

Analyzing How Low Socioeconomic Status Impacts Childhood Development

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Abstract

10,466,000 kids under the age of 18 lived in poverty in 2019 (Census, 2020). Despite the fact children account for 22.6% of the U.S. population, they accounted for 31.1% of the total people who live in poverty (Census, 2019). Childhood poverty, and the low socioeconomic status that comes with it, is one of the more sobering problems we have in our country as children are an unfairly and unevenly impacted demographic in terms of poverty. Children have limited ability to improve or dictate the situation that they are brought up in. Also, as I will present in this paper, poverty and low socioeconomic status typically lead to long term negative impacts on physical and mental health. Awareness and understanding of the impact that SES has on child development, and the ramifications it has for the country itself, is important knowledge for people to possess. The purpose of this paper is to examine the important aspects that affects living in a low socioeconomic status household has on childhood development. Three aspects of living in a low SES household that impact childhood development are social determinants of health, adverse childhood experiences (ACE's) and educational outcomes.

Introduction

Social determinants of health are conditions in places where people live, learn, work and play that affect a wide range of health and quality-of-life risks and outcomes (CDC, 2018). The most common social determinants of health referenced for children are poverty, unequal health care access, poor environmental conditions, and educational inequalities (Allensworth, 2011). One thing that is clear is that children have limited control over these social determinants of health.

Adverse childhood experiences are another issue that stems from low socioeconomic status. ACE's are potentially traumatic events that occur in childhood (CDC, 2019). 26.1% of the families whose children suffered an ACE reported it was hard to afford basic life necessities (Zare, 2018). This suggests a correlation between ACE's and socioeconomic status. The lower your status, the more likely it is you will suffer from an ACE. ACE's can have troubling long-term effects. According to the CDC, prevention of ACE's could lead to a reduction of 21 million cases of depression, 1.9 million cases of heart disease, and 2.5 million cases of obesity. This shows the sheer magnitude of ACE's as millions of people suffer both mental and physical long-term ailments from these events. The uncontrolled conditions these low SES children live in are putting them at a disadvantage for life.

Educational outcomes are also impacted by living in a low SES household. Low SES has a large impact on education for students. Low SES children typically have poor health. This impacts attendance in school, which can negatively impact achievement. Achievement in school is a big determinant of health and earning potential. Those who do not receive a high school diploma live 6-9 years less than those who do (D. D. Allensworth, 2011). With education impacted by SES, students not only have a worse quality of life, they live even shorter lives than those not in their situation. They also lose the ability to fully participate in a part of life that can be a ticket out of a low SES upbringing. These three subjects show the magnitude and importance of this topic. The purpose of this paper is to examine these three aspects of living in a low SES household and how they impact childhood development.

Social Determinants of Health

Social determinants of health are most common amongst low SES households (Allensworth, 2011). While most people's determinants of health stem from their habits or

genetics, people of low SES households, who are more likely to live and work in less than ideal conditions, are negatively impacted by their surroundings. This is problematic for many reasons. One reason is that social determinants of health can be largely aided by certain social programs. However, many are not effectively benefitting the populations in need. Two, children of low SES households have limited control over where they live, meaning they are unfairly affected. The key problem, however, is that social determinants of health can linger throughout the duration of one's life. How social determinants of health impact children, and how they impact them long term, is important in understanding how SES impacts childhood development.

Social determinants of health and their impact were exemplified in a study by the Society of Public Health Education. The most common social determinants of health amongst children are identified as poverty, unequal health care access, poor environmental conditions, and educational inequalities (Allensworth, 2011). It is more likely than not that if you suffer from one of these social determinants, you are also subjected to multiple others. (Allensworth, 2011). The study further explains how these determinants are all connected and can lead to a negative impact on health. If you live in poverty you are at higher risk of living in substandard housing conditions, having less access to quality healthcare, having an increased exposure to crime and suffering from food insecurity (Williams & Jackson, 2015). These are all factors that can impact long-term health and show the interconnectedness of these determinants of health.

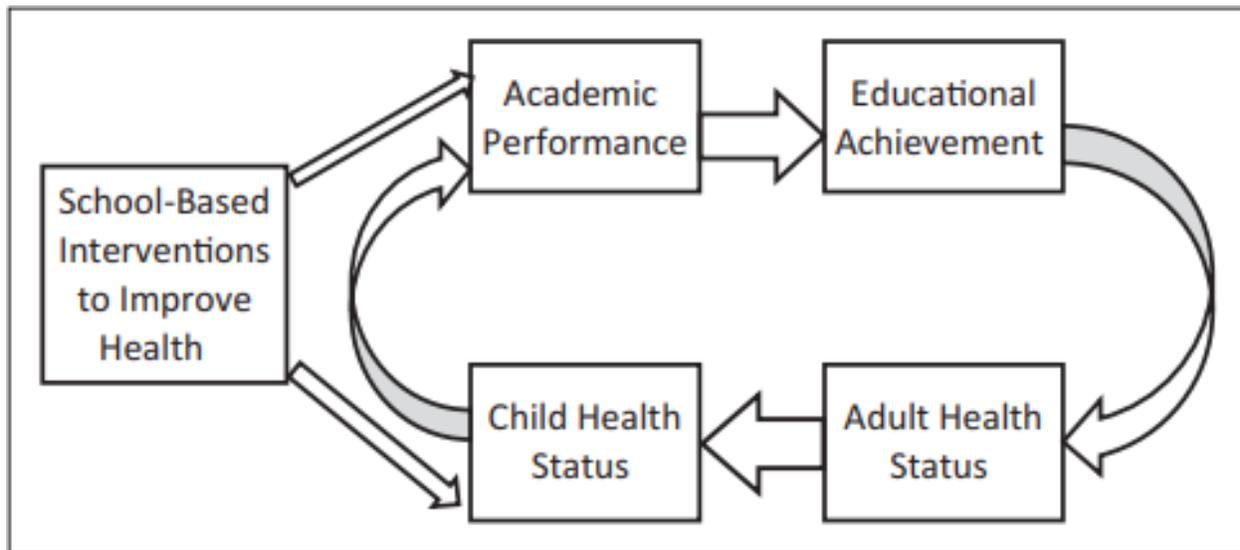
The interconnectedness of these determinants is further expanded on when looking within the situation explained above. If you look solely at substandard housing conditions, people who live in these conditions are more likely than not to live in areas with poor environmental conditions and pollution, which can lead to an increase in illness (Williams & Jackson, 2015). This suggests the claim that if you suffer from one determinant you suffer from many is true.

Living in a low SES household can spiral into many different directions that may culminate in increased health risk. The reason why this is so important in the case of children is that by having these social determinants, and suffering from the illness and long-term health defects that come with it, it limits the avenues that they have to get themselves out of these bad situations.

With some social programs not at the level of effectiveness that is needed to address social determinants of health, one avenue that is seen as a ticket to a better quality of life is education. “The educational level that one attains is a significant determinant of one’s earning potential and health. Those who learn more earn more money and have a better health status. Those who do not attain a high school diploma on average live 6 to 9 years less than those who do graduate from high school (Allensworth, 2011).” This suggests why social determinants of health are so devastating. These determinants lead to illness and health issues, which impact attendance in school. If one is not fit or well enough to attend school, they miss out on valuable education which impacts academic achievement. If they do poorly in school, it impacts the ability to attend college and find a good job. With academic achievement being an important measure of future earning potential, decreased academic achievement can strand children in the difficult situation they were born into. If these social determinants of health limit a child’s ability to improve quality of life, how can they improve their situation?

Despite limited intervention on a nationwide level, local communities still can help combat social determinants of health through school-based interventions. The Society of Public Health Education proposes that by making healthcare and health-based education part of the school experience, it can close the health gap in children in high poverty school districts and improve their overall academic achievement. This is shown in the image below.

Figure 1: Effective School Based Health Interventions (Murray Et. Al, 2016)



As is implied by the image above, school-based interventions to improve health can drastically benefit children's academic performance. By adding these interventions, it can improve a child's health status. An improvement in child health status leads to a decrease in health risk and an increase in the ability to attend school more frequently. This can result in an increase in academic performance and educational achievement, culminating in an improved adult health status.

Despite these possible interventions, there is still much to be done from a long-term perspective in addressing and preventing social determinants of health. In the short term, these problems are causing devastation in the life of children across the country and must be addressed. They can lead to exposure of events that have long-term effects on the health of children. These events are known as adverse childhood experiences and children who are subjected to them are more likely to suffer long term health problems.

Adverse Childhood Experiences

Another common situation that stems from living in a low SES household is the occurrence of adverse childhood experiences (ACE's). Adverse Childhood experiences are traumatic events in childhood that include violence, abuse, and separation from a parent (CDC, 2020). ACE's have a drastic long-term impact on childhood development, impacting the mental and physical health, and brain development, of the children who suffer them (CDC, 2020). They are most prevalent in children who live in low SES households, with 26.1% of parents of children who suffered an ACE reporting they were unable to afford basic necessities and 22.2% of children who suffered an ACE living in a single parent household (Pediatric Nursing, 2018). This suggests the prevalence these events have in the lives of children in low SES households.

One-way ACE's impact childhood development is through their impact on brain development. One situation where this occurs is through the ACE of separation from a parent. Access to stable and responsive caregivers is a vital part of brain development for a child (Tottenham et al, 2014). A child's survival is dependent on this caregiver. Besides protection, caregivers also supply input that helps aid in brain development. An example of this is a caregiver's response to distress. A caregiver's input in a situation of distress helps a child's brain develop self-regulatory capabilities and the neurobiological systems that serve them (Farah, 2017). Caregivers also offer normative cognitive, social and emotional input, which drives the development of higher level social-emotional and cognitive development (Bick & Nelson, 2016). When facing separation from a parent it robs children of this necessary relationship, which can stunt normal brain development. Children in this situation are deprived of the scenarios above that give them the feedback necessary for this cognitive and emotional development. As serious

as this is, brain development is just one part of a larger picture of developmental issues that stem from ACE's.

ACE's also have a profound impact on the long-term physical health of children. In the CDC-Kaiser study on Adverse Childhood Experiences, they found a strong correlation between ACE's and the long-term impact on physical health and physical risk habits. The methodology for the study was through questions on a survey that received 9,508 responses. Participants were questioned on 7 categories of adverse childhood experiences: psychological, physical, or sexual abuse; violence against mother; or living with people who were substance abusers, mentally ill or suicidal, or ever imprisoned (Felitti et al, 1998). The number of categories of these adverse childhood experiences was then compared to measures of adult risk behavior, health status, and disease.

This survey resulted in a clear understanding that there is a strong correlation between ACE's and health risk. First, it was discovered that people who had experienced four or more of the defined categories of childhood exposure to adversity, compared to those who had none, had a 4 to 12 fold increase in health risks for alcoholism, drug use, depression and suicide (Felitti et al, 1998). A 2 to 4 fold increase in smoking, poor self-rated health and sexually transmitted disease was also discovered (Felitti et al, 1998). Finally, the study discovered a 1.4 to 1.6 fold increase in physical inactivity and severe obesity (Felitti et al, 1998). This study culminated with the assertion that exposure to adverse childhood experiences results in long term health effects and an increase in adult health risks including ischemic heart disease, cancer, chronic lung disease, skeletal fractures, and liver disease, as well as the more adverse events you are exposed to the more health issues you are likely to have (Felitti et al, 1998). This study shows how the severity of ACE's are severe and multi-faceted. It impacts long term risk of physical health, with

an increased risk of severe obesity and heart conditions. Mental health is impacted by an increased risk of suicide and depression. Poor behavior like increased smoking and drinking is more likely if you have suffered an ACE. All of these issues stem from events that can be addressed and prevented.

With this study in mind, it is clear how ACE's impact children living in low SES households worse than anyone else. As referenced in the statistics earlier, children in low SES households are more likely to suffer from ACE's than those in medium to high SES households. The increased risk of suffering from an ACE subjects them to an increased risk of immediate and long-term health problems, placing a massive negative impact on their development.

While research examining the relationship between low SES and experiencing an ACE is prevalent, and even more research exists on the long term impact of suffering an ACE, not as much research has been dedicated to finding a solution to prevent them from happening. However, some progress has been made on how to help children cope. One method is using holistic approaches, such as meditation, yoga, and mindfulness, which have been found to positively impact brain and body development and can help the body in repairing the damage done by trauma (Kupferman, 2020). Mindfulness, meditation, and yoga have positive effects on the structure and/or function of children's hippocampus (responsible for information gathering and memory), the amygdala (responsible for emotion regulation), and the prefrontal cortex (responsible for executive functioning and complex behaviors) (Kupferman, 2020). While not a silver bullet solution, it is a positive step towards combatting this issue.

Combined, social determinants of health and adverse childhood experiences cause long term health problems for children. They anchor down a large portion of the children they impact,

rendering them stuck in the places they were first impacted. Education, long viewed as the ticket out of these circumstances, is unfortunately impacted just as much.

Educational Outcomes

Throughout this paper, factors that impact education outside of school have been discussed. In this section, factors within the school and their impact on educational outcomes for low SES children will be discussed. Most children of low SES live in high poverty areas, leading to a negatively impacted school full of a high student poverty demographic. High poverty schools more often have inadequate facilities (Acevedo-Garcia, McArdle, Ospuk, Lefkowitz, & Krimgold, 2007), and they receive lower per-pupil spending allocations from federal, state and local districts (Acevedo-Garcia et al., 2007; Education Trust-West, 2005; Lara, Gamboa, Kahramanian, Morales, & Hayes Bautista, 2005). This suggests that these schools lack the resources to properly educate these children and give them an environment in which they can flourish. This puts them at a disadvantage during development because good facilities and good resources are necessary in order to properly educate a student. The better the facilities and resources, the better an education outcome will be.

Besides a lack of resources, these schools also lack curriculum rigor (Barton & Coley, 2009; Poliakoff, 2006), have fewer advanced placement courses (Acevedo-Garcia et al., 2007), and have less technology assisted instruction (Barton & Coley, 2009); use less credentialed/qualified teachers who lack experience; who are absent more often; and who experience higher teacher turnover; (Acevedo-Garcia et al., 2007; Hodgkinson, 2006). This suggests that even those who get through to graduation are still at a disadvantage. A transcript and where you go to school are amongst the pillars of academic achievement and are most thoroughly analyzed by college admissions officers. This puts low SES students at a disadvantage because having a less

rigorous curriculum, fewer difficult classes like AP's and less credentialed teachers can make a high school student's resume not as strong as someone who comes from a high SES school. This puts a low SES student at a disadvantage for getting into a quality college or getting into a college at all. Thus, increasing the risk of not being able to improve their situation.

Another important aspect of a child's development in school is participating in extracurricular activities. Low SES children are also at a disadvantage in this area as well. The Early Longitudinal Study was a study of a Kindergarten class and their participation in extracurriculars based on their socioeconomic status. The analysis found that 20 percent of low-SES students visited an art, science, or discovery museum in the summer, compared to 62 percent of high-SES students (Redford & Burns & Hall, 2018). This suggests a clear gap between low and high SES participation in academic extracurriculars. Museums, like the ones mentioned in this study, are not only educational but can also foster different interests and offer inspiration for developing children. With fewer opportunities to attend, low SES students are less likely to attain these experiences. This will negatively impact future educational outcomes.

Disparities by SES were also found across other activities examined in the report, including going to a library and visiting historic sites (Redford & Burns & Hall, 2018). Historic sites and libraries are another set of facilities that foster an academic environment. Like museums, these facilities can be beneficial to a child's educational outcomes, further putting low SES children and their development at a disadvantage.

Another analysis of children's time-use during the summer months found that children from lower-income households watched more television and spent less time talking with parents than children from higher-income households (Redford & Burns & Hall, 2018). This is important because isolating yourself and watching television and not spending time with people can impact

your ability to communicate and foster relationships, which are important in an academic setting (Redford, Burns, Hall, 2018).

With education being impacted so heavily by socioeconomic status, children are being deprived of the one thing that can aid them in improving their circumstances. This means that in order to move towards a solution to addressing the impact low SES has on a child's development, we must reorganize and repurpose aspects of child development in order to prevent these problems from happening in the first place.

Potential Solutions

Although there have not been many definitive solutions on how to combat the negative impacts of low SES on children, there have been proposals put in place on how to potentially aid children. One possible way to aid children in low SES households is by redesigning health care practices. In a research paper by Academic Pediatrics, they discuss how redesigning health care practices to target and identify potential social determinants of health in children could be beneficial in addressing the issue.

With childhood poverty being so widespread, most pediatricians are likely to be treating at least a few patients who live in poverty. With this in mind, the paper describes the need for a transformation of healthcare practices to create a means to target and identify social determinants of health in a child's living situation (Schickedanz, Dreyer, Halfon N, 2016). The initial described step in the process of identifying social determinants of health is through a screening tool. The screening tool can take the form of known surveys such as the health leads survey (Fierman et al, 2016).

Figure 2: Health Leads Survey (Fierman et al, 2016)

Bellevue Hospital Center
 Health Leads
 Better health. One connection at a time.

Bellevue Hospital Center
 462 1st Ave.
 New York, NY 10016

Stamp patient information here

Patient Family Questionnaire

Health Leads connects Bellevue patients with the basic resources they need to be healthy. Please complete the form below so we can help connect you with services in your community. Thank you.

Name:..... Address:.....
 Phone Number:..... Best time to call:.....

Please check any box below that applies		✓
	Sometimes I don't have enough food for my family	
	I worry that my home is unhealthy , or that my family may become homeless	
	My family currently shares a home with another family (not my child's grandparents)	
	My family currently lives in a New York City shelter for homeless families	
	I have trouble paying my utility bills (gas, electricity and phone/cell phone)	
	I need help finding job training or employment programs	
	I want to apply for health/dental insurance for my children or for myself	
	I want to find adult education classes (e.g. GED, ESL)	
	I want to apply for public benefits (e.g. food stamps, cash benefits, WIC, SSI/SSDI)	
	I want to find child care or activities for my children to do after school or during the summer	
	My family needs clothing , diapers , car seats , back to school supplies , other.	
	I am having legal issues, such as immigration and divorce	
	I do not feel safe at home. I am afraid that I may be hurt by someone at home.	

The figure above represents an example of a potential survey that can be used to help identify social determinants of health in a child’s life. As you can see, it addresses issues like food insecurity, poverty, education, and health care. Once these determinants are identified, it is essential that the practice begin a series of steps that assist the patient in dealing with it. There is a wide variety of ways that a practice can respond to these determinants.

First, a practice can look internally to utilize resources on hand to help. However, it is likely that practices with a lot of high poverty clients will not have sufficient resources for this issue (Fierman et al, 2016). These practices will need to look externally. Most communities have state and federally funded programs that can help aid with social determinants of health in

children. Practices will need to have an up to date directory of all the resources in the community so that they can easily link clients to their services (Fierman et al, 2016). To identify all resources, and compile a directory, practices must connect and form relationships with other practices and community entities. Once this is completed, a practice can help these families.

Outside of this, practices can also try to develop programs within their own offices if they deem the community entities to not be sufficient enough in catering to the children's needs. Having the option of using a medical practice as a point of intervention could be a more effective option for certain people given their situations. Clearly, redesigning health care practices is a tall task. It takes participation across thousands of practices across the country. However, the science behind it shows it has the potential to assist children in these situations. Awareness of it could help create a big difference in the quality of life for certain children.

Outside of redesigning health care practices, using the private sector to provide intervention is also seen as a method that can help low SES students. This concept, known as social entrepreneurship, is an innovative activity within or across the nonprofit, government, or business sectors to generate social impact (Allensworth, 2011). Essentially, it is groups with large funding using their resources to benefit society. Because of the many networks amassed by large entities, they have the potential to use these networks as a bridge between communities and families in need and the groups that can provide that help. They have the potential to compile their own resources through their own means that can then be injected into the community. Although not a direct solution to the problem, social entrepreneurship has the potential to not only help communities but also bring awareness to the bigger problem at hand.

Conclusion

The data shows that childhood development is negatively impacted by growing up in a low socioeconomic status household. Growing up in a low SES household makes a child more likely to be subjected to social determinants of health, adverse childhood experiences and negative education outcomes. What is so dangerous about these three aspects of growing up with low SES is that they are very connected and almost work in tandem to bring those down who suffer from them.

When you live in a low SES household you are very likely to deal with social determinants of health. These social determinants of health have immediate and long-term impacts on the health of children who grow up with them. Even more important in the discussion of this issue, children have limited ability to choose the situation they grow up in. These determinants that impact their future are out of their control and are unfairly placed upon them. Worst of all, they increase a child's chance of suffering from one or more adverse childhood experiences.

Adverse childhood experiences are also more likely to impact low SES children than high SES children. These traumatic events are typically a result of the environment they grow up in, something they have limited control over. As is suggested by the research presented, the ramifications of these traumatic events are often long term, plaguing these children with physical and mental health problems, impaired cognitive development, and behavioral impairment. The fallout from these events leak into other parts of life.

These aspects of living in a low SES household work in tandem to wreak havoc on the lives of those who suffer from them. Social determinants of health and adverse childhood

experiences greatly affect educational outcomes for these children. Education is seen as the primary avenue out of low SES and into a positive status that can lead to a healthy and successful life. With children who do not receive a high school diploma living 6-9 years less than those who do, it shows the importance of preventing the former two aspects in order to save the latter aspect. (Allensworth, 2011). Children in low SES households are brought into a situation where they are exposed to events that negatively impact health and can ultimately lead to a shorter life. Further troubling, the effect these events have on their health prevents them from taking the one avenue that can improve their situation: education.

This paints the picture of a vicious cycle that some families have been unable to stop for generations. A child is born into a low SES household. The social determinants of health take root early, leading to adverse events such as the loss of a parent. The adversity leads to illness and early stunted development, further impacting their ability to perform well in school. Lackluster academic achievement leads to the inability to procure a good job, bringing them right back to where they started. Eventually, the next generation is ushered in and the cycle continues, become systemic within the country itself. These people are our friends, our neighbors and members of our local community. It calls out our morals and ethics that issues like this can persist in a technologically advanced and developed country.

When looking at the future of this research and the direction it is heading in regard to a solution there is a lot to think about. The analogy of the cycle, and the idea that these aspects work in tandem, shows that a solution cannot be attained for any of the three aspects individually. There must be a systematic change that can impact all three at once. If one of these aspects persists, the other two will go along with it. That is why understanding and researching

this topic is necessary. Until it is solved, children and generations of families will continue to suffer.

There is an enormous amount of research on this topic, showing that there is a clear public health issue in place. Although there have been proposals on how to combat this issue, like the one made by American Pediatrics to identify social determinants of health, there is not a lot of total research on how to solve the problem. With a clear correlation between socioeconomic status and childhood development, pushing towards a solution is in the best interest of the country. When more people are succeeding and thriving it has a positive effect on the nation as a whole. It produces more consumers, doctors, teachers and more necessary forces in order to improve society. A solution to this problem does not just impact the impoverished children, it impacts all of us.

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