

Executive Summary

Emerging Early Childhood Inequality: On the Relationship Between Poverty, Stress, Sensory Stimulation, and Child Development and Achievements

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How do experiences in early childhood impact development and achievement? The academic literature indicates that there are various ways in which economic inequality experienced in early childhood may lead to inequality in scholastic achievement later in life.

It is widely agreed that education is the key to future opportunities, success, and intergenerational economic mobility, and that equal educational opportunity should be assured for all of Israel's children. Though the prevailing assumption is to address inequalities in education through changes to the education system, studies show that scholastic-achievement disparities between children belonging to different socioeconomic strata appear already at younger ages.

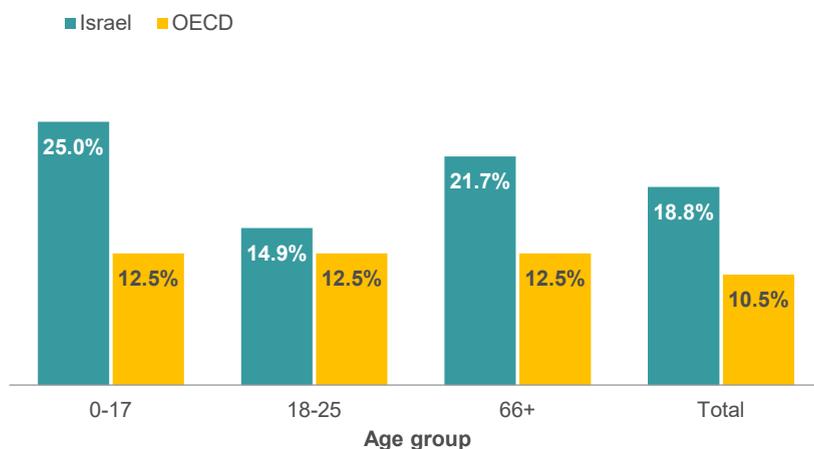
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Socioeconomic and scholastic-achievement inequalities

Inequality in scholastic achievements in Israel is among the highest in the developed world, which may well be related to economic inequality.

Despite a slight decline in recent years, Israel leads the OECD in disposable income inequality. In 2015, the share of children ages 0-17 living in poor families was 25 percent. The incidence of poverty among children in Israel is very high compared to the norm for welfare states, and child poverty is especially prevalent among the Arab Israeli and Haredi populations.

Figure 1. The incidence of poverty by age group, 2016



Source: Yossi Shavit, Isaac Friedman, John Gal, and Dana Vaknin, Taub Center

Data: NII, *Annual Report 2016*

Inequality in scholastic performance is also particularly high in Israel. The PISA 2015 exam results indicate that the gap between the average score of Israel's 5th percentile and the average score of the 95th percentile ranks in the top three of all participating countries for scientific literacy, reading literacy, and math.

Stress and sensory stimulation

Existing research on scholastic achievement suggests that prolonged exposure to environmental experiences in early ages is of critical importance to the development of the brain and the central nervous system, and that early childhood is a time when the brain has the most “plasticity” and is particularly open to change.

This literature review argues that the lack of exposure to cognitive stimuli in early childhood, as well as exposure to chronic stress situations, may inhibit the normal development of cognitive and non-cognitive skills. For example, studies show that stress during the young brain’s developmental stages can disrupt normal cognitive and emotional development. Similarly, stress experienced by a mother during pregnancy may affect the development of the fetus and the infant in the future.

Not only does severe childhood deprivation have an impact on chronic stress, but there is also evidence that the degree of recovery from damage caused by gestational stress is closely related to family socioeconomic status — with children of high socioeconomic status recovering more readily than those of lower socioeconomic status. Furthermore, the family’s socioeconomic status may affect the supply of sensory stimuli available to young children, which in turn influences brain development. Therefore, children who grow up in an environment of chronic and severe poverty may suffer from persistent deprivation of exposure to enriching experiences, which may affect the optimal development of cognitive abilities and social and emotional skills, as well as future scholastic achievement. Experiential deprivation during “critical periods” of brain development and lack of exposure to certain vital stimuli while the brain has optimal plasticity can be very difficult to compensate for later in life.

Policy options: Addressing poverty in early childhood and its impact on scholastic achievements

Interventions aimed at coping with the consequences of early childhood poverty and inequality on the educational achievements of children can focus on a wide range of areas — the labor market, healthcare system, education system, etc. The literature review focuses on three possible approaches:

1. Substantially increasing access to day care and improving the quality of care

Educational frameworks for young children could mitigate the disadvantages of growing up in a family of low socioeconomic background and can lead to better cognitive performance and non-cognitive development later on. In fact, research has shown that the educational programs with the highest rates of return are those that target the youngest age group, from birth to age 5.

In Israel, only 20 percent of children ages 0-3 attend recognized and supervised day care centers or family day care (only 10.6 percent in the Arab Israeli sector). Consideration should be given to policies that would substantially increase the supply of high quality early childhood education and care programs and allow easier access to day care centers for children whose parents do not regularly and continuously participate in the labor market. There should also be special emphasis on developing a system of day care centers to serve the Arab Israeli population.

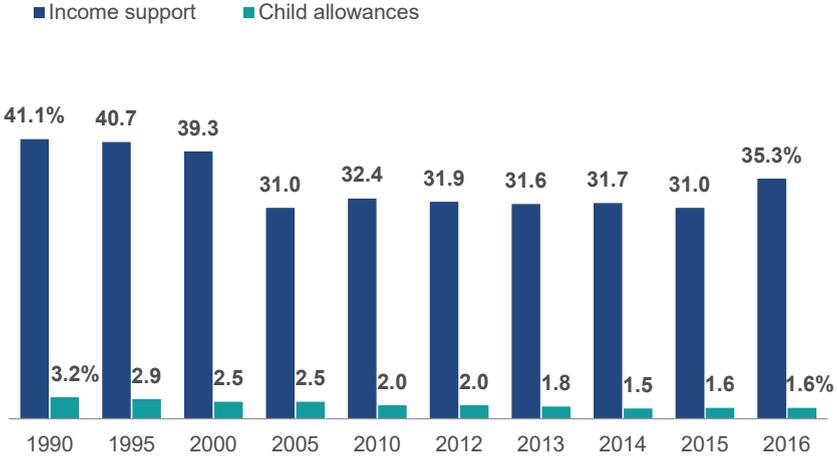
2. Comprehensive interventions at the community level, focusing on families with young children living in poverty

Poverty and severe distress can make it hard for parents to provide their children with the best possible developmental environment. Directly and holistically addressing the diverse needs of families through “poverty-aware social work” can make a big difference, but cannot be done on a large scale without a major expansion of community-level programs that focus specifically on the needs of families suffering from severe deprivation.

3. Addressing poverty more comprehensively and effectively

Another approach is direct intervention to curb the prevalence of child poverty. This could be accomplished through increasing cash payments that can help alleviate the financial difficulties of families with children lacking sufficient basic financial resources.

Figure 2. Family income support and child allowances as a percentage of the average wage



Source: Shavit Madhala, Taub Center | Data: NII, *Statistical Quarterly*