
Educational Attainment: Child's Play is Fundamental

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Abstract: This article discusses children and youth who, due to conditions over which they have little or no control, face odds that lead to disparate educational opportunities. Such inequity could result in limited prospects later in life. Perhaps surprisingly, *child's play* is a protective factor that should gain more attention in its potential to improve educational attainment for K-12 public school students.

Child's play and academic attainment should be viewed as mutually dependent, not mutually exclusive. Free play is more than just a way for children to pass the time and spend energy. Child's play, particularly for those in early childhood, is an essential element of human development. Playing is an opportunity for fantastical and enigmatic adventures that help children to think, socialize, regulate impulses, develop emotionally, and connect with others. Lessons learned during play—enhanced abilities to learn, behave competently, and positively interact with society—increase the likelihood of educational achievement and future success.

This article discusses children and youth who, due to conditions over which they have little or no control, face odds that lead to disparate educational opportunities. Such inequity could result in limited prospects later in life. Risk factors that decrease the likelihood of high educational attainment for some children include, but are not limited to, parents or guardians that have: no high school diploma; poor social, emotional, and coping skills; mental health or substance abuse issues; a record of being incarcerated, low annual income, or unsafe living conditions. Perhaps surprisingly, child's play is a protective factor that should gain more attention in its potential to improve educational attainment for K-12 public school students.

As early as the 1880s, the significance of children's games in the United States has interested folklorists and anthropologists. The first comparative study of children's games, *Games and Songs of American Children*, was published in 1883 by William Wells Newell (Riddell, 1990). Fun, unstructured and voluntary, children's play experiences, or lack thereof, can help shape how a child develops and, consequently, their educational attainment level.

The United Nations Convention on the Rights of the Child has defined principles that help promote the well-being of children from birth to age 18. Many of these principles are related to and have implications for K-12 educational policies and practices (Nastasi et al., 2020). Play is so important to optimal child development that it has been acknowledged by the U.N. Convention as a right belonging to every child, along with children's rights of rest and leisure (McNeill, 2019-2010; Nastasi et al., 2020). Through a lens of the value of child's play, the current article will discuss factors that may ultimately hinder maximum educational attainment.

People in prior generations spent more time playing outside being physically active and participatory than children today (Carver et al., 2008). Ginsburg describes play as contributing not only to cognitive well-being, but also to the physical, social, and emotional health of youngsters. Even so, some have significantly fewer play opportunities than other children and youth. Evolving family arrangements, rushed routines, a focus on academics and enrichment activities, as well as reduced school recess and free play, have contributed to a decline in the amount of time that children play these days (2007). The Academy of Pediatrics describes child's play as a vital element of human development (Ginsburg, 2007). Cooper (2006) posits that healthy play helps children learn and grow to become competent individuals. White and Allers see play as the natural way children learn, intermingle, and grow to understand the rules and principles of the adult world (1994). Body movement while playing supports "efficient and effective muscular growth and physical health and well-being; playing helps children with flexibility, agility, balance, coordination and satisfaction" (Declaration on the Importance of Play 2014, p. 1). Leibowitz describes play as vital activity, as important to children's health and lives as sleep, water, and nutritious food. Play activity stimulates cognitive and socioemotional growth. More than entertaining, play helps children learn, solve problems, self-regulate and build positive social skills (2020), all of which are foundational to educational success. Yet, according to McNeill, deliberately providing opportunities to play seems to be neglected by municipalities during urban planning, by school districts in establishing curricula, and perhaps unintentionally by parents in prioritizing studying above play (2019). Child's play carries a reduced value in American culture as increased value is being placed on organized activities focused on academic attainment (Leibowitz, 2020). Children would be better served if their play and educational achievement were regarded as mutually dependent, not mutually exclusive.

Vygotsky describes play as being very important to development because it frees a child from situational constraints. Play repeatedly generates demands on the child to act against his or her present impulses. Take the example of a child wanting to run off suddenly, but the rules of the games compel him to wait. Vygotsky posits that the child anticipates that following the rules of the entire structure of the play will offer more rewards from the game than feeding an immediate impulse (1967).

Cognitive scientists do not all agree on a universal definition or categorical description of what cognition means (Allen, 2017). In the current article, ‘cognitive’ includes processes such as “perception, attention, memory, language, reasoning, decision-making, and problem-solving” (Durso, 2007, p. 4), while higher cognitive abilities relate to a capability to analyze, synthesize (Bloom’s Taxonomy, 2020; Richards, 2020), and self-reflect (Richards, 2020). Children’s cognitive abilities relate to the “core skills [their] brain uses to think, read, learn, remember, reason, and pay attention. Working together, they take incoming information and move it into the bank of knowledge [they] use every day at school, at work, and in life” (LearningRx, 2020, p.1).

The prefrontal cortex is one of the last areas of the brain to develop. Brain maturation corresponds with increased capabilities in abstract reasoning, and response inhibition (Yurgelun-Todd, 2007), among other functions. Response inhibition, also called inhibitory control, is a cognitive process (executive function) that can be categorized as having the capacity to inhibit impulses in order to increase the likelihood of displaying appropriate behaviors that are consistent with accomplishing long-term goals (Chikara et al., 2020; Deater-Deckard et al., 2019). Vygotsky argues that through playing, young children learn to delay their impulses to seek immediate rewards (1967). Public school educators and administrators highly value students’ ability to self-regulate and control impulses.

The intelligence level of children and youth has a strong influence on what they can accomplish in life. Consequently, identifying and adjusting risk factors related to cognitive ability is a matter of interest to public health professionals (Specht et al., 2019) and educators. For instance, children with weak verbal abilities are at great risk of experiencing reading problems, but language challenges are often masked as shyness, inattention, forgetfulness, or the like (Adlof, 2020). The congruence between reading levels and educational attainment is well established. Being mindful of such cognitive risks and how child’s play is related could be of great benefit to all involved, particularly children, their families, and school districts.

Maslow’s Hierarchy of Needs has been seriously criticized by both researchers and theorists and is claimed by some to have little grounding in the scientific method. However, due to its prominence, ongoing influence, and recurrence in the literature, it deserves attention here. In *A Theory of Human Motivation*, Abraham Maslow offered five classifications of human needs: physiological; safety and security; belongingness; esteem; and self-actualization. He theorized that these needs appeared sequentially as a person advanced from birth to adulthood. Maslow further theorized that the lower needs were more dominant than, the higher needs. The more these basic needs were satisfied, the better an individual’s psychological health.

Maslow indicated that psychological needs are related to hunger and thirst, and safety refers to humans’ desire to be protected and reassured (1943). Consider how these two most basic of Maslow’s needs may relate to children’s well-being, and ultimately to their educational attainment.

Regarding physiological needs, Maslow embraced Cannon's concept of homeostasis:

Homeostasis refers to the body's automatic efforts to maintain a constant, normal state of the blood stream. Cannon (2) has described this process for (1) the water content of the blood, (2) salt content, (3) sugar content, (4) protein content, (5) fat content, (6) calcium content, (7) oxygen content, (8) constant hydrogen-ion level (acid-base balance) and (9) constant temperature of the blood. Obviously this list can be extended to include other minerals, the hormones, vitamins, etc. (Maslow, 1943, p. 372).

It is difficult to exaggerate the importance of nutritious foods and clean water, and their connection to children's physical and mental homeostatic health.

According to Maslow's safety and security component of human needs, children typically favor environments that are safe, secure, structured and predictable. The average child prefers not to encounter unforeseen, uncontrollable, or unstable circumstances. Should such situations occur, children and youth want to know that their parents will keep them safe and protected from harm (1943). Young people need well established, reassuring social environments and access to assets within the home to enhance cognitive, emotional, and physical development (Bronfenbrenner, 2001). Children facing high risk factors such as poverty, hunger, thirst for clean water, unsafe neighborhoods, food insecurity, poor nutrition, foster care, drug dependent or incarcerated parents, and the like, are certainly distracted from scholastic achievements and are hindered in ways not encountered by their peers who do not face such obstacles.

Currently, in the U.S., there are 50.7 million students enrolled in public schools. (National Center for Education Statistics: Fast Facts, 2020). A majority of these students live in low-income households (Suits, 2016). The Children's Defense Fund Gaps in Meal Program reports that physical well-being and brain development is contingent upon being well-nourished, particularly during infancy and early childhood. Being hungry and malnourished not only endangers children's health and development, but also their education and career readiness. Nevertheless, many children lack consistent access to sufficient food. In 2017, 12.5 million of the nation's 72,000,000 children (one of every six) lived in food-insecure households (2020).

Opportunities to experience the full benefits of play are decreased for children exposed to neglect, abuse or other maltreatment. Cooper's findings suggest that ill-treated children have an increased likelihood of developmentally postponed play skills, reduced playfulness, and behavioral disturbance during play. These factors may increase the likelihood of learning and social problems (2006), both of which affect educational achievement. Further, there is a direct, negative effect on the mental and physical health of children living in disadvantaged neighborhoods (Park, 2015). Parents struggling to meet every day, basic needs may see play as a luxury or not consider the consistent supervision of their children's free play as a high priority.

Where children play is also important. Wong points out that having enriched surroundings with many variations of site furnishings, vegetation, and open-ended uses, may help develop a child's perceptual, motor, and cognitive abilities. For example, play things can be used as accoutrements to enhance eye-hand coordination, spatial awareness, balance, and provide opportunities for gross motor and coordination skills (2014).

Admittedly, a family's socioeconomic status can be changeable over time. However, in 2020, as documented in the Child Poverty report, 18 percent of children (almost 13,000,000) live

in poverty, meaning that the combined yearly earning of all adults in their household is less than a federally set income level (The Annie E. Casey Foundation, 2020). Nearly 3 in 4 poor children were children of color. In 2018 more than 5 million poor children lived in extreme poverty on less than \$9 per person per day, in households that earned less than half the poverty rate. The youngest children were most likely to be poor. Almost 1 in 5 were less than age 5, a period when the human brain develops rapidly (Child Poverty, 2020) and requires quality nutrition and clean water for maximum physical and cognitive health. The first 8 years of a child's life, when the brain is still growing quickly, can establish a structure for future learning, health, and life success (Robinson et al., 2017).

Children growing up in poverty have a heightened risk of being exposed to elements and circumstances that can impair their brain development and lead to poor cognitive and physical health outcomes. Child poverty reduces skill-building opportunities and scholastic outcomes, hindering a young person's capacity to learn, earn a high school diploma, and more (The Annie E. Casey Foundation, 2020).

Vygotsky posited that child's play is the highest form of preschool development. It is through play that the child advances and moves ahead of his or her normal actions (1967). Obviously, children who are absent from preschool cannot reap the benefits. Key Data Highlights from the Office of Civil Rights indicate that Black preschool age children are 3.6 times as likely to obtain one or more out-of-school suspensions than their White preschool peers. While only 19 percent of all preschool youngsters, Black children represent 47 percent of children receiving one or more out-of-school suspensions. Their White counterparts represent 41 percent of preschool enrollment, yet only 28 percent receive one or more out-of-school suspensions (2016). And, the pattern continues.

A review of Key Data Highlights by the Office for Civil Rights reveals vast inequalities in school discipline. Compared to White youth, Black students are nearly 2 times (1.9) more likely to be expelled from school, with no education services being provided. While encompassing 8 percent of all students, Black boys represent 19 percent of students expelled without educational services. Black girls represent 9 percent of expulsions with no education services and 8 percent of the national student body (2016).

Another disparity relates to students with disabilities. They are more than twice as likely to be suspended out-of-school (13 percent) than the 6 percent of their peers without disabilities (2014). However, disabilities should not necessarily limit a person's ability to participate in educational experiences.

Heitzeg credits the growth of zero tolerance school policies with not only increased dropout rates but also school suspensions and expulsions, all of which are disparate by race (2009). Zero Tolerance policies, it is worth noting, have thrived without confirmation that they improve school safety and security (Skiba 2001).

In 2008-2009, approximately 3,039,015 students in U.S. public schools received a high school diploma, leading to a national freshman graduation rate of 75.5 percent, on average. The data varied widely based on geographic region, with southern states like Florida (68.9%), Georgia (67.8%), Mississippi (62%), New Mexico (64.8%), and South Carolina (66%) reporting lower four-year completion rates than mid-western states like Idaho (80.6%), Iowa (85.7%), North Dakota (87.4), and South Dakota (81.7%). With 90.7 percent and 89.6 percent, respectively,

Wisconsin and Vermont had the highest freshman graduation averages (Stillwell, 2011), revealing differences based on zip codes. For students in marginalized groups such as American Indian, Hispanic, and Black, Heitzeg estimates their chances of graduating with a diploma at a little more than 50-50.

In 2009 whether enrolled in high school or not, approximately 84.4 percent of people age 18-24 had a diploma or other high school credential, such as a GED. That year females in that age group who were not enrolled in high school had a higher completion rate (91.2%) than males (88.3%). A review of the cohort by race shows that Asians/Pacific Islanders (95.9%) and Whites (93.8%) fared better than people identifying as two or more races (89.2%), Blacks (87.1%), and American Indians/Alaska Natives (82.4%). At 76.8 percent, Hispanics had the lowest high school credential completion rate (Chapman, 2011).

In 2012, for each dollar earned by a college graduate, a high school dropout earned just 30 cents (Suitts, 2019). Median weekly earnings reported by the U.S. Bureau of Labor Statistics show a similar imbalance. During an average week a college graduate earns \$1,559 compared to \$606 for someone who did not finish high school (2019). Educational attainment is rewarded even at the lower level. Chapman reports that people with comparatively low cognitive skills that dropped out of high school experience increased incomes if they earn a GED (2011), though, demand for low skill workers is plummeting.

It would be a meaningful endeavor to encourage high school dropouts to complete the requirements for a diploma. The Center for Labor Market Studies reports that American taxpayers would save more than \$292,000 for each re-enrolled student who attains a diploma. Such significant savings would occur in the areas of health care, welfare, incarceration, and other social systems. Further, the newly enfranchised would contribute not only to tax coffers, but home ownership and property taxes would increase as well. Politically speaking, dropouts have a lower probability of casting ballots in federal and state elections (2009). Keeping young people that are involved with the juvenile justice system engaged in school can improve their chances of educational success and prevent ongoing delinquency (Leve and Chamberlain, 2007).

The physical surroundings experienced by children have important impacts on their cognitive and socioemotional development (Ferguson, 2013). Physical structures in neighborhoods can influence crime (Kurtz et al., 1998; Wilcox et al., 2004). Public housing communities in areas with high levels of concentrated disadvantage and residential instability, plus numerous nonresidential land uses will likely have higher levels of crime as compared to communities with lower levels of concentrated disadvantage, higher levels of residential stability, and limited nonresidential land uses (Tillyer and Walter, 2018). People living in public housing or subsidized rentals such as Section 8, report a higher fear of crime (Kilewer, 2013), as do people living in high crime areas in general (Brunton-Smith, 2011; Lewis, 1986; Stafford, 1984). Given the poverty rate in U.S. cities, it is essential to contemplate the conditions and environments that produce the safest low-income housing for residents (Tillyer, 2018), to reduce crime, fear of crime, and promote safe spaces for children to play.

Providing stimulating environments, materials, and quality childhood experiences is more likely for adults who can afford to. Kliewer et al. caution that parents living in low wealth areas with few resources are faced with compelling challenges (2013). Related to fear of crime, safety concerns can include objective as well as perceptual measures such as stray dogs, traffic, lighting, pavement upkeep, and strangers in the neighborhood (Kumanyika, 2006; Wilson et al.,

2004). Fear of crime could be just as damaging to social systems as actual crime. While only a small percentage of community members actually become victims, fear of crime affects nearly everyone in urban areas. Factors related to fear of crime include, among other elements, misplaced perceptions of crime, as well as physical characteristics of the environment (Henig and Maxfield, 1978). Social incivilities include public displays of rowdiness, drinking, drunkenness and drug use, while objective measures of physical environments include abandoned buildings, homes and cars, vacant or trashed lots, poorly maintained properties, litter, and graffiti (Taylor and Hale, 1986).

And then, there is the matter of law enforcement. Travis and Coon report that as far back as 2005, almost half (47.8%) of the principals questioned reported having school resource officers. Nearly all, 96.8 percent, depended mainly on public law enforcement instead of private security (2005). Literature shows that there are substantial racial inequalities in individual- and neighborhood-level police exposure. Findings suggest that aggressive policing strategies and tactics may proliferate racial disparities in educational outcomes. Evidence indicates that the consequences of policing extend into key areas of social life, with implications for the educational paths of youth of color, and social inequality more broadly (Fagan et al., 2010; Hagan et al., 2005; Legewie, 2016). There is a higher probability that juveniles will have more contact with law enforcement officers than adults (Leiber et al., 2000). The exchanges are particularly consequential for young people (Hurst and Frank 2000).

A study of Operation Impact, a policing initiative in New York conducted during 2004-2012, found that for Black males, exposure to aggressive police surges reduced test scores in a meaningful way, consistent with the boys' increased exposure to policing. The operation lowered the educational outcomes of Black boys, which has consequences for child development, economic progress, and racial inequity (Legewie and Fagan, 2019). Such aggressive policing tactics could make playing outside less desirable.

Lady Justice is a statute that adorns many criminal court buildings and symbolizes fairness in the U.S. justice system. Her blindfold signifies that the 'system' does not see or consider color, race, ethnicity, or the like when criminal defendants are before the court. Her scales indicate that defendants will be judged based on the weight and value of evidence and not on factors such as personal demographics. Through her presence at court facilities throughout the nation, Lady Justice sends a clear, purposeful message that all people with cases before a court will be treated equally. A look at the disparate treatment of juveniles of color makes one wonder if Lady Justice lifts her blindfold to peek.

Although 54 percent of males and 73 percent of females arrested will have no subsequent contact with the juvenile justice system (Snyder and Sickmund, 1999), youth of color have higher rates of involvement with law enforcement (Fagan et al. 2010; Hagan et al. 2005; Legewie 2016), and criminal proceedings, than their White peers. Literature shows that in 2002 policies and procedures were updated to consistently and uniformly measure nine possible points of contact that youth can have with the juvenile justice system. The points of contact are: "arrest, referral to court, diversion, secure detention, petition (charges filed), delinquent findings, probation, confinement in secure correctional facilities, and transfer to criminal/adult jurisdiction" (Coalition for Juvenile Justice, n.d p.1; Rovner, 2014, p.1; National Juvenile Defender Center, n.d., p.1). Reasons for the enhanced clarity in measurement aim to reduce or eliminate what is known as Disproportionate Minority Contact (DMC). Still, to this day, juveniles of color continue to

experience higher contact levels at each of the nine decision points (Coalition for Juvenile Justice, n.d.; Piquero, 2008; Rovner, 2014).

Nationwide, the number of young people held in secure facilities increased by 72 percent from 1983-1997. Four of every five detainees held during this time were youth of color (Hoyt, n.d.). Sawyer explains that during the last 20 years, the number of confined youth has fallen by 60 percent, and this trend is expected to continue. Currently, more than 43,000 young people are in confined facilities ranging from adult jails and prisons (4,535); detention centers (16,858); long-term secure facilities (10,777); residential treatment (10,256); group homes (3,375); plus shelters, wilderness camps and other places away from home. Two-thirds are age 16 or older, and even more disturbing, 500 are 12 years old or younger. Black children comprise 14 percent of the nation's youth population. Yet, 42 percent of boys and 35 percent of girls held in confinement are Black. Native American children fare even worse. Despite comprising only 1 percent of all youth in the U.S., 3 percent of females and 1.5 percent of American Indian males are confined. As with other juvenile justice points of contact, White youth are underrepresented (2019). The Sentencing Project: Fact Sheet reports that as of 2015, Black juveniles were five times more likely than their White peers to be detained or confined in facilities (2017).

Thirty-seven percent of youth detained in the U.S., a large majority of whom are Black and Hispanic males, are held due to having harmed others. But, one-third are in custody for reasons other than having damaged property or people (Suitts, 2019).

Racial and ethnic disparities weaken the credibility of a justice system that purports to treat everyone equitably. Across the country, juvenile justice systems are marked by disparate racial outcomes at every stage of the process, starting with more frequent arrests for youth of color and ending with more frequent secure placement (Rovner, 2014, p.1).

The mission of the U.S. Department of Education “is to promote student achievement and preparation for global competitiveness by fostering educational excellence and ensuring equal access” (ed.gov. homepage, p.1). Equally important is the federal law requiring criminal courts to consider “needed educational and vocational training” during the sentencing phase of legal proceedings (U.S. Code § 3553, p.715). Yet, being criminally involved with the justice system leads to poor educational outcomes and lasting harm. Court involvement leads to higher school absenteeism, humiliation, and social separation for youth of color (Coalition for Juvenile Justice, n.d.). One factor that has led to K-12 students becoming involved with the juvenile justice system is copious school suspensions. Such policies implemented by school districts have affected African American and Hispanic males, in particular (Suitts, 2019).

Graduation rates and other educational attainment indicators for public school K-12 students are easily accessible in federal, state, and local departments of education statistical databases. Curiously, there are wide gaps in data availability regarding graduation or completion rates for K-12 students in juvenile justice detention schools.

People living in confined facilities have attained below-average levels of education credentials (Correctional Education, 2017). Standardized academic ability assessments showed that incarcerated youth function at a significantly lower level than their non-delinquent counterparts (Foley, 2001). A fact sheet from the Sentencing Project reveals that two-thirds of youth released from juvenile confinement never go back to school (2017). Additional resources

including personnel, professional development, transition services, and classroom instruction, are needed (Benner, 2016) to reduce such poor outcomes.

Child's play and academic attainment should be viewed as mutually dependent, not mutually exclusive. Free play is more than just a way for children to pass the time and spend energy. Child's play, particularly for those in early childhood, is an essential element of human development. Playing is an opportunity for fantastical and enigmatic adventures that help children to think, socialize, regulate impulses, develop emotionally, and connect with others. Lessons learned during play—enhanced abilities to learn, behave competently, and positively interact with society—increase the likelihood of educational achievement and future success.

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