

Addressing the Need for Better Measures of Positive Health

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Modern Western medicine has a longstanding orientation toward treatment of symptoms and diseases.¹ Similarly, much of modern biomedical research has been oriented toward reducing the incidence and impact of negative health outcomes, such as illness, injury, death, or disability. The reasons for this are many. Negative health outcomes are generally easier than positive health outcomes to define and measure. Certain measurement tools reinforce such framing by explicitly defining health in terms of the absence of disease or other negative attributes.² Global initiatives to frame “functioning” as a positive outcome³ have not been broadly adopted beyond the disability and rehabilitation communities. “Well-being” has also not been broadly adopted in clinical settings, in part because of a lack of consensus around terminology and measures across scientific disciplines.⁴

Nonetheless, many researchers and clinicians have called for better measures of *positive* health. Community members and research participants also express desires to speak about their strengths. Among medical specialties, pediatrics has often been at the forefront of these efforts, with its inherent orientation toward child development and preventive care. Research efforts in this arena have been hampered, however, by a dearth of well-defined measures for positive health which can be applied across populations and settings, display a useful spread of responses, and are sufficiently

sensitive to change to be useful outcome measures in research.

In the current issue of *Pediatrics*, Whitaker et al⁵ attempt to address this gap by examining the construct of “flourishing” across a wide range of global settings. This study of flourishing builds on a body of work in the field of emotional well-being, for which the foundational science has mostly been conducted within psychology and economics. These efforts try to tease apart different aspects of emotional well-being to find testable components. For example, Kahneman and Deaton⁶ have shown that money can buy life satisfaction but not happiness. In the Whitaker article,⁵ the authors describe their efforts to discriminate levels of flourishing across a global population of adolescents and to isolate the contribution of family connections to this positive health outcome, independent of the adolescent’s economic or material circumstances.

Moving from a deficit model to a strengths-based model is especially important for children and adolescents. The goal of child development is not merely to avoid negative outcomes such as illness and injury but to reach positive outcomes such as high levels of self-regulation, skills in interpersonal communication, and experiences of school engagement. Childhood is a time for setting down the building blocks for decades of subsequent positive health, such as food preferences, exercise, sleep habits, patterns of risk-taking behaviors, and approaches to relationships.

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At the same time, capturing positive health outcomes poses many challenges, particularly in children. Perhaps the most commonly used measures of positive health have been quality of life (QoL) and functional status. Pediatric QoL measures have been validated for both general and condition-specific populations and have been shown to have sufficient sensitivity to change for use in many studies of seriously ill or hospitalized children.⁷

However, such measures have been more challenging to use in ambulatory or community-based settings in which children often rate themselves highly at baseline, even in the presence of chronic medical conditions, leaving limited room for improvement in response to interventions.⁸ In this study, Whitaker et al⁵ provide another example of a positive outcome—flourishing—that may complement knowledge previously gained from studies using QoL measures.

Another challenge in capturing positive health outcomes in children is the discrepancy that is often seen between children's self-reports and parent proxy reports. Parents of children with chronic conditions commonly rate their children's QoL less favorably than children themselves rate it. One recent study of adolescents with cerebral palsy⁹ found that such discrepancies between child and parent reports of QoL expand as children advance into adolescence, driven primarily by declines in parents' ratings of their children's experiences. Whitaker et al⁵ avoid this potential pitfall by focusing on an age group capable of self-report; however, there are many situations in which self-report will not be possible for all respondents of interest.

Yet another concern is the variability in how different children react to the same challenges. Given the same health condition, some children's emotional well-being will

sink significantly while others remain high. One study of multiple dimensions of self-reported quality of life in pediatric populations showed considerable variance among indices of emotional well-being.¹⁰ Ellis and Boyce¹¹ memorably described the potentially divergent effects of environmental stressors on children by dichotomizing children into "dandelions," who are likely to thrive regardless of their circumstances, and "orchids," whose potential for flourishing is shaped by the "nurturant or neglectful character of the environment." More recent work suggests that the distribution of underlying susceptibility may be normal rather than bimodal but leaves open the question of whether this variability is specific within domains or a general trait of a child.¹² Other important questions, such as how susceptibility to stressors in one context correlates with susceptibility in a different context, remain largely unanswered.

The findings of Whitaker et al⁵ that adolescents' perceptions of their interpersonal connections to parents and family members make a positive difference in their emotional well-being should be a welcome relief, especially during the challenges of the pandemic. Families can and do support flourishing. Most adolescents are experiencing normative development. However, their findings do suggest several areas for further investigation.

First, both family connection and flourishing are heavily skewed in the positive direction. It is possible, therefore, that the abundance of adolescents who are flourishing and strongly connected to their families are obscuring important nuances in the data. Analyses that are stratified by levels of family connection or limited to adolescents reporting lower levels of flourishing might reveal the importance of covariates

whose effects are only visible when family connection is weaker. Further analyses of adolescents with discordant responses in these 2 domains might show the particular importance of some aspects of family connection over others if the scale were teased apart.

Second, the combined analysis does not permit an investigation of national or cultural effects. As shown in Supplemental Table 2,⁵ adolescents in some nations, such as Albania and Sri Lanka, report high levels of flourishing across both high and low levels of family connection. In contrast, adolescents in Chile and Poland and report stark differences in flourishing across these 2 categories. Better understanding of the drivers of such differences is needed to inform the design and implementation of setting-specific interventions.

Despite these challenges, multiple research organizations and funders are demonstrating interest in positive health. As part of efforts in response to the coronavirus disease 2019 pandemic, the National Academies of Sciences, Engineering, and Medicine launched a project on *Promoting Emotional Well-Being and Resilience*.¹³ The project's stated goal is to develop and disseminate a suite of tools to help support multiple dimensions of well-being. Although the title suggests a focus on positive health, however, the tools take only the approach of harm reduction by teaching children and youth to manage negative emotional experiences, such as anxiety and sadness. The National Institutes of Health *Emotional Wellness Toolkit* includes elements of both harm reduction and health promotion, such as developing a brighter outlook and strengthening social connections.¹⁴ However, these materials do not target specific age groups or family settings; thus, the degree to which the underlying research applies to children or to

special populations, such as individuals with intellectual or developmental disabilities, is unclear. The National Institute of Health has also recently launched a network of research networks to advance the science of emotional well-being. This initiative has a life course focus that begins with childhood.¹⁵

More constructs of positive health in childhood are needed, in conjunction with a broader array of measures to capture these constructs in a rigorous and reproducible fashion. This article on flourishing is an important contribution to this space; yet much work remains to be done to determine its potential utility as an outcome measure. As more valid and reliable measures of positive health become available, researchers will be better able to capture the positive effects of prevention and health promotion interventions. This, in turn, will better position clinicians to translate such research findings to clinical care that optimizes positive health outcomes for children and adolescents.

ABBREVIATIONS

NIH: National Institutes of Health
QoL: quality of life

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