

Quality Early Child Development As A Cost- Effective Strategy For Crime Reduction

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Abstract

There is increasingly growing evidence across different disciplines suggesting that early life conditions do have consequences on individual outcomes throughout the life-cycle. The focus of this paper is how quality ECD impacts on long-term adult behaviors such as crime? This has tried to answer the question by doing three things. One we summarized a growing body of evidence suggesting that policy interventions aimed at early childhood bear fruit for decades positing the argument that investments in quality child care and early childhood education do more than pay significant returns to children; and very importantly in the long run reduce crime and violence. Two, it examines the trends in crime and measures currently utilized in combating crime and argues that investment in early childhood development could be an integral component. Three, propose for an effective crime policy that would carefully examine the cost and benefits across multiple domains and across diverse policy options.

INTRODUCTION

There is an emerging consensus that most major economic problems in most societies globally such as crime, teenage pregnancy, dropping out of school and poor health conditions can be traced to low levels of skill and ability in school which is a consequence of the quality of parenting at the early childhood stage. Researchers have established that early childhood, beginning in infancy is a critical period in which the foundational structure of cognitive and social emotional abilities of young children are laid (Cunha and Heckman, 2007). Studies in economics, education, neuroscience, and psychology mostly agree that early childhood investments can benefit children, parents, and society at large. The paper is guided by the following three objectives: (a) to discuss the research on the strength of the link between early childhood development and adolescent and adult outcomes; (b) to provide an evidence-based review of the effectiveness of key interventions targeting early childhood development; (c) make the case for early childhood development as a cost-effective integral strategy for crime reduction.

With respect to children, there are three main benefits. One, investments made when children are very young will generate returns that accrue over a child's entire life (Becker, 1962). Two, the flexibility and capacity for change in cognitive functioning and brain development is greatest for young children, and these changes can have lasting effects on behavior throughout life (Knudsen et al. 2006). Three, early investments can have large impacts if early skills serve as a multiplier, or complement for later skills (Cunha et al. 2006). The logic is that the extent of the skill acquisition in early elementary school depends on the degree of skills attained before entering elementary school and the same is true for primary to secondary and secondary to tertiary.

Early investments in children has two main benefits for parents. One, is that freeing of the burden, can help parents especially mothers increase their opportunities for employment and earnings (Karoly et al. 1998). Two, early childhood interventions with parent support components, have a number of other benefits for parents, including increased confidence and reduced stress, potentially improving the overall well-being of the family by extension (Heckman, et al. 2014).

In addition to benefiting children and parents, the benefits of early education extend to society as a whole. These spillover benefits, what economists call positive externalities, include reductions in crime, and lower expenditures on health care and remedial education (Heckman, et al. 2010; Currie, 2001). This paper is interested mainly on how early childhood education could reduce involvement with the criminal justice system. Lower crime translates into benefits to society in the form of lowered costs of the criminal justice system and incarceration as well as reductions in victimization costs (Reynolds et al. 2001). Our central argument is that access to high quality early childhood care could be one of the key soft cost-effective strategies for crime reduction.

TRENDS IN THE GLOBAL GROWTH OF CRIME

Measuring crime trends in global perspective remains a key challenge for international policy makers. The ability to quantify accurately levels of crime across countries remain a challenge to criminal justice practitioners, this is in part as a result of methodological weaknesses of using cross country sources. The United Nations Survey of Crime Trends and Operations of Criminal Justice Systems is one of the sources of data on Government-reported levels of crime worldwide (Barclay and Tavares, 2002). The United Nations Survey of Crime trends has been used by a number of academic analysts and in a series of studies carried out by the World Bank (Fajnzylber, Lederman, and Loayza, 2002). Beginning from the period 1970-1975 the survey has been conducted seven times and the seventh United Nations Survey of Crime Trends covering the period 1998-2000, data was received from 82 countries.

The result of this survey is becoming increasingly very valuable to international and national policy makers in the field of criminal justice. The goal in general is to collect data on the incidence of reported crime and the operations of criminal justice systems and this will help in dissemination of information globally. The United Nations survey of crime trends shows increases in some parts of the world and decline in other parts. Increases are most notable in Latin America and the Caribbean which closely mirror the global trend. Eastern Europe and the Commonwealth of Independent States, South-East Asia and the Pacific, as well as the Arab States witnessed a downward trend. The data for sub-Saharan Africa shows a clear trend, but the overall trend is not reliable because a small number of states provide crime data through the United Nations survey of crime trend.

North America witnessed the most striking decline especially in United States and Canada. The European Union shows a significant decline in some countries, while some low-crime societies such as Denmark and Finland are witnessing a small increase in street crime.

Homicide: Among the countries that submitted their report Colombia has recorded 63 homicides per 100,000 people and South Africa recorded 51 per every 100,000 which is the highest level of homicide. The United Nations survey shows that the majority of European Union members with exception of Estonia, Latvia and Lithuania fall below global average. The United States had recorded a higher homicide rate between 1980 and 2000 but was gradually witnessing a decrease to almost 5.5 homicides per 100,000 people which is still higher than all nations except those in political turmoil (Stephens, Genes, 2003). Homicide rates tend to be higher in developing countries, in particular in middle income and developing countries that have experienced either sustained periods of civil conflict or political transitions, such as Colombia, the Russian Federation and South Africa. (Shaw; Dijk and Rhomberg, 2003).

Rape: In the last three decades U.S. rape rates were higher than those of any Western nations. The NCVS rape report declined in the last 10 years, from 150 per 100,000 persons age 12 or older to 90 per 100,000 age 12 or older in 2011. The FBI's UCR data report the rate of forcible rapes known to law enforcement was 33.1 per 100,000 persons in 2002 and down to 26.9 per 100,000. Because of the methodologies and definitions utilized rape and sexual assault crimes are challenging to collect under NCVS and UCR.

Robbery: North America showed a dramatic decline from early recorded cases of robbery. Robbery rates for other parts of the world were very sketchy for a reasonable conclusion to be drawn. Countries like England and Wales, Portugal, and Spain reported more robberies than North America during 2000.

Germany, Italy, and France also reported fewer robberies. Research also shows that countries transitioning to democracy always witness high level of robberies; countries like South Africa, Eastern European countries, as well as Latin American countries.

Burglary: The United States has lowered its burglary rates than countries like Australia, Denmark, Finland, England and Wales, and Canada. Burglary rates are lower in Spain, Korea, and Saudi Arabia to be compared with United States.

Vehicle theft: Countries like Australia, England and Wales, Denmark, Norway, Canada, France and Italy have higher vehicle theft than United States.

Kidnapping: Kidnapping for ransom and extortion has become very rampant in some areas of the world. This has become a threat to foreign recreational and business travel. Some countries have been notoriously earmarked as Global kidnapping hotspots.

Assessment By Regions

Africa

Because of the conflicts and political upheavels in Africa there has been an increasing number of kidnappings going on. Libya accounts for the highest level of kidnaopping of foreigners. The Sahel region and Somalia are witnessing a lot of kidnapping. Kidnapping in Nigeria is mainly in the Niger Delta region, this is notoriously due to extort money from foreign oil workers and business people.

Asia

Kidnapping is particulary high in countries like tribal areas of Pakistan where foreign nationals are the targets. The instability in Afghanistan has made that country to be dangerous and NGO workers are other foreigners are targets. In Malaysia and Philippines kidnappings have been carried out by Islamic militants both inland and offshore.

Europe

Kidnaopping is very low in this region except for some isolated incidents that involves individuals with links to illicit activities. With the rise in terrorist threat Western Europe could witness a rise in kidnapping. Turkey and Spain have witnessed sporadic activities.

Middle-East

With the Conflict in Iraq, Syrai and Yemen the Islamic State Group (IS) looks to engage in high profile kidnappings for propaganda and political gains. The absent of basic law enforcement in conflict zones made it easy for armed groups with diverse goals to kidnap people without a trace.

Latin America

Because of the political and economic instability sweeping the Latin American countries there has been a very big increase in kidnapping. Mexico, Columbia and Venezuela have been identified as the regional leaders. The most and common type of kidnapping here is what is called “paseo millionario” (millionaire tour) where a victim is taken the the ATM at night and forced to withdraw the maximum allowable amount.

EXPENDITURE ON CRIMINAL JUSTICE

There is a strong relationship between a country’s economic welfare, measured as GDP, and its expenditure on criminal justice (Newman and Howard 1999). Farrell et al. (2001) also examined expenditure on policing and noted that on the average, richer countries spend more per capita on criminal justice than poor countries. He also noted that the best model to use in identifying the expenditure in crime is to look at the expenditure for policing, prosecution, courts and prison.

Expenditure on Policing:

It is noted that countries across the globe spend just under one per cent of their GDP on policing, while some countries spend more. Data on developing countries suggests that they spend less on policing than the developed countries, but Madagascar and Zambia spend considerably more. More importantly to note is that majority of European countries appear to spend less than the global average on policing as percentage of GDP.

In a comparison between North America and Southern Africa we find that the countries in Southern Africa spend more on policing 84% of their criminal justice budget than the countries in North America that spends 57% of their criminal justice budget on policing (United Nations

Office on Drugs and Crime)

In the United States approximately 765, 000 sworn law enforcement officers are employed in the three levels of government, federal, state, and county in the almost 20,000 agencies. To have a peep of how much is spent in policing. This involves looking at the wages of police officers, police patrol officers. Most of them have a median annual wages of approximately \$57,000.00, and the lowest 10 percent earned less than \$33,000. The annual wages of detectives varies from city to city where the median wages goes up to \$74,000.00 and that of chiefs of police make more money well in the excess of six figures in large cities. The operating cost for local police departments in 2013 were about \$131,000.00 per sworn officer \$102,000 per employee because in addition to full-time employees, local police departments employs none sworn officers. (LEMA Survey 1987-2013)

Expenditure on the Judiciary (Courts and Prosecution)

A comparative analysis of the expenditure on the criminal justice system by United Nations Survey of Crime Trends found that the cost of the courts to be 29% and prosecution 15% of the criminal justice budgets. (United Nations office on Drugs and Crime,1999). There is however , a bit difference across the world in the distribution rate on the expenditure on each component of the criminal justice system. While in Sothern African countries the courts take 12% and the prosecution takes 4% of the criminal justice budget while in North America the courts take 32% and prosecution take about 11% of the Criminal justice budget (United Nations Office on Drugs and Crime, 1999).

In the United States funding in the FY2014 for the judiciary was 7.039 billion. The FY2015 was \$7.261 billion an increase of \$221.9 million, and the FY 2016 was \$7.344 billion which was an increase of (1%) from the previous year budget. The largest account approximately 73% of the total FY2016 is the salaries and expenses account for the U.S. Courts of Appeals, District Courts and other Judicial Services. The FY 2017 request for the judiciary totals \$7.53 billion an increase of 3.3% over FY 2016. (Office of Management and Budget FY2017) These are the total for the federal government. The state expenditure for the judiciary differs according to the population of the state. New York spends more on the judiciary than a state like Maine. In the FY 2016 the state of New York budgeted 7.34 billion and in FY 2017 it was \$7.8 billion and this represents an increase of 3.3% over the previous year's budget. Maine spends only 2% of its annual budget on the Judiciary.

Expenditure on Corrections:

People always equate corrections with imprisonment but it encompasses more than that. There are so many programs, services, facilities and organizations that are responsible for the supervision and management of those who have been accused or convicted of criminal offenses. Corrections consists of many subunits, some are administered in institutions such as prison and jail, while others are administered in the community such as intermediate sanctions like Probation, halfway house, restitution and fines, community service, house arrest, and electronic monitoring, Boot camp and substance abuse treatment.

There are more than 8.75 million held in penal institutions globally. Most of these people are pre-trial detainees. About half of these are in the United States, followed by Russia (0.96m), or China (1.43m) (Walmsley, R , 2002) The United States has less than 5 percent of the world population but nearly 25 percent of the world's imprisoned people. Prison population rates vary considerably between different regions of the world, and between different parts of the same continent. For example:

- In Africa the median rate for western and central African countries is 50/55 whereas for Southern African countries it is 260
- In the Americas the median rate for south American countries is 115 whereas for Caribbean countries it is 295;
- In Asia the median rate for south central Asia countries (mainly the Indian sub-continent) is 55 whereas for (ex-Soviet) central Asia countries it is 425;
- In Europe the median rate for southern European countries is 65 whereas for central and eastern European countries it is 210
- In Oceania (including Australia and New Zealand) the media rate is 105 (Walmsley, R 2002)

AS prison populations are growing in many parts of the world so do prison expenditure. The U.S. Local Government Expenditures for FY 2005-2011 shows that in fiscal year 2011 local government spent \$26.4 billion for corrections. Between 2005 and 2011, the annual expenditures by local government varied between \$25.8 and 28.4 billion. Corrections expenditure represented 1.6% of total local government expenditure between 2005 and 2011. Between 2005 and 2011, local government annually spent over a third (34.4% to 37.0%) of all funds spent by state and local government on correctional institutions (Kyckelhahn, T, 2013).

According to the brief from the U.S. Department of Education, Policy and Program Studies Service, July 2016; from 1979-1980 to 2012-2013, public PK-12 expenditures increased by 107 percent from \$258 to \$534 billion), while total state and local corrections expenditures increased by 324 percent (from \$17 to \$71 billion) – triple rate of increase in education. While prison spending has risen three times as quickly as school spending nationally, in some states the disparities are far greater. In Colorado, prison spending rose five times faster than school spending. Prison spending grew six times more quickly in South Dakota and seven times in Wyoming. In Texas, where the disparity is greatest, prison spending grew at nearly eight times the rate as school spending. (Ingraham, C, July 7, 2016)

The level of educational qualification for those who got sent to prison is much lower than those who are not sent to prison. Educational spending could in fact help to lower incarceration rates. Statistics suggest that being a high school drop dramatically increases the likelihood of being sent to prison. States can use some of the dollars budgeted for locking people up to provide pre-K slot or financial aids for those who want to go to college. To get people out of poverty and break that school-to-prison pipeline states should invest in early childhood education to help the young ones stay in school and get them ready for college or the work force.

DESCRIPTION OF GOOD MODELS OF EARLY CHILDHOOD DEVELOPMENT

Two types of programmes – model preschools and large scale preschool -were reviewed

Infant Programmes and Model Pre-schools

Nurse-Family Partnership (NFP)

The Nurse-Family Partnership Programme (NFP) was introduced as a pilot in Elmira, New York and later expanded to Memphis, Tennessee, and Denver Colorado. The NFP programme shows how improving pre-natal conditions and early parenting can improve child skills and outcomes. It aims at first time, low income, unmarried, and/or adolescent mothers without previous births. The programme involves: (a) nurses' visitation (about 30-35 visits of around 75-90 minutes each) of young mothers from the first or second trimester of the mother's pregnancy until the second birthday of her first child; (b) encouraging mothers to reduce smoking, teaches mothers how to care for their children, and helps mothers to pursue education and find jobs.

A randomized evaluation show evidence that: (a) NFP reduces risky behaviours of mothers and their children; (b) children exhibit persistently higher IQ scores through age 6; (c) children (at age 12) in the treatment group have lower rates of substance abuse and exhibit lower levels of internalizing behavior (anxiety, depression, and withdrawal); (d) mothers are much less dependent on welfare when children are at 12; (e) children are less likely to engage in crime (Howard and Brooks-Gunn, 2009; Olds, 2006).

The HighScope Perry Pre-School

The High/Scope Perry Preschool programme provided preschool to low-income African Americans. The intervention identified 123 low-income African American children ages 3 and 4 in Ypsilanti, Michigan during the 1960's and randomly assigned 58 of these children to the treatment group (Currier and Rossin-Slater, 2014). Treatment lasted for two years and consisted of a 2.5 hour preschool program on weekdays during the school year as well as weekly home visits by teachers.

The program curriculum has the following characteristics: (a) centred on 'active learning' where children were encouraged to plan, carry out, and reflect on their own activities through a 'plan and review' process; (b) emphasized reflective and open-ended questions asked by teachers, instead of strictly organized lesson plans; and (c) urged children to make choices and solve problems. After the intervention ended, the treatment and control groups were followed through age 40 (Schweinhart, Barnes and Weikart, 1993).

The Perry intervention was found to have made significant positive outcomes. Generally, it increased IQ scores at school entry, and other gains persisted while students were in school and into adulthood (Schweihart et al. 2005). The program group scored better on several cognitive and academic tests through age 27 (Barnett, 1996; Schweinhart, 2003). Educational attainment of the program participants improved. Perry participants high school graduation rates rose by about 17 percentage points (Heckman et al, 2010). Most importantly, for this paper, treatment individuals were also more likely to be employed, less likely to be receiving social assistance, and less likely to be involved in criminal activities or interacting with the criminal justice system throughout adulthood (Currier and Rossin-Slatter, 2014). Overall, treatment individuals had 11 to 36 percent higher lifetime earnings than the control group (Belfield et al., 2006).

Abecedarian Programme

The Abecedarian Programme, conducted in the 1970's targeted mostly African American children from challenging backgrounds. The program selected 112 children of mostly African American descent who were evaluated to be at risk for delayed cognitive development based on a variety of factors such as household income, parental education, and parental IQ (Currier and Rossin-Slateer, 2014). The program combined a pre-school intervention that started when children were as young as 6 weeks old with school age treatment through grade three (Griffin, Heckman and Moon, 2013). The children were randomly assigned into treatment and control groups. The treatment children entered the program when they were between 6 and 12 weeks old and stayed through age 5 (Barnett, 1995). The preschool component was full-day child care five days per week, 50 weeks per year. The curriculum focused on a series of educational games but also had medical and nutritional components. During grades one through three, teachers and parents interacted on a bi-weekly basis. The experiment participants have been followed through their mid 30s.

Like the Perry Programme, the Abecedarian intervention also had important long-term benefits. The pre-school component of the program led to lasting improvements in IQ (Heckman et al, 2014). Compared to the control group, treatment group children had 48 percent less grade retention, were 37 percent less likely to be in special education, 33 percent less likely to drop-out of high school, and more than 170 percent more likely to attend college (Currier and Rossin-Slatter, 2014). Very important for this paper, the program reduced participation in criminal activity, reduced substance abuse, and improved internalizing and externalizing behavior (Conti, et al., 2014)

Large- Scale Infant and Young Child Programmes

Head Start

The Head Start is a federal program designed to promote school readiness of preschool -age children. It is one of the largest and oldest of such programs in the United States. The program was first implemented in 1965 as part of the War on Poverty with a goal of enhancing low income children's cognitive, social, and emotional development (Currie and Rossin-Slater, 2014). Head Start provides comprehensive services that include preschool education, medical, dental and mental health care, nutrition services, and efforts to promote healthy relationships between parents and children. Families are eligible if they (a) have incomes below the federal poverty level (b) are homeless or (c) are receiving Social Security Income benefits.

Head Start has been found to positively impact child outcomes. There is evidence of improvement in participants test scores measured at school entry; however, these gains in cognitive ability and achievement fade out over time as children progress in elementary school (Deming, 2009). There is significant evidence that Head Start have direct impacts on longer term outcomes like higher educational attainment and earnings. For example, Deming found that Head Start (a) increased high school graduation rates by 8.6 percentage points (b) increased college attendance rates by 6 percentage points and (c) reduced non-participation (in either education or employment) by 7 percentage points, with African American participants experiencing the largest gains. Very importantly, children who attended Head Start are less likely to be placed in special education and less likely to be booked or charged with a crime than their non Head Start exposed siblings (Garces, Thomas and Currie, 2002)

Chicago Child-Parent Centre (CPC)

The Chicago Child Parent Centre (CPC) is another successful large scale preschool program. It is directed toward disadvantaged, inner city children in Chicago. The program provides a half or full day preschool program for three and four year olds. The program was designed to develop basic reading, writing, maths skills and good parenting behavior skills (Reynolds, 2000).

There is good evidence that CPC had positive impacts on children's development. At kindergarten entry, CPC preschoolers' cognitive readiness improved by about three months of learning; and maths and reading achievement gains persisted through sixth grade (Reynolds, 1995). Later evaluations found higher high school graduation and college attendance rates of CPC participants (Temple and Reynolds, 2007). Very crucial, there is good evidence that the programme (a) increased high school graduation by about seven percentage points (b) reduced substance abuse by four-six percentage points and (c) reduced arrests rates by six percentage points (Reynolds et al. 2011).

PATHWAYS THAT ACCOUNT FOR THE LONG TERM IMPACT OF INVESTMENT IN EARLY DEVELOPMENT

While there is now a critical mass of evidence in support of long term effects of investment in quality early childhood development, the pathways that account for these effects are still not very clear. Understanding how early education can produce long lasting benefits in terms of educational attainment, income, crime reduction etc is very crucial for public investment decisions.

Early studies focused on cognitive explanations (Reynolds and Ou 2011). Cognitive advantage, as assessed by IQ scores, was the sole mediator of long term effects in the Abecedarian Project (Campbell et al., 1998). Other mediators such as the social-emotional, motivational and family processes were not taken into account. Later studies (Reynolds, 2000; Heckman et al., 2006) have tried to look at these - named non-cognitive explanations. The argument is that the effects of early education on cognitive abilities only represents a relatively small portion of the overall effects of early education; also very critical is the power of early education in developing noncognitive abilities. What seems clear are (a) early education has the capacity to reduce crime through the development of enduring impact of cognitive and non-cognitive skills. The operation of both skills are difficult to be separated. The research challenge is how to assess the contributions of cognitive and non-cognitive skills separately.

What seems clear now is that a complex array of factors (cognitive and non-cognitive) that account for the long-term effects early childhood development. For simplicity five thematic factors are delineated: (a) cognitive (b) motivational (c) social adjustment (d) family support behavior and (e) school support behavior. There will be a need to look at the most crucial elements of the five factors that have very significantly impacted on issues of crime . This to us is the frontier of what needs to be known and used to develop a clear cost effective early childhood driven crime reduction programme. A major recommendation of the paper is that an effective crime policy should carefully examine the cost and benefits across multiple domains and across diverse policy options. Early Childhood Development experiences offer tremendous possibilities.

CONCLUSION

This paper has looked at how quality ECD impacts on long-term adult behaviors such as crime? We found that good quality early childhood development especially for the poor (a) was linked to higher educational attainment and lower rates of crime as a function of promoting both cognitive and non-cognitive skills for children that spill over to adolescence and adulthood periods (b) the current crime prevention strategies are not cost-effective (c) there is an important window of opportunity for tackling crime related issues through evidence based early-life interventions.

However, more work still have to be done to answer the question policy makers most want to know, which is what programs they should invest in if they wish to get the highest return on crime reduction with their investments on early childhood. A better solution to this is to increase investment in education from early childhood through college and there is no doubt that this will increase skills, opportunities, and career outcomes especially for at-risk-children and youth in high poverty schools and depressed neighborhoods.

The Bureau of Justice Statistics show that young black men between the ages of 20 and 24 without high school diploma have a greater chance of being incarcerated than employed. It is also common knowledge that a 10 percent increase in graduation rates results in a 9 per cent decline in arrest rates. The \$5.7 million grant program for improving outcomes for students who have been incarcerated or involved with the criminal justice system seems to me to be too late a help. The money could have been invested early in their lives. Hope is not lost as the Education Department has called on colleges and universities to remove barriers that can prevent almost 70 million Americans with criminal records from pursuing higher education. This paper is an offshoot to that study that will contribute to the policy debate on cost-effective sustainable crime prevention strategies.

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