
**Adolescent School Drop-out in South Africa:
An Asset-Vulnerability Framework**

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Abstract

This article investigates the impact of poverty and shocks on adolescents, particularly their role in early school drop-out. Data consisting of 3043 adolescent interviews and 1945 household interviews, from a recent survey entitled Transitions to Adulthood among Adolescents in Durban, South Africa, has been used. While conventional explanations of drop-out acknowledge the role of socio-economic factors, this paper attempts to understand, through an asset-vulnerability framework, the explicit contribution of poverty and shocks to drop-out in the South African context. The results indicate that the poverty-based theory of drop-out put forward, while appealing, does not fully account for drop-out. Instead, it would seem that among poor households the education of their children is seen as an asset that is to be protected. It is proposed that school feeding schemes be reconsidered as a social welfare tool to support poor households in their attempts to keep their children in school *[148 words]*.

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Declaration of Original Work

Except where specific reference is made to the work of others, this work is original and has not already been submitted either wholly or in part to satisfy any degree requirement at this or any other university.

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Intention to Submit Article for Publication

This dissertation was designed for submission as an article to *Population and Development Review*. The publication requirements of this journal are specified as below. The article consists of 8 861 words.

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Use end notes for substantive comments, not simply for references.

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The Adolescent Transition and School Drop-out

The time of transition from adolescence to adulthood is a critical period that can shape the adult life span. It is an extraordinarily stressful time which involves complex biological, physical, behavioural and social growth and change that is second only to infancy. During adolescence the nature of the stresses encountered, their relevance for the pursuit of identity, and the coping responses available all have important implications for identity processes and life-stage outcomes that emerge later. One manifestation of the stress that adolescents experience during the transition is early school drop-out (Carnegie Council on Adolescent Development 1995; Davis and Vander Stoep 1997; Swanson, Spencer and Petersen 1998).

A number of reasons for early school leaving have been found through controlled experimental investigations, descriptive and correlational studies (Ekstein and Wolpin 1999; Poole 1978; Tanner, Krahn and Hartnagel 1995). These have shown that socio-economic and individual factors, as well as school characteristics are associated with the probability of leaving school early. The relationship between social class and dropping out is notable with children of poorly educated parents in unskilled and semi-skilled occupations more likely to leave school before graduating. These children have fewer educational advantages and fewer role models that have gone on to higher education. In South Africa adolescent pregnancy is closely associated with interrupted and discontinued education, and is reported in the South African participatory poverty assessment (SA-PPA) as such (May *et al*/1998). Maharaj, Kaufman and Richter (2000) note that in the South African context family constraints and community resources are

important factors in children's education, particularly for Africans. Older children may be required to leave school early to support other children in the household, while the education level of the household head and the number of children living in the household also have an important influence on current enrollment.

Yet while income and affluence are mentioned as factors in early school drop-out, the specific constraints imposed by poverty and the effects these have on adolescents do not seem to be fully recognized. This article is concerned with understanding whether poverty, specifically shocks (such as the death of a household member or the loss of income to a household), can be ascribed as noteworthy reasons for drop-out in the South African context. Shocks can be distinguished from long-term trends, as being unexpected crisis events that may threaten the survival of households, and trigger a decline in well-being (World Bank 2000).

A number of research questions are therefore raised. Are adolescents in poor households particularly affected by livelihood shocks? Are they unintended victims of households coping strategies that force them to leave school, or alternatively, do households attempt to invest in the future of their children recognizing them as their most important asset and their pathway out of poverty? Data from the Study of Transitions to Adulthood among Adolescents in Durban, South Africa allows us to investigate these issues and opens up an analysis of the generational dimensions of poverty.¹

The theoretical basis for this analysis is substantiated in the following section by introducing the asset-vulnerability framework developed by Moser (1996) and others. In the light of this, the impact of shocks at the household and adolescent levels is discussed with a specific focus on the likely unequal effects of these shocks on female adolescents. Evidence against a poverty-based theory of drop-out is then put forward. In the section that follows the data source and methodology employed is outlined. Initially various characteristics of sample households is probed, as well as the experience of shocks in these households. Next, the coping strategies used to manage these shocks at the household level is assessed. From the individual perspective an attempt is made to look at the influence of poverty and shocks through two separate definitions of school drop-out. Following this, the circumstances of households that contain drop-outs is probed with an emphasis on shocked households containing drop-outs created by the shocks. Multivariate techniques are used to understand which household factors result in adolescents dropping out of school, particularly as a result of shocks. To end, conclusions and appropriate policy recommendations are drawn.

Toward a Poverty-Based Theory of Drop-out

Asset-Vulnerability Framework

Income and consumption approaches to poverty analysis have been criticized for their limited ability to account for complex external factors which affect the poor, and their responses to economic difficulty (Moser 1998); as well as the fact that they obscure

other important aspects of deprivation and their causes (Satterthwaite 1997). Detailed case studies on urban poverty, including one by Moser (1996), reveal the complexity of the processes that underlie impoverishment in urban areas and the need to account for something more than income or absolute poverty. While insecurity is defined as the exposure to risk, vulnerability is the resulting possibility of a decline in wellbeing of individuals, households and communities in the context of a changing environment (Moser 1996; World Bank 2000). This concept captures processes of change as people move in and out of poverty (Moser 1998). The World Bank (2000: 140) notes that transitory poverty is a large part of total poverty in many settings, and in many countries this group is larger than those that are chronically poor. Roberts (2000) uses the Kwazulu-Natal Income Dynamics Survey (KIDS) and finds that this holds true for South Africa as well.

Vulnerability is useful in analyzing livelihood security which includes exposure to risks, shocks and stress (Moser 1998). Poor people are among the most vulnerable in society because they are the most exposed to a variety of risks. Their low income means that they are less able to save and accumulate assets which in turn restricts their ability to deal with a crisis when it occurs. Therefore, the asset-vulnerability framework goes beyond a static measurement of the poor and models a household's vulnerability as a function of the number, diversity and value of its assets.² As the number, size and diversity of a person or household's collection of assets increases, so does the capacity to protect against external shocks; and conversely, as an asset portfolio is reduced, a person or household's insecurity increases (Devereux 1999; Moser 1998). However, Carter and May (1999) point to the fact that the poor are poor not only because they

have few assets but also because they are constrained in their ability to effectively accumulate, protect and utilize the assets that they do have, including human capital. A related finding by Jensen and Nielsen (1997, as cited in Grootaert and Patrinos 1999: 6) is that ownership of assets – human, physical and financial savings – leads to a significantly higher probability of school attendance. When such assets are not present it is difficult for a household to protect itself against external shocks, which in turn increases the likelihood that children are forced to leave school as part of a household coping strategy.

Shocks, Their Household Effects and Coping Strategies

Shocks can be classified by their nature and by the level at which they occur. This article focuses on economic and health shocks that affect an individual or household. Households employ a range of coping strategies (or collection of responses to a negative shock) to minimize the impact of shocks they experience and the risk to the household.³ Ultimately these responses seek to maintain the household as a viable social and economic entity (Stewart 1998).

Households may use a number of separate coping strategies in parallel, each of which is followed with greater intensity and at increasing cost or irreversibility as conditions deteriorate (Devereux 1999). The choice of strategy depends on the cause of the shock, the type of livelihood system, individual household criteria (such as household size or the age of household members), internal life-cycle factors, and income (Moser

1998; Stewart 1998). According to Corbett (1988), strategies that have little long-term cost are adopted first, while strategies with substantial long-term cost, that are difficult to reverse, are adopted later (Devereux 1999).

Different household assets play different roles in the coping process (Davies 1993). Actions undertaken by individuals include cashing in insurance, using savings or selling assets, borrowing, and utilizing support networks for transfers or loans. If these measures are insufficient households may increase their labour supply involving the use of more members working more hours. If this too is insufficient households may be forced to reduce consumption and possibly go hungry. Because the poor own few physical assets that can be sold in times of crisis, they are more likely to increase their labour supply, often drawing on women and children (World Bank 2000).

Shocks and Their Impact on Adolescents

In a crisis situation, adolescents are forced to divide their time and energy between activities that contribute to household income and their own education resulting in considerable tension. One author (Howell 1995) notes that household decision-makers in economic hardship are increasingly making difficult choices about basic needs which have a crucial impact on the immediate and future well-being of children. Roe (1992, as cited in Devereux 1999: 34) describes children as an "important link in the survival mechanism chain" for the low-income urban dweller. As the household matures children move from being net consumers to net producers, yet the pace of this natural transition

process may be rapidly increased when a shock occurs (Devereux 1999). In developing countries, decision makers in poor households are often compelled by economic circumstances to rely heavily on adolescents to contribute to household welfare through employment in the labour force or by undertaking household tasks so that adults are able to spend more time earning. Each household allocates the time of its children to whatever activities are perceived to have the highest return. Supply factors at the household level such as the age and sex of the child, household size, and education and employment status of the parents all play a role in this process (Grootaert and Patrinos 1999).

According to the World Bank (2000), the poorest households make every attempt to avoid a drop in income that could push them below the survival point, even if it means using the labour of their children. Grootaert and Patrinos (1999: 6) cite several analysts – Mendellevich (1979), Cain and Mozumder (1980), and Grootaert and Kanbur (1995) – who have highlighted the child labour decision as part of the household's risk management strategy. When a crisis occurs and households are not able to borrow, when adult unemployment is high or wages low, children may be pulled out of school and sent to work. In the South African Poverty and Inequality Report (PIR) it is noted that children are not continuously parented or schooled, and that they are frequently moved around due to crisis or as a coping strategy for poverty with the result that they may be kept out of school to help at home (May 1998). Moreover, Moser (1996) records an increasing reliance on child labour among poor households as one of a number of household strategies for mobilizing assets in response to changes in economic circumstances. Boys were found to be more likely to earn income and girls to

assist with childcare, which releases other household members to work. Interestingly, this strategy is aimed at reducing vulnerability rather than keeping households out of poverty, and children's earnings often complement rather than substitute male income in the household.

In an analysis of household strategies to cope with the economic costs of illness, the reallocation of tasks among household members was the most frequently chosen strategy to cope with anticipated production losses (Sauerborn, Adams and Hien 1996). However, it was found that coping behaviour jeopardized the household's asset base, with household members emerging from a period of illness poorer and more vulnerable. The neglect of activities such as education was found to have a negative effect on household welfare in the long run. In this light the effect of the HIV/AIDS epidemic on the household is stark. Although few studies have examined the impact of AIDS at the household level, a Ugandan study has shown that death from AIDS is associated with reduced schooling for children (Chipfakacha 1999). It has been noted that in South Africa an increasing number of children are suffering from an inability to attend school linked to the rising incidence of HIV/AIDS and unemployment (Streek 2001). These choices have profound implications for the future viability of households as economic and human development prospects are compromised in exchange for short-term benefit (Devereux 1999), increasing the risk that poverty is perpetuated from one generation to the next (Moser 1996). Ultimately the more negative consequences are borne by a future household in which the adolescent plays a decision-making role.

Gendered Effects of Shocks on Adolescents

It is widely understood that individual household members have different access to, use of, and control over resources, and that within a household poverty may occur to a varying degree with women and girls usually most vulnerable due to their lack of power and their youth (Dwyer and Bruce 1988; Wolf 1990). Because of different opportunity costs associated with investing in boys and girls, household decision-makers may allocate food, provide health care, and invest in education differently according to the sex of their children (Kimmel and Rudolph 1998). Consequently, a shock that effects the household as a whole may have different effects on different household members (Feldman 1992; World Bank 2000). Inequality based on gender and age lead to gender-specific differences in the ability to cope with economic difficulties which has important implications for wellbeing and the ability to take advantage of new opportunities (Moser 1996; 1998). Hence, a coping strategy that works for some household members may disadvantage others.

While evidence on gender bias in response to shocks is mixed, according to the World Bank (2000: 145) studies have found that women tend to suffer more from negative shocks than men. However, this evidence is mainly from South Asia and it is not known whether similar effects occur elsewhere. The coping strategy that is of interest here involves children leaving school as part of a household response to a shock. Findings from the SA-PPA reveal that in the event of a financial crisis girls may be more at risk of being taken out of school than boys. Educating girls is thought to be less important to the household because girls eventually marry and leave the household (May *et al*/1998).

Evidence Against a Poverty-Based Theory of Drop-out

While there is substantial evidence behind a poverty-based theory of adolescent drop-out, there is also a literature supporting the alternative hypothesis that poor households regard their children's education as an important asset to defend and consequently avoid withdrawing their children from school under shock conditions.

Strikingly, in every part of the world participants in the 'Voices of the Poor' study conducted by the World Bank (2000) mention child labour as an undesirable coping mechanism. This suggests that some vulnerable households may balance their risk against the maintenance of assets which allow for greater resilience in the future, and if faced with the same crises may choose to keep their children in school rather than send them out to work. Although these households are poorer in terms of income, in the long run this strategy reduces vulnerability through consolidating human capital as an asset. In her urban study Moser (1996) found that children who worked did not necessarily drop out of school. Further, in an analysis of the educational attainment and contributions to family welfare of adolescents in a rural area of the Philippines, Bouis (1998) finds that most parents do not believe that children should be taken out of school in order to work for pay. As an alternative, other household members may be called upon to make sacrifices so that adolescents may continue in school education. This is in line with findings in the SA-PPA which indicate that among both the rural and urban poor education is consistently ranked as the highest priority and recognized as the most effective route out of poverty – and therefore often protected at great cost. Lack

of education is held responsible for low wages, unemployment and crime while a good education is seen as a means to a better life. Education substantially increases earnings per unit of time, the principal asset of the poor (May *et al*/1998).

Financial assistance, particularly in the form of school fees, is a frequently mentioned form of support offered by social and kin networks in the South African context, and gaining access to education is seen as a way in which the household as a whole can benefit. A quote from a participant in the SA-PPA highlights this claim: "if you go to school, you can get food for the family" (May *et al*/1998: 112). Perhaps the key to explaining this alternative perspective is encapsulated in Davies' (1993) observation that coping strategies are primarily concerned with ensuring success, rather than preventing failure. From this view, preserving human capital contributes to long-term success through the development of growth linkages.

Recent work (Gaskell 1993) also recognizes the resistance of young people to domination and/or tradition. From this perspective, adolescents are seen as active participants in making 'sense' and making choices for themselves. In a similar vein, the SA-PPA notes that household actions often include negotiations for rights, the strategic use of power, and attempts to gain control over income generation, and children within the household are often involved in such adaptive behaviour (May *et al*/1998). Accordingly, during periods of shock, adolescents may resist pressure to leave school and instead make every attempt to ensure that they do not drop-out in order to guarantee their own future wellbeing.

While the poverty-based theory of drop-out emphasizes that the effects of shocks within the household are unequally distributed between the sexes, and that more girls than boys will drop out of school as a result of poverty and shocks, there is evidence to the contrary. The United Nations Development Fund for Women (UNDFW 2000) notes that while the most serious gender gaps in secondary education enrolment are found in Sub-Saharan Africa, South Africa is one of five countries out of the 34 listed where the relative disadvantage of girls has been eliminated, and where there is actually a gender gap favouring girls.⁴ Lloyd, Kaufman and Hewett (2000: 496) show that in 1993 96% of girls, compared with 93% of boys between the ages of 15 and 19 years had completed four or more years of schooling. In addition, in 1997 the absolute level of girls' net enrolment in secondary school in South Africa was extremely high at 97% (UNDFW 2000: 69). Further, among the poorer quintiles, girls had higher primary and secondary enrolment rates than boys (Key Indicators of Poverty in South Africa 1995).

Lloyd and her colleagues speculate that when parents turn to their children for contributions to the household in times of economic difficulty, boys may be more able than girls to make such contributions in the context of strong cultural constraints and differential treatment of girls. Indeed, recent studies in more urbanized countries suggest that prevalent cultural ideas of masculinity are encouraging boys to drop out at higher rates (UNDFW 2000: 67). In the South African context young women tend to stay in school longer on average because matriculation opens the way to nursing and teaching, two of the few careers which are seen to be open to women, while young men may experience more pressure to look for work sooner (May 1998).

Data and Methods

Transitions to Adulthood among Adolescents in Durban, South Africa, is a study of adolescent South Africans. One of the primary objectives of the study is to document patterns and trends in the incidence and timing of key events during the adolescent's transition to adulthood, of which leaving school is one. The focus of the Transitions study is not on the issue of household shocks, and therefore the data is not designed to study this issue. However because rudimentary shock data has been gathered, it provides a unique opportunity to look at how adolescents are affected by poverty.

This paper is based on the first round of data which was collected in September and October 1999, in the Durban Metropolitan- and Mtunzini Magisterial Districts, two administrative areas within the province of Kwazulu-Natal. These administrative areas were purposively selected to ensure a variety of urban, transitional and rural regions within the province. The urban group comprised of the urban areas of both districts makes up the majority (77%) of the sample, compared with the rural group (23%) which is only from the Mtunzini Magisterial District.

A modified multi-stage cluster sample was drawn. 120 enumeration areas (EAs) were randomly selected from a sampling frame of all EAs in the two districts. A total of 2007 structured interviews were conducted with households that contained adolescents between the ages of 14 and 22 years in 118 of the selected segments.⁵ Additionally, 3096 individual interviews were completed with adolescents that fell within this age

group within these households. Of the 3096 individual interviews, 3043 can be linked to 1945 corresponding households. All of the analysis presented here is based on this fully linked sample. Unlinked interviews have been excluded from this analysis.

Socio-Economic and Demographic Characteristics of Households in Durban

The households and adolescents included in this study enable analyses at both the household- and individual levels.⁶ Seventy-six percent of the adolescents are African, 16 percent Indian, six percent white and two percent coloured.⁷ Fifty-five percent of the adolescents are female, while the average age of the adolescents is approximately 17 years (mean = 17.46).⁸ Seventy-three percent of the adolescents are currently in school.

Total household expenditure is used to calculate whether a household is poor or ultra-poor.⁹ Given the limitations of poverty measures in general, it seems reasonable to use this measure since some method of defining the poor and the non-poor is required for this study. Households that have a per capita expenditure of less than R250 a month have been defined as poor, based on the poverty line used in the recent Stats SA (2000) report on poverty. Following Carter and May (1999), lower poverty lines which are half the amount of the upper poverty lines are used.¹⁰ Accordingly, ultra-poor households live on less than R125 per capita per month. Statistics have been computed for per capita poor households (n=1248) and per capita ultra-poor households (n=759). Sixty-four percent of households are poor which is reasonably close to the poverty rate of 50

percent for Kwazulu-Natal, based on imputed monthly expenditure from the 1996 South African census (Stats SA 2000). The difference between these two statistics could be explained by the differences in methodologies used to calculate the measures. In the Transitions study there are a limited number of variables and categories of expenditure which could easily contribute to the difference.

Table one allows us to assess the relative wellbeing of this sample in terms of social and economic indicators. The results compare favourably with other studies (May, Woolard and Klasen 2000). Poor households, and particularly those that are ultra-poor, have strikingly less access to services, shelter, education and employment than non-poor households. These households are more likely to be large, female headed and African.

Table one about here

The Experience of Shocks in Households in Durban

On the whole a substantial proportion (41%) of all households in this sample have experienced some type of shock. These shocks include demographic shocks, which are either the death of a household member (18% of households), the injury or illness of a household member (15%), or abandonment or divorce (2%). Economic shocks are the loss of a job of a household member (14%), the loss of a remittance to a household (4%), and the loss of a government grant to a household (2%). Asset-livelihood shocks

are either theft, fire or the destruction of property (9%), business failure or bankruptcy (3%), or the loss of crops or livestock (2%).

Demographic shocks occur most often (28% of households), with the death of a household member the most frequently occurring of these. In the SA-PPA the death of family members surfaced as one of the more severe shocks, capable of triggering vulnerable households into poverty. If one considers combinations of shocks, it is this shock that is experienced most often with other types of shocks. The experience of shocks is, however, slightly different to the results recorded in the SA-PPA. Where the loss of employment was the most commonly occurring shock in many of these studies, in this analysis it is the third most common shock. However, the types of shocks that occur most often among this sample of households are the same as those noted in the SA-PPA, namely death, illness, loss of employment and fire (May *et al* 1998). Amis (1995: 151) describes two studies in which the illness of a major income earner has been highlighted as having the greatest impact on the household in terms of frequency and magnitude. A considerable proportion of the households under review experienced this type of shock, which could be attributable to a large degree to the high incidence of HIV/AIDS in Kwazulu-Natal, the highest in South Africa.

Furthermore, the poor are more likely to experience shocks than the non-poor, with 46% of ultra-poor households in the sample having experienced a shock in the last 24 months, compared to 44% of the poor and 36% of the non-poor. Further, in table two it is clear that households that are poorer experience significantly more of each type of shock than those that are not poor, apart from economic shocks, which seem to strike

those more often that are further down than other households. This data supports findings that the poor are most exposed to a wide array of risk, and that living with risk is part of life for poor people (World Bank 2000: 135).

Table two about here

Moreover, poor and ultra-poor households are significantly more likely to experience more shocks than those households that are not poor. Thirteen percent of poor households have experienced two shocks, while 5% have experienced three shocks – markedly higher than the same figures for those households that are not poor (9% and 3% respectively). This is noteworthy since, according to the World Bank (2000) the cumulation of different shocks is a source of significant stress for households. Consumption smoothing is more difficult with repeated shocks, as households may have depleted their assets in coping with the initial shock, making it even more challenging to cope with subsequent shocks.

Coping Strategies Used in Response to Shocks

Broadly, the majority of responses to shocks at a household level can be categorized as economic (41%). Either households sell their assets or use their savings, borrow money from a money lender or a stokvel, or use insurance. Nine percent of households have responded to a shock by drawing on their social capital and using the help of others.

Further, poor and ultra-poor households listed a coping strategy to demographic shocks significantly more than those that are non-poor.¹¹ In addition, the poor and ultra-poor are not more likely than the non-poor to respond to shocks with economic means. However, poor households are significantly more likely than those that are not poor to respond to economic shocks with the help of others. Moreover, ultra-poor households are significantly more likely than those that are not ultra-poor to respond to demographic shocks with the help of others. From this perspective it would seem that social capital is well accessible to the poor, despite claims of continuing social fragmentation in urban areas (Moser 1998).

Only 2% of households noted that they had removed one or more of their children from school as a response to shocks.¹² Therefore from the level of the household, this coping response would appear to be extremely infrequently used, and would from the outset seem to indicate that adolescents are not frequently withdrawn from school as a result of shocks.

Adolescent School Drop-out

The type of analysis conducted at the household level is not entirely satisfactory for the purposes of investigating whether adolescents leave school as part of a household coping strategy. Information gleaned at a household level about an issue that occurs at the individual level might not be accurate.¹³ Therefore, in the following sections the focus will shift to the adolescent level, and the issue will be looked at in terms of early school leaving.¹⁴ In order to do so two definitions of drop-out will be used.

Permanent Drop-out

In the first definition, permanent drop-out is defined as those adolescents that have not completed grade 12 and were not in school at the time of the interview.¹⁵ Eight percent of the sample have left school because they have matriculated.¹⁶ Twenty eight percent of adolescents have dropped out permanently.¹⁷ The remaining 72% of adolescents are either in school or have completed grade 12. Further, 56% of these drop-outs are female, while 81% are African. In almost two-thirds (64%) of households there are no adolescents who have dropped out permanently. In 9% of households half of the adolescents are permanent drop-outs, and in a fifth (21%) of households all adolescents have dropped out permanently.

As table three shows, more of the poor and the ultra-poor than the non-poor drop-out permanently. However, it is only adolescents in ultra-poor households who are significantly more likely to drop-out than those in households that are not ultra-poor. There is also no significant difference between shock and non-shock households if one considers permanent drop-out. Twenty-seven percent of those adolescents who are in households that experience shocks drop-out, while 28% of those in non-shock households drop-out. Therefore, drop-outs defined in this way are more likely to come from households that are very poor, but not from households that experience shocks.

Table three about here

There are also no notable sex differences with regard to permanent drop-out: 27% of males and 29% of females are permanent drop-outs. If one looks at the reasons given

for leaving school before matriculating, a number of gender differences become evident. About a third (34%) of females were found to have left school because they fell pregnant. Conversely, 19% of males, as opposed to 3% of females, reported that they dropped out because they needed to work. While there is a sex difference in leaving school to perform domestic duties it is much smaller than the poverty-based theory of drop-out would suggest – only 3% of females as opposed to 1% of males reported that they left school for this purpose.

Overall, however, the cost of school fees is the most central reason for drop-out among both sexes, with 29% of males and 31% of females leaving for this reason. This ties in with findings recorded in the SA-PPA (May *et al*/1998: 58) that emphasize the costs of education as being a significant barrier in accessing education. A national survey of 15 to 30 year olds who had left school earlier than they would have liked found that 57% of young men and 46% of young women claimed that they had been forced to abandon their education for financial reasons (May 1998: 101).

Transitory Drop-out

Davies (1993) notes that if coping strategies are a good indicator of unusual stress, they are used when circumstances demand, and then abandoned once recovery is underway. Also, the relative priority that households give to current consumption and generating income in the future may shift at different points in the household coping strategy (Corbett 1988). It is therefore necessary to attempt a second definition for drop-out

that will take into consideration changes in coping that occur at a household level. Transitory drop-out occurs when adolescents leave school temporarily and later return. This may occur more than once, and the child may eventually not return to school at all. This form of drop-out is important as it might most commonly be seen among shock households.

Since all shocks occurred within 24 months prior to the date of interview, it was necessary to define the transitory drop-out episode as having occurred within the same period, in order to be able to link shock and drop-out information. Transitory drop-outs were defined as either (1) not having completed one of grades one to 12 at some time during the last two years or (2) not being in one of grades one to 12, after completing the previous year, at some time during the past two years.¹⁸

In the Transitions study, the full educational history of adolescents has been recorded in a calendar format. Each respondent was asked to state the grade he or she was attending at each age. In the calendar all full years of education are noted, as well as repeated grades, full and partial years of school absence, and reason for any interruption. Twenty reasons for discontinuing are provided, and among these there are six reasons that could indicate a response to a shock. These reasons include leaving school because the adolescent needed to work, could not pay school fees, was removed by their family, or had to care for either a sick relative, an older relative, or children. The assumption is that if the household experienced a shock, and if the adolescent skipped school for one of these reasons within the last 24 months, it is likely that this

particular adolescent dropped out of school as a result of, and in response to the household shock that occurred.

Attention must be drawn to the fact that while this is the broad assumption that is made in this paper, differences in options and choices occur at a number of levels, including that of the individual and household. Davies (1993) argues with regard to food security monitoring, that if a certain activity is identified as being a coping strategy the assumption is that all people who take up that activity do so in order to cope with food stress. However, there is no way of distinguishing between someone who is choosing to go hungry and someone who has no choice in going hungry, since they have no food. In the same way, there is no way of knowing if the assumption made in this article, about dropping out of school as a result of shocks, will hold true or if the adolescent has dropped out for reasons unrelated to the household shock, despite giving a shock reason for doing so. As Maluccio (2001) cautions, it is extremely difficult to determine the extent to which shocks are exogenous to other factors. It is not possible with this data to ascertain whether the shock is driving drop-out in those households where shocks occur, or whether other factors are responsible, or equally, whether other factors are obscuring the impact of shocks.

It was found that 11% of adolescents (325) are transitory drop-outs. Further, while 84% of households contain no transitory drop-outs, in 5% of households half of the adolescents are transitory drop-outs, and in 7% of households all adolescents in the household can be defined as transitory drop-outs. With regard to reasons given for drop-out over the last two years, 40% of these adolescent drop-outs have given one or

more shock reasons for dropping out. Almost half (49%) have given one or more non-shock reasons.¹⁹ Finally, 11% have given both a shock and a non-shock reason for dropping out.

Shifting focus to the likelihood among different groups of using shock reasons for drop-out, it was found that although more girls (46%) than boys (33%) give shock reasons for dropping out, the difference is not significant. Table four indicates that while more of those transitory drop-out adolescents that are poor, than those that are non-poor, give shock reasons for dropping out, the difference is not significant. The difference between ultra-poor and poor transitory drop-out adolescents is even less in this regard. Interestingly, 42% of transitory drop-outs in shock households give shock reasons for dropping out and 39% of transitory drop-outs in non-shock households give shock reasons for dropping out, yet this difference too is not significant.

Table four place here

Turning to the central focus of this paper, it was found that 18% of transitory drop-outs had left school directly as a result of one or more shocks. In other words, this group was constituted of adolescents who came from households in which a shock had occurred, and these adolescents gave a shock-related explanation for dropping out of school. Almost two-thirds (64%) of these 47 shock drop-outs are from poor households, while 17% are from ultra-poor households. A further 64% of these shock drop-outs are female and 92% are African.

If shock drop-out households are compared to other types of drop-out households or households with adolescents of school going age that contain no drop-outs, as in table five, a number of interesting differences emerge. While no clear cut conclusions can be drawn from this table, in the light of the poverty-based theory of drop-out it seems that shock drop-out households are in fact more likely to be poor than other drop-out households. However, any conclusions made must be cautioned by the relatively small sample size of shock drop-out households.

Table 5 about here

A Profile of Factors Predicting Permanent Drop-out

The survey command in STATA was used to run two logistic regression models with permanent drop-out as the dependent variable. Since shocks were included in the first model, it was necessary to exclude those variables that are endogenous to shocks.²⁰ A number of variables are significant, but the sex and age of adolescents, as well as one of the race categories (coloured) are all significant at the 0.01 level. From the odds ratio it can be seen that male adolescents are 35% less likely to permanently drop-out than females. Further, adolescents in older age groups (17 to 19 years and 20 to 22 years) are more than twice as likely to drop-out than adolescents in the 14 to 16 year age group. In addition, living in a shack doubles the likelihood of permanent drop-out, while adolescents in households without flush toilets are also more likely to drop-out than those that live in households that have flush toilets. The race finding requires an

explanation. Africans are as likely not to drop-out as whites, while Indians and coloureds are more likely than Africans to drop-out. This could be due to the fact that African adolescents tend to stay in school longer, often repeating grades. Of particular interest is the fact that those experiencing demographic shocks, or a combination of economic and asset-livelihood shocks are more likely to drop-out than those who do not experience these shocks.²¹

Table 6 place here

In the second logistic regression model shown in table seven, shocks are excluded and variables that are endogenous to shocks are included. It can be seen that many of the same variables that were present and significant in the first model are still significant. Therefore, being female, falling within the older age categories, living in a shack and living in a dwelling that does not have a flush toilet are all significant. Adolescents that fall within these categories have a greater likelihood of permanently dropping out relative to the respective reference groups. Coloured adolescents are again more likely to drop-out relative to Africans, although this is not the case with regard to Indians and whites. On the whole the point estimates of the effect seem to be very similar to those evidenced in the first model.

Table 7 about here

Discussion

Adolescents, 10 to 19 years of age, make up 20% of the global population (Bouis 1998: 1) and 22% of South Africa's population (Stats SA 1996). Moreover, 85% of adolescents reside in developing countries (Bouis 1998: 1). Since almost a quarter of the population of the developing world still live in extreme poverty (Grinspun 2001: iii), it would be expected that a sizeable portion of these adolescents would be found within households that are poor. The aim of this paper has been to ascertain whether adolescents in poor households are specifically affected by livelihood shocks, and have to leave school as part of a household coping strategy. This hypothesis has been based on literature which has documented the negative effects of shocks among poor households and the adolescents within them. Yet evidence also exists to support an alternate view, that is that the education of children is highly valued as an asset, and may be protected at great cost.

This analysis seems to confirm the idea that poverty is associated with vulnerability, since poor households seem to experience shocks more often, and experience more shocks than households that are not poor. However, removing children from school is not reported as a response to shocks, and therefore at a household level it does not seem that it is being used as a strategy to cope. However, the ultra-poor are more likely to drop-out permanently than those that are not ultra-poor, and poverty is thus associated with more drop-outs that are permanent. This is not confirmed with regard to transitory drop-outs or within the logit model that includes poverty as a variable,

although some variables that indicate standard of living are shown to play a role in drop-out.

While drop-out is shown to be associated with certain shocks in the various cross-tabulations that were run, in the logit model that includes shocks and excludes variables that are endogenous to shocks, demographic shocks and the combination of economic- and asset-livelihood shocks are shown to be responsible for causing permanent drop-out. Sex is not identified in the cross-tabulations as being a cause of drop-out, but in both logit models being female is shown to be strongly related to permanent drop-out. However, it does not seem that this is attributable to the poverty-based theory of drop-out. Teenage pregnancy which is identified as a major cause of leaving school before matriculating seems to play a strong role.

In all, it seems that the poverty-based theory of drop-out does not fully account for early school leaving in this sample. The indication would seem to be that poor households attempt to defend the future of their children as their most important asset and their pathway out of poverty, and therefore make every attempt to see that their children remain in school despite the difficult circumstances that shocks bring about. Yet while these children may still be in school, the challenges they face at home in an environment of vulnerability and coping responses is likely to compromise their ability to function to their full potential at school and at home. How then is it possible to support these poor households in their efforts to ensure that their children remain in school, and in so doing develop human capital, which could assist the household to move out of poverty in the future?

Haddad and Zeller (1997) indicate that there is widespread consensus on the importance of social welfare programmes and safety nets as a key component of a public policy strategy for the reduction of poverty. Among the policy measures recommended by the PIR to eradicate poverty and inequality in South Africa, are protective measures which provide relief from deprivation. In the report it is noted that more targeted measures are required if the benefits accruing to the poor are to be increased, and that specific targeted interventions may be required to deal with particular social or geographic dimensions of urban poverty in South Africa (May 1998). Streek (2001: 31) describes the results of a recent study which indicates that compared to other countries with similar levels of income, South Africa fares badly in the delivery of basic child health, nutrition and education rights. Indeed in the PIR it is acknowledged that children are in many cases not well nourished, and that some even receive no support at all as unemployed parents often have no way of obtaining the basic minimum resources necessary (May 1998).

In the PIR it is recommended that the urban poor be assisted by programmes in human development and infrastructure service delivery that augment their assets, expand their existing coping or household management strategies, or facilitate new opportunities (May 1998). Moser (1996) emphasizes the importance of ensuring that interventions complement and strengthen, rather than substitute for people's own initiatives. Therefore one of the most obvious interventions in the light of this collective information is school feeding schemes, which would have the effect of improving children's health, and lead to an increase in concentration levels and related improvements in school

performance, as well as a greater likelihood of school attendance. Such a strategy would also provide a way for the state to engage in the provision of a workable means of direct income redistribution.

One of the lead projects announced at the opening of the first democratic parliament in South Africa was the 'Primary School Nutrition Project' (PSNP). This programme was criticized for its expedient introduction without clear planning. At the time no effective evaluation of which children most needed the programme was conducted, with the result that all children were fed. While the project has been considered a success in some provinces, in others it has variously been criticized for corruption, mismanagement, lack of capacity and difficulties at the delivery level. Yet there is agreement that the programme has provided an essential social service, and this is evidenced in lowered absenteeism, increased exam pass rates, and a marked difference in the illness rate (Edmunds 1997; Sidley and Amner 1995; Smith 1997). Clearly if a similar programme were to be introduced, it would need to be coherently located in the normal structures of government in order to provide it with an infrastructure of support to secure its future, and communities would need to be empowered to take on a watchdog role (Kallaway 1996; Smith 1997). More research is needed if this intervention is to be practically considered.

Finally, how do the findings shape how we regard children that are not in schools? A clear shortcoming of this study is that the sample frame of households excludes the homeless. It would seem that their not being in school would not necessarily be due to the poverty of the household, and could instead be ascribed to a number of other

factors, including domestic violence, the break up of family life, commercial exploitation or substance abuse. Alternately, children who are not at school could be disabled or have chronic diseases. According to Robinson and Sadan (1999: 51), almost 70% of children with disabilities are presently out of school, which stems from a widespread attitude that children with disabilities should attend special classes instead of being integrated within schools in their areas. Clearly these categories of vulnerable children in difficult circumstances also need to receive attention through specifically targeted programmes (Robinson and Sadan 1999).

Endnotes

¹ This study has taken place in the third largest city in South Africa, and as an urban study it has relevance for a number of reasons. Urban population growth in South Africa has been occurring at a faster rate than overall population growth (Pick and Obermeyer 1996), and according to the most recent census, 54% of the country's population is classified as urban (Stats SA 1996). In addition, on a global scale the number of urban poor is increasing in absolute terms (de Haan 1997), and in the PIR urban poverty is recognized as a policy problem that is growing in scale and visibility (May 1998).

² Moser (1996) has developed a classification of assets, which is identified in terms of an 'asset-vulnerability framework'. Various types of vulnerability can be associated with each asset. These assets include labour, human capital, productive assets, household relations and social capital.

³ While the term coping strategy was given new meaning in the food security literature (Moser 1998), the use of the term has proved to be problematic since it implies that the household does in fact cope, whereas many households do not actually cope in these circumstances. Coping strategies may even become less effective over time and bad for long term development (Davies 1996). Devereux (1999) also warns that the term overstates the resilience of the poor.

⁴ UNDFW (2000) caution that enrolment ratios may give an over-optimistic view of the degree to which young people, especially girls, are educated. Enrolment data show how many students enrol, but do not indicate how many attend or the extent to which drop-out occurs.

⁵ While no age categories can adequately account for the differing experience of adolescence, in this study adolescents aged 14 to 22 have been sampled, since between these ages there are various age categories which capture adolescents at different stages in their transition to adulthood (Transitions to Adulthood Study Team 2000).

⁶ Household membership defined as those individuals who (1) live under the same 'roof' or within the same compound/homestead/stand; (2) when they are together share food from a common

source; and (3) contribute to or share in a common resource pool (Transitions to Adulthood Study Team 2000).

⁷ The same racial classification used by Stats SA (2000) has been adopted here.

⁸ The slight under-representation of males in this sample reflects the difficulty interviewers had in finding eligible male adolescents at home in the selected households.

⁹ In order to obtain this figure the household food expenditure, non-food expenditure and expenditure on infrequent items was totalled. Using total monthly expenditures rather than measured income is widely noted as a preferable measure of household material well-being, since income is regarded as a poor proxy for standard of living (Carter and May 1999).

¹⁰ The World Bank (1990) notes that it is good practice to identify both an 'upper' and a 'lower' poverty line, which indicates the boundary between the poor and the very poor.

¹² Those instances in which a household listed its coping response as taking children out of school, were checked manually to see whether pregnancy was a factor that featured in their dropping out. An analysis of the education history of the eighteen relevant adolescents revealed that falling pregnant was not responsible for the early school drop-out that occurred in households that recorded this as a response to a shock.

¹³ Interviewers were instructed to try to find the responsible adult in the household and were told not to speak to anyone under the age of 16.

¹⁴ Apart from table four, in which aggregated household data has been used.

¹⁵ Alternatively, those adolescents who do not fit within the permanent drop-out category have either completed grade 12, possibly moving onto tertiary education or work, or were in school at the time of the interview.

¹⁶ Schooling in South Africa is free and compulsory until Grade 10, but since educational opportunities for adolescents include staying in school through matriculation, this has been regarded as an important achievement, the lack of which jeopardizes future economic and human development. It is important to note that while leaving school before matriculating has been defined as drop-out, some of these respondents may return to school. This is not likely since more than 70% of school leavers were age 18 or older and may therefore consider themselves beyond secondary school age.

¹⁷ No prediction can be made about what adolescents may do in the future. Data that had been gleaned was simply worked with, as is. As such, some of the adolescents defined as permanent drop-outs may return to school in the future.

¹⁸ Adolescents who do not fall within the transitory drop-out definition did not 'drop-out' of secondary school at all during the past two years.

¹⁹ Either the adolescent was expelled, dropped out because of poor school performance, or because they were pregnant or sick. Other reasons include no accessible school, a bad or poor school, political concerns or violence, boycott of the school, the school closed, or the adolescent's family moved.

²⁰ This includes any variables that could be influenced by a loss of household income or a household member leaving. Therefore any variables that take expenditure into account (per capita expenditure, poor, pension, other grant) are endogenous to economic shocks, while any variables that have to do with the number of household members (number of household members, average age of the household, proportion of the household that is educated, unemployed, unskilled work, informal work, per capita expenditure distribution, per capita poor) are endogenous to demographic shocks.

²¹ Interactions between the shock variables measure the additional non-additive effect of experiencing two shocks simultaneously. Having an economic shock together with an asset-livelihood shock increases the likelihood of dropping out more than just adding the individual effects of those shocks, and the effect is significant.

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TABLE 1 Characteristics of households in Durban (means and percentages)

Household characteristics	Households		
	Non-poor (n=697)	Poor (n=1248)	Ultra poor (n=759)
Mean household expenditure (Rands/month) *	2981.62 (1834.72)	706.89 (455.08)	513.32 (311.55)
Mean per capita expenditure (Rands/month) *	670.39 (437.81)	110.24 (61.65)	68.65 (31.47)
Percentage African	33	95	98
Percentage female headed	32	43	43
Mean years of education (head)	8.5	6.8	6.7
Percentage head employed	70	60	59
Mean household size	4.7	7.0	7.7
Number in household employed	1.7	1.4	1.4
Number in household educated to Gr 10	2.6	2.0	1.9
Percentage permanent house	90	46	37
Percentage internal piped water	87	31	22
Percentage flush toilet	90	36	27
Percentage electricity	96	69	61

* standard deviations in parentheses

TABLE 2 Experience of each type of shock among poor and non-poor households

Type of shock	Households			
	Poor/Non-poor		Ultra poor/Non-Ultra poor	
	Chi Sq.	Sig	Chi Sq.	Sig
Demographic	15.990	0.000**	17.570	0.000**
Economic	2.913	0.088	4.579	0.032*
Asset-Livelihood	12.925	0.000**	10.886	0.001**
All	10.340	0.001**	15.439	0.000**

*significance value ≤ 0.05

**significance value ≤ 0.01

TABLE 3 Likelihood of permanent dropout among poor and non-poor households

Household type	% Dropout	Pearson Chi-Sq.	Sig.
Poor	29	1.650	0.199
Non-Poor	27		
Ultra-poor	32	4.472	0.034*
Non-Ultra-poor	27		

*significance value ≤ 0.05

**significance value ≤ 0.01

TABLE 4 Likelihood of giving shock reasons among among poor and non-poor transitory dropouts

Household type	% Dropout who gave shock reason	Pearson Chi-Sq.	Sig.
Poor	48	5.309	0.70
Non-Poor	34		
Ultra-poor	41	0.073	0.964*
Non-Ultra-poor	41		

*significance value ≤ 0.05

**significance value ≤ 0.01

TABLE 5 Characteristics of dropout and non-dropout households (means and percentages)

Household characteristics	Households			
	Permanent dropout (n=710)	Shock dropout (n=47)*	Non-shock dropout (n=265)*	No dropout** (n=1182)
Household expenditure (Rands/month)	1537.38 (1678.855)	1108.78 (1060.47)	1523.77 (1595.39)	1511.51 (1537.94)
Per capita expenditure (Rands/month)	303.21 (383.73)	208.82 (217.19)	305.47 (365.89)	314.95 (375.67)
African	74	85	72	72
Coloured	3	0	4	2
Indian	17	11	18	19
White	6	4	6	7
Female headed	39	38	38	38
Head employed	63	70	62	64
Years of education (head)	7.1	6.4	7.2	7.8
Household size	6.3	6.9	6.2	6.1
Number of adolescents	1.9	2.3	1.9	1.4
Number in household employed	1.5	1.5	1.5	1.5
Number in household educ to Gr. 8	2.2	2.1	2.2	2.3
Permanent house	61	32	63	62
Piped internal	49	23	49	53
Flush toilet	52	26	52	58
Electricity	77	79	74	80

* while there are 325 transitory dropouts, all except 18 stated reasons for dropping out

** with school going adolescents

TABLE 6 Logistic regression model of permanent drop-out (I) (n=2898)

Drop-out	Odds Ratio	Std. Err.	t	P	95% Confidence Interval	
Female	0.650	0.094	-2.985	0.003***	0.488	0.865
Dem. shock	1.510	0.281	2.212	0.029**	1.044	2.185
Eco. shock	1.036	0.267	0.137	0.891	0.622	1.724
As-Lvhhd shock	0.562	0.204	-1.589	0.115	0.274	1.152
DE shock	0.582	0.309	-1.019	0.311	0.204	1.666
DA shock	0.991	0.420	-0.021	0.983	0.428	2.294
EA shock	1.958	0.666	1.974	0.051*	0.998	3.841
Coloured	2.716	0.776	3.496	0.001***	1.542	4.784
Indian	1.933	0.681	1.869	0.064 ⁺	0.962	3.884
White	0.892	0.310	-0.33	0.742	0.448	1.774
2 nd age group	2.566	0.403	6.008	0.000***	1.881	3.501
3 rd age group	2.185	0.424	4.024	0.000***	1.487	3.209
Female headed	1.218	0.250	0.958	0.340	0.810	1.830
Age head	0.996	0.006	-0.692	0.490	0.984	1.008
Ever attended	0.968	0.345	-0.09	0.928	0.479	1.959
Highest grade	0.990	0.037	-0.265	0.791	0.920	1.066
Educ. grade 10	0.911	0.229	-0.372	0.711	0.554	1.497
Post school	1.328	0.229	1.646	0.103	0.944	1.869
Number rooms	1.047	0.038	1.265	0.209	0.974	1.126
Own home	1.169	0.263	0.692	0.490	0.748	1.826
Traditional house	0.815	0.195	-0.857	0.393	0.508	1.308
Shack	2.013	0.676	2.084	0.039**	1.035	3.916
No flush	1.571	0.426	1.664	0.099*	0.918	2.688
No piped internal	0.935	0.303	-0.208	0.836	0.492	1.775
Electricity	0.929	0.221	-0.311	0.757	0.580	1.488

***=P<=.01 **=P<=.05 *=P<=.1

TABLE 7 Logistic regression model of permanent drop-out (II) (n=2898)

Dropout	OR	Std. Err.	T	P	95% Confidence Interval	
Female	0.650	0.087	-3.207	0.002***	0.498	0.848
Coloured	2.174	0.675	2.503	0.014**	1.176	4.020
Indian	1.649	0.544	1.514	0.133	0.857	3.170
White	0.667	0.278	-0.97	0.334	0.292	1.524
2 nd age group	2.554	0.395	6.061	0.000***	1.880	3.470
3 rd age group	2.213	0.510	3.446	0.001***	1.402	3.494
Female headed	1.329	0.279	1.354	0.178	0.877	2.013
Age of head	0.998	0.007	-0.281	0.779	0.985	1.011
Ever attended schl	1.045	0.378	0.122	0.903	0.510	2.140
Highest grade	0.982	0.040	-0.444	0.658	0.906	1.065
Educ. Grade10	0.855	0.219	-0.609	0.544	0.515	1.422
Post-school	1.269	0.245	1.237	0.219	0.866	1.859
Unemployed	1.180	0.220	0.888	0.376	0.815	1.708
Unskilled work	1.004	0.168	0.022	0.982	0.720	1.398
Informal work	0.660	0.198	-1.389	0.167	0.364	1.194
2 nd quartile educ.	0.667	0.164	-1.648	0.102	0.410	1.085
3 rd quartile educ.	1.115	0.224	0.543	0.588	0.749	1.660
4 th quartile educ.	1.139	0.279	0.531	0.597	0.701	1.851
Total number in hh	0.995	0.029	-0.168	0.867	0.939	1.054
Average age	0.999	0.015	-0.095	0.924	0.969	1.029
2 nd quartile perc. exp.	0.985	0.169	-0.091	0.928	0.701	1.383
3 rd quartile perc. exp.	1.088	0.246	0.374	0.709	0.696	1.703
4 th quart. perc. exp.	1.224	0.365	0.677	0.500	0.678	2.208
Pension	0.923	0.258	-0.288	0.774	0.531	1.605
Other grant	1.104	0.347	0.315	0.754	0.592	2.057
Number of rooms	1.065	0.045	1.480	0.142	0.979	1.158
Own home	1.156	0.240	0.697	0.487	0.766	1.743
Traditional house	0.923	0.236	-0.314	0.754	0.556	1.531
Shack	2.350	0.808	2.486	0.014**	1.190	4.642
No flush toilet	1.760	0.477	2.088	0.039**	1.029	3.010
No piped internal	0.973	0.288	-0.091	0.928	0.542	1.749
Electricity	0.969	0.238	-0.13	0.897	0.595	1.577

***= $P < .01$ **= $P < .05$ *= $P < .1$