



Failing to progress or progressing to fail? Age-for-grade heterogeneity and grade repetition in primary schools in Karonga district, northern Malawi



Bindu S. Sunny^{a,*}, Markus Elze^a, Menard Chihana^b, Levie Gondwe^b,
Amelia C. Crampin^{a,b}, Masoyaona Munkhondya^c, Scotch Kondowe^c, Judith R. Glynn^a

^a London School of Hygiene and Tropical Medicine, UK

^b Karonga Prevention Study (KPS), Chilumba, Malawi

^c District Education Office (DEO), Karonga District, Malawi

ARTICLE INFO

Article history:

Received 12 January 2016

Received in revised form 23 June 2016

Accepted 14 October 2016

Available online 24 November 2016

Keywords:

Repetition

School progression

Africa

Over-age

Under-age

Primary school

Risk factors

ABSTRACT

Timely progression through school is an important measure for school performance, completion and the onset of other life transitions for adolescents. This study examines the risk factors for grade repetition and establishes the extent to which age-for-grade heterogeneity contributes to subsequent grade repetition at early and later stages of school. Using data from a demographic surveillance site in Karonga district, northern Malawi, a cohort of 8174 respondents (ages 5–24 years) in primary school was followed in 2010 and subsequent grade repetition observed in 2011. Grade repetition was more common among those at early (grades 1–3) and later (grades 7–8) stages of school, with little variation by sex. Being under-age or over-age in school has different implications on schooling outcomes, depending on the stage of schooling. After adjusting for other risk factors, boys and girls who were under-age at early stages were at least twice as likely to repeat a grade as those at the official age-for-grade (girls: adjusted OR 2.06 $p < 0.01$; boys: adjusted OR 2.37 $p < 0.01$); while those over-age at early stages were about 30% less likely to repeat (girls: adjusted OR 0.65 $p < 0.01$; boys: adjusted OR 0.72 $p < 0.01$). Being under/over-age at later grades (4–8) was not associated with subsequent repetition but being over-age was associated with dropout. Other risk factors identified that were associated with repetition included both family-level factors (living away from their mother, having young children in the household, lower paternal education) and school-level factors (higher student-teacher ratio, proportion of female teachers and schools without access to water). Reducing direct and indirect costs of schooling for households; and improving school quality and resources at early stages of school may enable timely progression at early stages for greater retention at later stages.

© 2016 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

1. Background

Despite global efforts to universalise education, 124 million children worldwide were out of school in 2013 with a growing proportion (50%) of these children living in Sub-Saharan Africa (UIS/UNESCO, 2015, p. 11). While the introduction of free primary education in Malawi led to a significant increase in school enrolments, only 35% manage to complete primary education (World Bank, 2010). Children who drop out of school are not young

and may leave school for several reasons, including poor school quality, poor performance or when schooling conflicts with transitions to adulthood (Chimombo et al., 2000; Glynn et al., 2010; Grant and Hallman, 2006; Hunt, 2008; Lloyd et al., 2008; Meekers and Ahmed, 1999; Mensch et al., 1999). In Malawi, primary education is for eight years (grades 1–8), with the official age of entry into school being 6 years. This suggests that those who enter on time and progress uninterrupted through each grade could complete primary school by the age of 14. However, due to late entry, frequent disruptions and repetitions, children are getting over-age for their grade and may take up to 23 student years to complete eight years of primary education (World Bank, 2010). Age-for-grade heterogeneity (relative age or age “distortion” (Psacharopoulos and Nguyen, 1987) is characterised by children of

* Corresponding author at: London School of Hygiene and Tropical Medicine, Keppel St, London WC1E 7HT, UK.

E-mail addresses: bindu.sunny@lshtm.ac.uk, bsunny@gmail.com (B.S. Sunny).

various ages studying in the same grade in school. Delays in progression result in age heterogeneity within a class, but it is unclear what the extent of age heterogeneity is, and whether being over-age/under-age has an effect on subsequent grade repetition, potentially leading to a vicious circle with students falling further behind the official age-for-grade.

Repetition is an indicator of progress made in school and can result from “academic failure, unsatisfactory progress, insufficient examination marks to advance to the next level of instruction, age, and poor attendance or simply from lack of local educational opportunities” (UNESCO, 2012) p-17). Students in their terminal year of school may “volunteer” to repeat their grade in order to improve their performance in the final exam and increase their chances of securing a place in secondary school; or may choose to repeat a year due to unaffordability of exam fees. Repetition is often practiced in post-colonial Francophone, Anglophone and Lusophone countries in Africa and Asia, and is less common in developed countries (except France and Belgium) where automatic promotion is more prevalent (Ndaruhutse et al., 2008). A global analysis of the patterns of repetition have broadly classified countries to have: a) high repetition (>20%) in early grades, which declines over subsequent grades, till the last grade of lower secondary (like Malawi); b) low repetition in the first grade (<10%), which increases steadily till the last grade of lower secondary; or c) a mix of both, with high repetition in all grades, ranging from 10 to 49% and fluctuations between grades (UNESCO, 2012).

Students who are older at entry have higher repetitions, drop outs and lower completion rates (Wils, 2004), as the productivity of the child and the opportunity cost of being in school increases with age (Cameron, 2005; Majgaard and Mingat, 2012; UNESCO, 2012; Wils et al., 2009). A study on the factors effecting grade repetition in grade 6 in 15 countries in Southern Africa observed that boys from poorer households and under-resourced schools were twice as likely to repeat as those from better off households (Ikeda, 2005). In a study in South Africa, (Branson et al., 2014) those overage for their grade by two or more years were more likely to dropout at later stages. Data from 54 developing countries showed that a higher proportion of female teachers in school reduced repetition for boys and girls, and increased retention especially among girls (cited in (Majgaard and Mingat, 2012). Nutritional status in early years may also be associated with positive school outcomes. A five-cohort study in Brazil, Guatemala, India, Phillipines and South Africa, showed that higher birthweight was associated with a lower risk of grade repetition (Martorell et al., 2010). Recent reviews (Brophy, 2006; Ndaruhutse et al., 2008) have listed a range of individual (low motivation/ability), household (low levels of parental education, household income, participation in household work) and school-level characteristics (low instructional time, differences in mother tongue and language of instruction, high schooling costs, proximity to school, access to sanitation facilities, poor school quality and curriculum relevance) that contribute to grade repetition in school, although there is limited empirical evidence that supports these associations.

While grade repetition is one cause of age-for-grade heterogeneity, the association between age-for-grade heterogeneity and subsequent grade repetition is less understood. A descriptive analysis of school performance, using DHS data from 35 countries, showed that over-age students performed better than younger students at early grades, but had higher repetition and dropout at later grades (Wils et al., 2009). In 24 of the 35 countries, including Malawi, almost half of all those in primary school were two or more years over-age for their grade, with those under-age having higher repetition rates, especially in grade 1, while those over-age were at higher risk of dropping out of school.

Our study follows a cohort of primary school students in 2010 in Karonga district, northern Malawi, to understand the risk factors

for grade repetition; the extent of age-for-grade heterogeneity in school; and its effects on grade repetition in the following year, after accounting for other individual, household and school-level risk factors.

2. Data and methods

2.1. Data sources

The dataset for the analysis originates from a Demographic Surveillance System (DSS), collecting data from around 34,000 individuals living in approximately 7000 households in Karonga District, northern Malawi, since 2002. The DSS area is primarily rural, with a majority of the population engaged in agriculture, fishing and petty trading (Crampin et al., 2012). The DSS collects data on births and deaths continuously through key informants within the community, with an annual census. House-to-house surveys following the census include detailed socio-economic, schooling, and demographic profiles of the population. Information on schooling includes current schooling status (in/out of school) and highest educational attainment (grade and level) for individuals above the age of 5. Questions relating to school performance (grade repetition, absenteeism) were asked of those currently in school aged 5–30 years.

Household information includes data on the quality of dwelling construction. A household is defined as a social construct of people who co-reside and acknowledge the same head of household. Interviews were conducted with verbal consent from the household head and individual household members and any reason for non-participation was recorded. GPS locations of individual households and schools (located in and within 10 km of the DSS boundary) were tracked using handheld geographic positioning systems (Garmin Etrex and Garmin Geko 201). Ethics approval for the study was received from the Health Sciences Research Committee, Malawi and the ethics committee of the London School of Hygiene and Tropical Medicine.

2.2. Study population

This study focused on respondents between ages 5–24 years, defined by the minimum age for answering the schooling survey; WHO’s definition of “young people”; and the upper age limit observed for those attending primary school. The analysis is restricted to primary school students, as primary schools differ quite markedly from secondary schools, in terms of student profiles (socio-economic status, academic motivation and financial leverage to persist in school), school systems (admission/transition criterion, provision of school infrastructure and resources, funding) and teaching/learning processes (monitoring participation, performance and completion). Enrolment into primary school is free whereas secondary schools are fee-paying and highly selective based on performance at primary level and availability of places.

2.3. Dependent and independent variables

Grade repetition as reported in the following year was used as the outcome variable to explicitly delineate the effects of age-for-grade heterogeneity on subsequent grade repetition, and distinguish the assumed ordering between exposures and outcome. Respondents were asked about their grade repetition status (“Have you attended your current standard/form before?”) and the number of times they had attended the same grade previously. Age-for-grade, the main explanatory variable, is calculated as the number of years of age a child is ahead/behind in class, based on the official age for a specific grade (i.e. Age-for-grade = Current Age - Current Grade - 5). Following UNESCO definitions, respondents

Download English Version:

<https://daneshyari.com/en/article/4938533>

Download Persian Version:

<https://daneshyari.com/article/4938533>

[Daneshyari.com](https://daneshyari.com)