attendance in daycare | 1.43 | -0.58, 3.45 | | -0.31 | -2.46, 1.83 | |
| Mothers' education (high school) | 2.83 | 0.82, 4.84 | ** | 1.54 | -0.62, 3.70 | |
| Mothers' work status (working) | 1.83 | -0.17, 3.83 | * | 1.08 | -0.94, 3.09 | |
| Persons (difference in the number of persons from year 1 to year 4) | -0.85 | -1.38, -0.33 | ** | -0.64 | -1.25, -0.03 | * |
| Television ownership | 2.25 | -0.25, 4.24 | * | 0.83 | -1.34, 3.00 | |
| Land ownership | 4.10 | 1.99, 6.21 | ** | 3.50 | 1.32, 5.69 | ** |
| Rural Residence | -2.72 | -6.42, 0.99 | | -2.32 | -6.05, 1.41 | |
| Program area | 2.41 | 0.36, 4.47 | * | 1.72 | -12.24, 5.19 | |

^arefers to changes from nuclear to extended or from extended to nuclear households

** Significant at the 1 percent level / * Significant at the 5 percent level

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