

Perspective

Handing Money to the Poor Is Never Enough: The Impact of Marginalization-Related Diminished Returns

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Abstract: Recent US studies such as Baby's First Years have again demonstrated that unconditional cash transfers and guaranteed income do not lead to significant improvements in the health, economic status, and well-being of individuals living in poverty. In this perspective article we review the emerging literature on this topic and offer explanations for the observed outcomes. We then apply the theory and empirical evidence on marginalization-related diminished returns (MDRs) also called minorities diminished returns (MDRs) to elucidate the weak or null effects of cash transfers in the lives of marginalized populations. According to the MDR theory, marginalization not only reduces access to resources but also reduces their utility. Individuals who experience long-term poverty and marginalization exhibit smaller than expected benefits from new resources, such as cash, in adulthood. This is due to the deeply entrenched structural barriers and systemic discrimination that persist throughout their lives. The existing literature suggests that socioeconomic changes in adulthood have limited impact on the health and well-being of populations that have been raised in poverty. This is because the advantages of increased socioeconomic status (SES) are often undermined by ongoing marginalization and limited access to supportive resources and opportunities. As a result, simply providing cash transfers is insufficient to create substantial and lasting improvements in the lives of those living in poverty. To address these challenges, we recommend a multifaceted approach that includes childhood poverty prevention, interventions aimed at reducing marginalization, and comprehensive multi-sector strategies. By focusing on early intervention and addressing the root causes of poverty and marginalization, we can create more effective and sustainable solutions to improve health and well-being among disadvantaged populations. This holistic approach recognizes the complexity of poverty and the necessity of addressing both immediate needs and long-term structural barriers to achieve meaningful change.

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For many years, cash assistance has been targeted as a primary tool for poverty elimination. The underlying premise of this approach is that providing direct financial support will enable individuals and families to secure better employment, manage their finances more effectively, and ultimately improve their overall health and well-being.

Proponents argue that with financial barriers reduced, recipients will have the resources needed to pursue educational opportunities, invest in healthier lifestyles, and escape the cycle of poverty.

However, the existing literature presents a more nuanced picture, often showing that the results of such interventions are not as promising as initially hoped. Studies have indicated that while cash assistance can provide temporary relief and modest improvements in some areas, it often fails to produce substantial and lasting changes in the lives of the recipients. This suggests that cash assistance alone may not be sufficient to address the multifaceted nature of poverty and its underlying causes.

Several factors may contribute to the limited effectiveness of cash assistance programs. Structural barriers, such as limited access to quality education and healthcare, persistent discrimination, and a lack of supportive social services, can impede the long-term benefits of financial aid. Additionally, economic instability and fluctuating labor markets may undermine the stability that cash assistance aims to provide.

In this perspective article, we first provide a comprehensive overview of the concept of cash assistance and guaranteed income. We then summarize recent literature that has examined the effects of these interventions, highlighting both the successes and limitations observed. Following this, we delve into potential explanations for the observed weak effects, considering the broader socioeconomic context and structural challenges that may hinder the effectiveness of cash-based interventions. Finally, we discuss the policy implications of our findings, suggesting additional measures that could complement cash assistance to create more sustainable and impactful change. By addressing these additional needs, we hope to offer a more holistic approach to poverty alleviation that acknowledges the complexity of the issue and the necessity for multifaceted solutions. It is crucial to approach these findings with caution and avoid oversimplifying the effects when recommending policies to address economic, behavioral, and health disparities.

Mincome, the "Manitoba Basic Annual Income Experiment," was a Canadian guaranteed annual income (GAI) social experiment conducted in Manitoba during the 1970s [1]. Funded jointly by the Manitoba provincial government and the Canadian federal government under Prime Minister Pierre Trudeau, the experiment included a randomized controlled trial in the City of Winnipeg and rural Manitoba. Additionally, a "saturation site" pilot project was launched in the town of Dauphin, Manitoba, in 1973. No final report on Mincome was issued and there are no strong evidence suggesting influence of such a Basic Annual Income program on major wellbeing of the population [2].

B-MINCOME, conducted between 2017 and 2019 in Barcelona, was one of the first European implementations of guaranteed income. This intervention implemented a basic income experiment, to reduce poverty and social exclusion in a low-income area of the city. A new cash grant was designed along with a package of active policies. Four modalities of participation were then established depending on two criteria: whether attending these policies was mandatory or not, and whether participants' additional income altered the amount of the grant or was instead net added on top. The intervention failed to improve these outcomes: Using social services, Undertake training, Engaging in social leisure activities, Spending more time on household chores, health (self-rated), mental health (self-rated), New diagnostics of anxiety or depression, perceived social support, social volunteering, engaging in social participation, or educational involvement [3].

Troller-Renfree *et al.* published the first results of the Baby's First Years [4] intervention on babies. The detailed information on the design of the intervention is available here [4]. In summary, this innovative study randomly assigned 1,000 low-income mother-newborn dyads into two intervention arms: a large nominal unconditional monthly cash transfer and a nominal unconditional monthly cash transfer. The results reveal changes in the brain function at 1 y, using resting

electroencephalography, among the infants in the larger cash transfer group [5,6]. However, the study did not show any impact on

Gennetian et al. paper in *Nature Human Behaviour* reported another aspects of the results of their Baby's First Years [4] intervention. They tested the impact of unconditional cash transfers on family investments among parents in low-income families [7]. They enrolled and randomized low-income mothers from four US metropolitan areas into two groups. One group received a monthly unconditional cash transfer of \$333 per month (high) and one group received a monthly unconditional cash transfer of \$20 per month (low) for the first several years after childbirth. The findings suggest that families receiving a higher cash transfer spend more on child-specific goods and engage more in early learning activities. These results are promising and highlight the potential benefits of public and economic interventions that provide financial support for new mothers living in poverty [8-11].

Vivalt et al. [12] conducted a study to examine the causal effects of income on a wide range of employment outcomes through an experiment involving 1,000 low-income participants. Participants were randomly assigned to receive \$1,000 per month unconditionally for three years, while a control group of 2,000 participants received \$50 per month. The study collected detailed survey data, administrative records, and data from a custom mobile phone app. Results showed that the cash transfer group experienced a reduction in total individual income by about \$1,500 per year relative to the control group, excluding the transfers. Additionally, the program led to a 2.0 percentage point decrease in labor market participation and a reduction in labor hours by 1.3-1.4 hours per week. Participants' partners also reduced their working hours by a comparable amount. The primary effect of the cash transfer was an increase in time spent on leisure activities. The project did not impact the quality of employment, and statistical analysis ruled out even small positive effects. In addition, there were no significant effect of the intervention on investments in human capital, although younger participants might pursue more formal education [17].

While cash assistance as a tool for poverty elimination has positive effects, policymakers may have a tendency to overestimate the effects of their policies and interventions [13-15]. They should be humble and expect more attenuated results in real-life settings due to the voltage drop of any intervention once it is implemented outside of controlled experimental settings [16]. Another reason for humility is that the impact of poverty on health and behavior is not uniform across different racial and ethnic groups [17]. Research has consistently shown that the presence or absence of poverty is a more consequential determinant of health for Whites than for marginalized social groups such as Black populations [18]. The disparities in health and behavioral outcomes between Black and White populations cannot be fully explained by socioeconomic status (SES) alone [19].

There have been various anti-poverty interventions implemented in developing countries, but the evaluations of these programs have rarely been conducted using randomized trials. Without randomization, there is always the possibility of bias, which could lead to an overestimation of the effects of these programs. These examples do demonstrate the potential for cash transfer programs to improve public health indicators, reduce poverty, and enhance social outcomes, particularly when they are well-targeted and accompanied by complementary interventions. However, while some of these interventions have been associated with improvements in outcomes, the lack of randomized evaluations means we cannot definitively attribute these effects to the programs themselves. Table 1 lists some of these programs, but it should be noted that this list is not exhaustive.

In their influential paper, "The Miracle of Microfinance? Evidence from a Randomized Evaluation," [20] Nobel laureates Abhijit Banerjee and Esther Duflo presented findings from a randomized evaluation of a group lending microcredit

program in Hyderabad, India. In this study, a microfinance lender operated in 52 randomly chosen neighborhoods, resulting in an 8.4 percentage point increase in the uptake of microcredit. The study observed an increase in both small business investments and profits for pre-existing businesses, but it found no significant rise in overall consumption. While spending on durable goods did increase, expenditures on "temptation goods" declined. The evaluation also revealed no significant impacts on health, education, or women's empowerment. After two years, when control areas had also gained access to microcredit and households in the treatment areas had borrowed more and for longer periods, few significant differences between the groups remained [20]. Therefore, while some minor positive effects of microcredit may be evident, the benefits of such programs have often been overestimated by researchers, with the actual gains being null or at most very modest [13].

Table 1. Some notable examples of cash transfer programs in developing countries that have not been evaluation using randomized trial design

<p>Brazil</p> <p>Bolsa Família:</p> <p><i>Overview:</i> Bolsa Família is one of the largest and most well-known conditional cash transfer programs globally. It provides financial aid to low-income families, with conditions such as ensuring children attend school and receive vaccinations.</p> <p><i>Impact:</i> Studies have shown significant improvements in child health outcomes, reductions in poverty rates, and increased school attendance. The program has also contributed to reducing inequality in Brazil.</p> <p>Mexico</p> <p>Oportunidades/Prospera:</p> <p><i>Overview:</i> Initially launched as Progresa, this conditional cash transfer program was later renamed Oportunidades and then Prospera. It targets poor households with financial assistance tied to health check-ups, nutrition, and educational attendance.</p> <p><i>Impact:</i> The program has been associated with improvements in child nutrition, school enrollment rates, and reductions in stunting. It also contributed to long-term poverty reduction and better health outcomes.</p> <p>Kenya</p> <p>Hunger Safety Net Programme (HSNP):</p> <p><i>Overview:</i> HSNP is an unconditional cash transfer program targeting vulnerable populations in Northern Kenya, focusing on poverty alleviation and improving food security.</p> <p><i>Impact:</i> The program has been linked to reduced poverty and improved food security. It has also increased household resilience to shocks, such as drought, by providing a safety net.</p> <p>South Africa</p> <p>Child Support Grant (CSG):</p> <p><i>Overview:</i> The CSG is an unconditional cash transfer program providing financial assistance to low-income families with children. It aims to reduce child poverty and improve child welfare.</p> <p><i>Impact:</i> The grant has been associated with improved child nutrition, increased school attendance, and reductions in poverty among beneficiaries. It has also contributed to better health outcomes for children.</p> <p>Ethiopia</p> <p>Productive Safety Net Programme (PSNP):</p> <p><i>Overview:</i> PSNP is a large-scale social protection program that combines cash transfers with public works employment. It aims to reduce food insecurity and build household resilience.</p> <p><i>Impact:</i> The program may have led to improvements in food security, increased agricultural productivity, and better household resilience to economic shocks. It has also contributed to poverty reduction in targeted areas.</p>
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Ghana

Livelihood Empowerment Against Poverty (LEAP):

Overview: The LEAP program, launched in 2008, is an unconditional cash transfer initiative targeted at extremely poor households in Ghana. The program primarily supports orphans and vulnerable children, elderly people without support, and persons with severe disabilities.

Impact: LEAP has been associated with several positive outcomes, including reductions in poverty and food insecurity. Beneficiaries have shown improvements in health-seeking behavior, school enrollment, and retention for children. Additionally, the program has helped households increase their consumption and build resilience against economic shocks. While LEAP has made significant strides in improving immediate welfare indicators, challenges remain in achieving sustained long-term impacts on poverty and health outcomes. The program has been part of a broader strategy to strengthen Ghana's social protection framework.

Bangladesh

Employment Generation Program for the Poorest (EGPP):

Overview: The EGPP is a public works program that provides short-term employment to extremely poor and vulnerable households during the agricultural lean season, when job opportunities are scarce. While the primary form of support is employment, the program includes cash transfers as wages for the work performed.

Impact: The EGPP may have had a significant positive impact on poverty alleviation and food security among the poorest segments of the population. It may have helped to stabilize incomes during the lean season, reducing the need for distress sales of assets and improving household food consumption. Although primarily focused on economic outcomes, the EGPP indirectly contributes to improved health outcomes by enabling poor households to afford better nutrition and access healthcare services.

Old Age Allowance Program:

Overview: The Old Age Allowance Program is an unconditional cash transfer initiative aimed at providing financial support to elderly citizens in Bangladesh who do not have a regular source of income. This program is part of Bangladesh's broader social protection strategy to reduce poverty among the elderly.

Impact: The program may have had a positive impact on reducing poverty among elderly beneficiaries, improving their ability to meet basic needs, including food, healthcare, and shelter. It also enhances the social status and security of older individuals in their communities.

Vulnerable Group Development (VGD):

Overview: The VGD program is a large-scale social safety net initiative that combines food assistance with cash transfers and skills development for women living in extreme poverty. Beneficiaries receive food rations and a small cash stipend, along with training to improve their income-generating capabilities.

Impact: The VGD program may have been successful in improving food security, nutritional status, and economic empowerment among its female beneficiaries. It has also contributed to reductions in poverty and enhanced resilience against economic shocks.

Another illustrative example is provided by a study conducted by Lantz et al. [21], who performed a population-based telephone survey involving 2,346 rural Wisconsin women aged 40 years and older. The study revealed that the most significant barriers to cancer screening in this rural population were nonfinancial impediments to access. The removal of economic barriers alone did not lead to substantial increases in screening rates when other types of barriers were present. The researchers concluded that policies and interventions focused solely on the visible disparities among rural women of different socioeconomic levels—such as the ability to afford healthcare services—are insufficient if they do not also address barriers related to knowledge, attitudes, and healthcare access. This study provides empirical evidence that eliminating financial barriers alone is

unlikely to significantly reduce socioeconomic disparities in cancer screening. The findings underscore the importance of considering a broader range of factors, including whether women understand the purpose of the tests and whether they are recommended for their age or risk profile. Importantly, the study's simulation exercises suggest that nonfinancial barriers, such as recent contact with a healthcare provider and having a regular physician—especially one who has previously recommended cancer screening—are critical determinants of screening behavior. These factors strongly influence a woman's adherence to screening guidelines, irrespective of her financial situation or her knowledge and attitudes toward the tests. The study suggests that policies and programs offering free or reduced-cost screenings will have limited impact in subpopulations that lack consistent healthcare or recent interaction with a healthcare provider. However, designing policies and interventions that effectively address these nonfinancial barriers presents a significant challenge [21].

All the studies discussed above have predominantly focused on marginalized and impoverished populations. These studies have primarily utilized cash assistance programs and have not included multi-sector interventions. Additionally, they have failed to address the stigma and other barriers faced by individuals in these populations. The results of these studies have shown less than expected effects, with no major hypothesized outcomes being achieved. Both physical and mental health outcomes have remained largely unchanged, and some unintended negative effects, such as low participation in the labor market, have also been observed.

We explain these findings through the lens of the Diminished Returns (MDRs) theory [22-30]. According to MDRs, resources and assets tend to have weaker effects on health, behaviors, and economic outcomes for marginalized populations compared to their more advantaged counterparts [31-38]. This phenomenon highlights the structural and systemic barriers that limit the effectiveness of interventions aimed at improving the well-being of marginalized groups [39-48]. Consequently, the anticipated benefits of cash assistance programs and similar interventions are often not fully realized, underscoring the need for more comprehensive, multi-sector approaches that address the underlying causes of health and economic disparities.

As shown by the Marginalization – related Diminished Returns (MDRs) literature [49,50], the same level of resources and SES yields fewer health benefits for marginalized groups compared to their White counterparts. This theory underscores the role of structural factors, such as racism and segregation, which limit access to essential resources like healthy food, quality education, and public transportation for marginalized families. These structural barriers diminish the positive returns of parental resources and SES on youth from marginalized communities.

Here are some examples of Minorities' Diminished Returns (MDRs) documented in the literature: An increase in income among Black individuals is not consistently associated with a reduction in the risk of discrimination [51], stress [52], distress [53], school dropout, depression [54], externalizing behaviors [55], internalizing behaviors [55], suicide [56], substance use [57], asthma [58], obesity [59,60], chronic disease [61], and high blood pressure [62]. In Black children, increase in income does not predict increase in some aspects of cognitive functioning such as attention [63] and matrix reasoning [38]. These patterns are evident across various life stages, including birth [64], childhood [58], pre-adolescence [38], adolescence [54], emerging adulthood [65], mid-adulthood [66], and older adulthood [67-70]. Similarly, other resources such as family structure, education, parental education, and employment often do not yield the same protective effects for Black individuals as they do for their White counterparts. These patterns of diminished returns are not exclusive to Black people and have also been observed among other marginalized groups, including Asian [71], Latino [57,72,73], Native American [24,74,75], immigrant [31,40,76-79], Lesbian, gay, bisexual, and transgender (LGBT) [30,34,80], and even certain marginalized White populations.

It is unexpected but true that under social stratification, racism, and segregation, higher financial resources in Black families often come with increased exposure to discrimination and higher rates of depression. High income protects against diseases for Whites more effectively than for Blacks, partly because resources are more likely to translate into savings and long-term benefits for privileged groups. For marginalized families, systemic inequalities hinder the conversion of financial resources into health and behavioral improvements [49,50].

Public policies that increase availability of cash and reduce financial distress or even add income security for families living in poverty would not be highly effective unless we see a reform the systems of education, housing, food, healthcare, and policing that can help that added income or cash can bring for families. This is particularly the case for families with multiple marginalizing identities [17].

This opinion piece is not intended to discourage investments in poverty elimination or marginalization reduction. On the contrary, we advocate for continued and increased investments in these areas. However, it is a myth to believe that closing the SES gap will automatically eliminate health and behavioral disparities. Policymakers must consider the broader social context and address the structural determinants of health to achieve true equity [17]. There is always a need for multisectoral interventions [81-83].

In conclusion, it is essential to recognize the limitations of SES-focused interventions and the need for comprehensive strategies that tackle structural inequalities that cause unemployment and poverty. Only by addressing the root causes of disparities can we hope to close the economic, behavioral, and health gaps in our society. Such interventions should be multi-sector, multi-level, and upstream. Giving cash to people is helpful, but none of that.

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References

- [1] Lain B, Julia A. Why do poor people not take up benefits? Evidence from the Barcelona's B-MINCOME experiment. *Journal of Social Policy*. 2024;53(1):167-188.
- [2] Forget E. Reconsidering a guaranteed annual income: lessons from MINCOME. *Public Sector Digest*. 2015:18-23.
- [3] Riutort S, Laín B, Julià A. Basic Income at Municipal Level: Insights from the Barcelona B-MINCOME Pilot. *Basic Income Studies*. 2023;18(1):1-30. doi:10.1515/bis-2021-0047
- [4] Noble KG, Magnuson K, Gennetian LA, et al. Baby's First Years: Design of a Randomized Controlled Trial of Poverty Reduction in the United States. *Pediatrics*. 2021;148(4). doi:10.1542/peds.2020-049702
- [5] Troller-Renfree SV, Costanzo MA, Duncan GJ, et al. Reply to Assari and Lantz: Heterogeneity in BFY impacts. *Proceedings of the National Academy of Sciences*. 2022;119(35):e2201864119. doi: 10.1073/pnas.2201864119
- [6] Troller-Renfree SV, Costanzo MA, Duncan GJ, et al. The impact of a poverty reduction intervention on infant brain activity. *Proceedings of the National Academy of Sciences*. Feb 1 2022;119(5):e2115649119. doi:10.1073/pnas.2115649119
- [7] Gennetian LA, Duncan GJ, Fox NA, et al. Effects of a monthly unconditional cash transfer starting at birth on family investments among US families with low income. *Nature Human Behaviour*. 2024/06/21 2024;doi:10.1038/s41562-024-01915-7
- [8] Noble KG, Magnuson K, Gennetian LA, et al. Baby's First Years: Design of a Randomized Controlled Trial of Poverty Reduction in the United States. *Pediatrics*. Oct 2021;148(4)doi:10.1542/peds.2020-049702
- [9] Sperber JF, Gennetian LA, Hart ER, et al. Unconditional Cash Transfers and Maternal Assessments of Children's Health, Nutrition, and Sleep: A Randomized Clinical Trial. *JAMA Netw Open*. Sep 5 2023;6(9):e2335237. doi:10.1001/jamanetworkopen.2023.35237
- [10] Yoo PY, Duncan GJ, Magnuson K, et al. Unconditional cash transfers and maternal substance use: findings from a randomized control trial of low-income mothers with infants in the U.S. *BMC Public Health*. May 5 2022;22(1):897. doi:10.1186/s12889-022-12989-1
- [11] Troller-Renfree SV, Costanzo MA, Duncan GJ, et al. The impact of a poverty reduction intervention on infant brain activity. *Proc Natl Acad Sci U S A*. Feb 1 2022;119(5)doi:10.1073/pnas.2115649119
- [12] Vivalt E, Rhodes E, Bartik AW, Broockman DE, Miller S. *The Employment Effects of a Guaranteed Income: Experimental Evidence from Two US States*. 2024.

- [13] Ceci SJ, Papierno PB. The rhetoric and reality of gap closing: when the "have-nots" gain but the "haves" gain even more. *American Psychologist*. 2005;60(2):149.
- [14] Oliver K, Lorenc T, Tinkler J, Bonell C. Understanding the unintended consequences of public health policies: the views of policymakers and evaluators. *BMC Public Health*. Aug 6 2019;19(1):1057. doi:10.1186/s12889-019-7389-6
- [15] Strach P, Zuber K, Pérez-Chiqués E. Why Policies Fail: The Illusion of Services in the Opioid Epidemic. *J Health Polit Policy Law*. Apr 1 2020;45(2):341-364. doi:10.1215/03616878-8004910
- [16] Simoes EJ, Jackson-Thompson J. The United States public health services failure to control the coronavirus epidemic. *Prev Med Rep*. Feb 2023;31:102090. doi:10.1016/j.pmedr.2022.102090
- [17] Assari S, Lantz PM. Income security and infant health: Social context matters. *Proc Natl Acad Sci U S A*. Aug 30 2022;119(35):e2201818119. doi:10.1073/pnas.2201818119
- [18] Assari S, Moghani Lankarani M. Poverty status and childhood asthma in white and black families: National Survey of Children's Health. MDPI; 2018:62.
- [19] Braveman P. *The social determinants of health and health disparities*. Oxford University Press; 2023.
- [20] Banerjee A, Duflo E, Glennerster R, Kinnan C. The miracle of microfinance? Evidence from a randomized evaluation. *American economic journal: Applied economics*. 2015;7(1):22-53.
- [21] Lantz PM, Weigers ME, House JS. Education and income differentials in breast and cervical cancer screening: policy implications for rural women. *Medical care*. 1997;35(3):219-236.
- [22] Assari S, Akhlaghipour G, Boyce S, Bazargan M, Caldwell CH. African American Children's Diminished Returns of Subjective Family Socioeconomic Status on Fun Seeking. *Children*. 2020;7(7):75.
- [23] Assari S, Boyce S, Bazargan M, Caldwell CH. African Americans' diminished returns of parental education on adolescents' depression and suicide in the Adolescent Brain Cognitive Development (ABCD) study. *European journal of investigation in health, psychology and education*. 2020;10(2):656-668.
- [24] Assari S. American Indian, Alaska Native, Native Hawaiian, and Pacific Islander Children's Body Mass Index: Diminished Returns of Parental Education and Family Income. *Res Health Sci*. 2020;5(1):64-84. doi:10.22158/rhs.v5n1p64
- [25] Assari S. College Graduation and Wealth Accumulation: Blacks' Diminished Returns. *World J Educ Res*. 2020;7(3):1-18. doi:10.22158/wjer.v7n3p1
- [26] Assari S. Dimensional Change Card Sorting of American Children: Marginalization-Related Diminished Returns of Age. *Child Teenagers*. 2020;3(2):72-92. doi:10.22158/ct.v3n2p72
- [27] Assari S, Cobb S, Saqib M, Bazargan M. Diminished returns of educational attainment on heart disease among Black Americans. *The open cardiovascular medicine journal*. 2020;14:5.
- [28] Assari S. Diminished returns of educational attainment on life satisfaction among Black and Latino older adults transitioning into retirement. *Journal of Medicine, Surgery, and Public Health*. 2024/04/01/ 2024;2:100091. doi:https://doi.org/10.1016/j.glmedi.2024.100091
- [29] Assari S BM, Caldwell CH, Zimmerman MA. Diminished Returns of Parental Educational Attainment on School Achievement of Non-Hispanic Black High School Students. *Under review*. 2020;
- [30] Assari S, Bazargan M. Education Level and Cigarette Smoking: Diminished Returns of Lesbian, Gay and Bisexual Individuals. *Behav Sci (Basel)*. Sep 24 2019;9(10)doi:10.3390/bs9100103
- [31] Assari S, Perez MU, Johnson N, et al. Education Level and Self-rated Health in the United States: Immigrants' Diminished Returns. *Int J Travel Med Glob Health*. Summer 2020;8(3):116-123. doi:10.34172/ijtmgh.2020.20
- [32] Assari S. Educational Attainment and Exercise Frequency in American Women; Blacks' Diminished Returns. *Women's Health Bulletin*. 2019;6(3):e87413.
- [33] Assari S, Bazargan M. Educational Attainment and Self-Rated Oral Health among American Older Adults: Hispanics' Diminished Returns. *Dentistry Journal*. 2019;7(4):97.
- [34] Assari S, Bazargan M. Educational Attainment and Subjective Health and Well-Being; Diminished Returns of Lesbian, Gay, and Bisexual Individuals. *Behavioral Sciences*. 2019;9(9):90.
- [35] Assari S, Bazargan M. Educational attainment and tobacco harm knowledge among American adults: Diminished returns of African Americans and Hispanics. *International journal of epidemiologic research*. 2020;7(1):6-11.
- [36] Assari S, Boyce S, Bazargan M. Erratum: Subjective Family Socioeconomic Status and Adolescents' Attention: Blacks' Diminished Returns. *Children* 2020, 7, 80. *Children (Basel)*. Dec 31 2020;8(1)doi:10.3390/children8010015
- [37] Assari S, Boyce S, Caldwell CH, Bazargan M, Mincy R. Family Income and Gang Presence in the Neighborhood: Diminished Returns of Black Families. *Urban Science*. 2020;4(2):29.
- [38] Assari S, Boyce S. Family's Subjective Economic Status and Children's Matrix Reasoning: Blacks' Diminished Returns. *Res Health Sci*. Nov 29 2021;6(1):1-23. doi:10.22158/rhs.v6n1p1
- [39] Assari S, Najand B, Sheikhattari P. Household income and subsequent youth tobacco initiation: Minorities' Diminished Returns. *Journal of Medicine, Surgery, and Public Health*. 2024/04/01/ 2024;2:100063. doi:https://doi.org/10.1016/j.glmedi.2024.100063
- [40] Assari S. Income and Mental Well-Being of Middle-Aged and Older Americans: Immigrants' Diminished Returns. *International Journal of Travel Medicine and Global Health*. 2020;8(1):37-43. doi:10.34172/ijtmgh.2020.06
- [41] Assari S, Boyce S, Bazargan M, Caldwell CH, Mincy R. Maternal Education at Birth and Youth Breakfast Consumption at Age 15: Blacks' Diminished Returns. *J—Multidisciplinary Scientific Journal*. 2020;3(3):313-323.

- [42] Assari S. Mental Rotation in American Children: Diminished Returns of Parental Education in Black Families. *Pediatric Reports*. 2020;12(3):130-141.
- [43] Assari S, Boyce S, Caldwell CH, Bazargan M. Minorities' Diminished Returns of Parental Educational Attainment on Adolescents' Social, Emotional, and Behavioral Problems. *Children*. 2020;7(5):49.
- [44] Assari S, Boyce S, Caldwell CH, Bazargan M. Parent Education and Future Transition to Cigarette Smoking: Latinos' Diminished Returns. *Front Pediatr*. 2020;8:457. doi:10.3389/fped.2020.00457
- [45] Assari S. Parental Education and Spanking of American Children: Blacks' Diminished Returns. *World J Educ Res*. 2020;7(3):19-44. doi:10.22158/wjer.v7n3p19
- [46] Assari S. Parental Education, Household Income, and Cortical Surface Area among 9-10 Years Old Children: Minorities' Diminished Returns. *Brain Sci*. Dec 9 2020;10(12)doi:10.3390/brainsci10120956
- [47] Shervin Assari CHC, Mohsen Bazargan. Parental Educational Attainment and Black-White Adolescents' Achievement Gap: Blacks' Diminished Returns. *Open Journal of Social Sciences*. Mar 2020;8(3):282-297. doi:10.4236/jss.2020.83026
- [48] Assari S, Bazargan M, Caldwell CH. Parental Educational Attainment and Chronic Medical Conditions among American Youth; Minorities' Diminished Returns. *Children*. 2019;6(9):96.
- [49] Assari S. Health Disparities due to Diminished Return among Black Americans: Public Policy Solutions. *Social Issues and Policy Review*. 2018;12(1):112-145. doi:10.1111/sipr.12042
- [50] Assari S. Unequal Gain of Equal Resources across Racial Groups. *Int J Health Policy Manag*. Jan 1 2018;7(1):1-9. doi:10.15171/ijhpm.2017.90
- [51] Assari S, Cochran SD, Mays VM. Money Protects White but Not African American Men against Discrimination: Comparison of African American and White Men in the Same Geographic Areas. *Int J Environ Res Public Health*. Mar 8 2021;18(5)doi:10.3390/ijerph18052706
- [52] Assari S. Family Socioeconomic Status and Exposure to Childhood Trauma: Racial Differences. *Children*. 2020;7(6):57.
- [53] Assari S, Lapeyrouse LM, Neighbors HW. Income and Self-Rated Mental Health: Diminished Returns for High Income Black Americans. *Behav Sci (Basel)*. May 17 2018;8(5)doi:10.3390/bs8050050
- [54] Assari S, Caldwell CH. High Risk of Depression in High-Income African American Boys. *J Racial Ethn Health Disparities*. Aug 2018;5(4):808-819. doi:10.1007/s40615-017-0426-1
- [55] Assari S. Youth Social, Emotional, and Behavioral Problems in the ABCD Study: Minorities' Diminished Returns of Family Income. *J Econ Public Financ*. 2020;6(4):1-19. doi:10.22158/jepf.v6n4p1
- [56] Assari S, Najand B, Mincy R, Caldwell C. Family Income May Better Protect White Than Black American Youth Against Suicidality. *Hospital Practices and Research*. 2022;7(2):50-57. doi:10.34172/hpr.2022.11
- [57] Assari S, Najand B, Sheikhattari P. Household Income and Subsequent Youth Tobacco Initiation: Minorities' Diminished Returns. *Journal of Medicine, Surgery, and Public Health*. 2024/02/02/ 2024:100063. doi:https://doi.org/10.1016/j.glmedi.2024.100063
- [58] Assari S, Moghani Lankarani M. Poverty Status and Childhood Asthma in White and Black Families: National Survey of Children's Health. *Healthcare (Basel)*. Jun 12 2018;6(2)doi:10.3390/healthcare6020062
- [59] Assari S, Thomas A, Caldwell CH, Mincy RB. Blacks' Diminished Health Return of Family Structure and Socioeconomic Status; 15 Years of Follow-up of a National Urban Sample of Youth. *J Urban Health*. Feb 2018;95(1):21-35. doi:10.1007/s11524-017-0217-3
- [60] Assari S, Bazargan M, Chalian M. The Unequal Effect of Income on Risk of Overweight/Obesity of Whites and Blacks with Knee Osteoarthritis: the Osteoarthritis Initiative. *J Racial Ethn Health Disparities*. Aug 2020;7(4):776-784. doi:10.1007/s40615-020-00719-5
- [61] Assari S. The Benefits of Higher Income in Protecting against Chronic Medical Conditions Are Smaller for African Americans than Whites. *Healthcare (Basel)*. Jan 9 2018;6(1)doi:10.3390/healthcare6010002
- [62] Assari S, Najand B, Khatami SM. High Systolic Blood Pressure of High-Income African American Children. *J Racial Ethn Health Disparities*. Jul 7 2023;doi:10.1007/s40615-023-01668-5
- [63] Assari S, Boyce S, Bazargan M. Subjective Family Socioeconomic Status and Adolescents' Attention: Blacks' Diminished Returns. *Children*. 2020;7(8):80.
- [64] Assari S. Protective Effects of Maternal Education against Low Birth Weight Deliveries: Blacks' Diminished Returns. *Res Health Sci*. 2020;5(4):1-17. doi:10.22158/rhs.v5n4p1
- [65] Assari S, Zare H. Household Income and Offspring Education Explain Blacks' Diminished Returns of Parental Education. *Open J Psychol*. 2024;4(1):18-29. doi:10.31586/ojp.2024.986
- [66] Assari S, Preiser B, Kelly M. Education and Income Predict Future Emotional Well-Being of Whites but Not Blacks: A Ten-Year Cohort. *Brain Sci*. Jun 29 2018;8(7)doi:10.3390/brainsci8070122
- [67] Assari S. Black Americans' Diminished Health Returns of Professional Occupations: A Thirty-Year Follow-Up Study of Middle-Aged and Older Adults. *J Racial Ethn Health Disparities*. May 28 2024;doi:10.1007/s40615-024-02034-9
- [68] Assari S. Combined Effects of Race and Educational Attainment on Physician Visits Over 24 Years in a National Sample of Middle-Aged and Older Americans. *Hosp Pract Res*. Winter 2020;5(1):17-23. doi:10.34172/hpr.2020.04
- [69] Assari S, Cobb S, Najand B, Zare H, Sonnega A. Race, Educational Attainment, and Sustained High Body Mass Index over 24 Years of Follow-up in Middle-Aged and Older Adults. *J Racial Ethn Health Disparities*. May 2 2023;doi:10.1007/s40615-023-01589-3

- [70] Assari S, Zare H, Sonnega A. Racial Disparities in Occupational Distribution Among Black and White Adults with Similar Educational Levels: Analysis of Middle-Aged and Older Individuals in the Health and Retirement Study. *J Rehabil Ther.* 2024;6(1):1-11. doi:10.29245/2767-5122/2024/1.1141
- [71] Assari S. Diminished Returns of Income Against Cigarette Smoking Among Chinese Americans. *Journal of health economics and development.* 2019;1(2):1.
- [72] Assari S. Minorities' Diminished Returns of Educational Attainment on Life Satisfaction among Black and Latino Adults in the United States. *Journal of Medicine, Surgery, and Public Health.* 2024/03/20/ 2024:100091. doi:https://doi.org/10.1016/j.glmedi.2024.100091
- [73] Assari S, Bazargan M, Caldwell C. Parental Educational Attainment and Chronic Medical Conditions among American Youth; Minorities' Diminished Returns. *Children (Basel).* Aug 26 2019;6(9)doi:10.3390/children6090096
- [74] Sabetnejad Z, Assarian F, Omid A, Najarzagdegan MR. Effectiveness of cognitive behavioral therapy and fluoxetine on sexual function of women with obsessive compulsive disorder: A double-blind randomized controlled trial. *Electron Physician.* Nov 2016;8(11):3156-3163. doi:10.19082/3156
- [75] Assari S, Bazargan M. Protective Effects of Educational Attainment Against Cigarette Smoking; Diminished Returns of American Indians and Alaska Natives in the National Health Interview Survey. *International Journal of Travel Medicine and Global Health.* 2019;
- [76] Assari S, Cobb S, Cuevas AG, Bazargan M. Diminished Health Returns of Educational Attainment Among Immigrant Adults in the United States. *Front Psychiatry.* 2020;11:535624. doi:10.3389/fpsy.2020.535624
- [77] Assari S. Household Income and Children's Depressive Symptoms: Immigrants' Diminished Returns. *Int J Travel Med Glob Health.* Fall 2020;8(4):157-164. doi:10.34172/ijtmgh.2020.27
- [78] Assari SA, G., Boyce, S., Bazargan, M., Caldwell, C.,. Parental Human Capital and Adolescents' Executive Function: Immigrants' Diminished Returns. *Medical Research Archives.* 2020;8(10):1-20. doi:10.18103/mra.v8i10.2235
- [79] Assari S. Socioeconomic Status and Current Cigarette Smoking Status: Immigrants' Diminished Returns. *Int J Travel Med Glob Health.* Spring 2020;8(2):66-72. doi:10.34172/IJTMGH.2020.11
- [80] Assari S. Education Attainment and Obesity Differential Returns Based on Sexual Orientation. *Behav Sci (Basel).* Jan 29 2019;9(2)doi:10.3390/bs9020016
- [81] del Carmen Casanovas M, Lutter CK, Mangasaryan N, et al. Multi-sectoral interventions for healthy growth. *Maternal & Child Nutrition.* 2013;9:46-57.
- [82] Sutarsa IN, Campbell L, Ariawan IMD, et al. Multisectoral interventions and health system performance: a systematic review. *Bulletin of the World Health Organization.* 2024;102(7):521.
- [83] Pronyk PM, Muniz M, Nemser B, et al. The effect of an integrated multisector model for achieving the Millennium Development Goals and improving child survival in rural sub-Saharan Africa: a non-randomised controlled assessment. *The Lancet.* 2012;379(9832):2179-2188.