

# Power of the Positive: Childhood Assets and Future Cardiometabolic Health

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In this issue of *Pediatrics*, Qureshi et al<sup>1</sup> provide a much-needed focus on positive psychological assets in childhood (rather than the more well-documented focus on childhood adversity)<sup>2</sup> and the relationship with subsequent cardiometabolic health. The examination of protective and resilience-enhancing factors is a largely unmet research priority,<sup>2,3</sup> and each of the 4 domains examined reveal empirical potential for investment. For example, the literature demonstrating the role of early-childhood executive function (or self-regulation) in obesity risk is substantial.<sup>4,5</sup> However, a well-designed randomized controlled trial targeting self-regulation in preschoolers was not effective at obesity prevention,<sup>6</sup> which highlights the need to both document associations and to rigorously study methods to enhance these assets. Prosocial behaviors and their relationship with cardiometabolic disease has been less well documented, although these behaviors are broadly protective of mental health and academic outcomes.<sup>7</sup> Associated factors, such as positive relationships, have been shown to be protective of the risk for being overweight in Mexican-origin adult women with histories of abuse,<sup>8</sup> which suggests both of these asset domains are worthy of deeper investigation for their associations with cardiometabolic health. Unfortunately, 2 of the 4 “asset” scales used by Qureshi et al<sup>1</sup> included the absence of internalizing and externalizing symptoms rather than the presence of positive attributes (well-being, positive mood, etc). As noted in their limitations, such measures are

less than ideal for their questions of interest, and researchers in future studies should endeavor to leverage true assets in models if we are to discern the relative role of individual psychological positive factors. Nonpsychological assets, such as positive relationships<sup>9</sup> and neighborhood opportunities,<sup>10</sup> have also been shown to offset the impact of adversity on child physical and mental health and should be considered.

Understanding both the associations and temporal order of mental and physical health is critically important both for prevention (to identify higher-risk individuals on the basis of a more complete understanding of their mental and physical factors that confer risk) and for allowing the design of more effective interventions (mental health is known to be a factor that may interfere with an individual’s ability to engage effectively in behavioral interventions related to cardiometabolic health, such as diet, exercise, and avoidance of tobacco use). Some evidence exists for mental health and morbidity preceding the development of cardiometabolic disease. Kubzansky and co-workers<sup>11</sup> have previously demonstrated in the 1958 National Child Development Study that childhood psychological distress (internalizing and externalizing symptoms at ages 7–16 years) is associated with cardiometabolic risk and that it accounted for 37% of the association between social disadvantage and adult cardiometabolic risk.<sup>12</sup> In other samples, mental health and social relationships appeared to mediate associations between early-life

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adversity and physical health outcomes,<sup>3</sup> providing additional evidence of their preceding role. Yet analytic findings in a representative sample of US adolescents suggest that heart disease precedes any mental disorder.<sup>13</sup> Longitudinal research is critically needed to clarify these complexities in timing and the mechanisms between mental health and cardiometabolic disease.

What are the implications of the study by Qureshi et al<sup>1</sup>? For researchers, these findings reinforce the importance of investigation into the links between mental health and physical health (particularly as they develop early in life), and they suggest the continued need for studies of positive psychological assets to develop alongside those of early-childhood adversity. The Environmental influences on Child Health Outcomes program that was recently initiated by the National Institutes of Health (<https://www.nih.gov/echo>) has a strong focus on assets and positive health outcomes in the ~50 000 children who are followed; these efforts may allow for further validation of these findings and provide the much-needed prospective data in a larger, more diverse sample. The importance of the diversity of the populations included in these studies cannot be overstated. In the work of Qureshi et al,<sup>1</sup> 95% of the sample was white, and of those with 4 assets, only 6.9% had ever experienced poverty. Although one-third of the sample came from families who had experienced poverty, the children who were lost to follow-up were far more likely to be from families who had experienced poverty (55.9%) or to have lower parental education. The distribution of psychological assets observed in the final sample (71.8% of the sample had  $\geq 3$  assets, and 8.4% of the sample had only 0–1 asset) as well as the associations of this distribution with cardiometabolic health merit examination in

populations that represent the broader range of sociodemographic backgrounds and experiences.

For those of us in clinical practice, this work fits squarely in the evolving cardiometabolic health and prevention paradigm, which has shifted from a predominant focus on preventing disease and identifying intervention target groups that are at highest risk for disease to optimizing health and reinforcing and promoting those psychological, behavioral, and physical attributes that are compatible with ideal cardiometabolic health.<sup>14</sup> This focus on optimal cardiometabolic health requires a life course approach, with particular emphasis on the pediatric period and (as Qureshi et al's<sup>1</sup> work reminds us) a continued understanding of how positive psychological assets that develop during this period may be a key to lifelong health.

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