Raising Healthy Children: Translating Child Development Research Into Practice

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Child development research has a rich history of informing practices in families, schools, communities, and other contexts that shape children's development and enhance their health and well being (Huston, 2008; Senn, 1975). Understanding developmental processes in typically and atypically developing children provides guidance on how to optimize positive development as well as how to prevent or minimize problematic outcomes. One of the most visible and well-known examples over the last few decades is the early childhood movement, including Head Start and related efforts to enhance early child development and school readiness (Shonkoff, 2010). Based on a convergence of solid evidence on diverse but related topics including normative cognitive, social, and emotional development, early brain plasticity, the short- and long-term impacts of early intervention, and cost–benefit analyses, early childhood programs have attained status as valued investments, both in the United States and internationally (Fox & Rutter, 2010; Heckman, 2006).

The importance of grounding policy and practice in the scientific study of children's development is consistent with the relatively new and rapidly evolving domain of translational research. Initially, this orientation emerged to increase the connection between the study of basic processes and their applications to health improvement and treatment in the field of medicine, characterized as connecting ''bench to bedside'' (Insel, 2005). This critical shift emphasizing the *end usability* of research on basic processes for health improvement became influential in other areas such as social psychology (Tashiro & Mortensen, 2006) and developmental psychopathology (Cicchetti & Toth, 2006). Within developmental studies, there has been increased focus on the connection between normative development, atypical development, and intervention, including the importance of understanding atypical development through a normative lens that can guide interventions (Cicchetti & Gunnar, 2009).

Still, there is no uniform definition of translational research, although several common themes have emerged that are relevant for developmental science. These include: (a) the notion of a translational chain from basic research to program implementation and evaluation (*Type 1 translation*), culminating in bringing these findings to scale (*Type 2 translation*); (b) attention to the bidirectional nature of influence between research and practice that includes *use-inspired* basic research and allows for the timely application of research to address pressing human problems; (c) an emphasis on testing promising interventions in high-quality efficacy and effectiveness trials to document evidence-based practices under ideal and real-world conditions; and (d) an emphasis on how best to communicate scientific evidence to the public in order to enhance the utilization of knowledge while separating science from advocacy. In some regard, translational research is best understood as a *way of thinking* or an alternate paradigm that seeks to blend rather than dichotomize basic and applied research

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towards the common goal of improving the human condition.

Indeed, a focus on translational research in child development exemplifies the very principles that have guided the Society for Research in Child Development since its inception in 1933—to foster interdisciplinary research on children and to encourage the utilization of findings to improve the lives of children and families (Hagen, 2008). Against the backdrop of well-known efforts like Head Start, there are many other examples of the diverse contributions of developmental research to enhancing the physical, mental, and socioemotional health of children and youth. The *goal* of this special issue is to highlight these contributions and underscore their relevance for an emerging translational research agenda in developmental science. The articles reflect a diversity of contributions including studies of typical development, risk processes, and interventions to promote healthy development or prevent problems—all with a common theme focused on raising healthy children. They reflect the scholarship of the contributors and their research teams, the careful reviews of consultants, and the enthusiasm of the editors who selected manuscripts from many high quality submissions and helped shape them into a cohesive special issue.

The Call for Submissions and the Response

Within this broad focus, the call for submissions emphasized contributions relevant to healthy outcomes from each of three major areas:

Socioemotional Well-Being and Mental Health— covering a variety of healthy outcomes associated with social and emotional functioning or specific mental health issues, including but not limited to attachment, peer relations, social skills and competence, empathy, moral development, emotion regulation, and resilience.

Physical Health—including outcomes indicating general physical health and wellness or healthy adaptation to specific medical issues and conditions, including but not limited to nutrition, diet, exercise, stress management, coping, and adaptation to disabilities.

Problem Behaviors—concerning outcomes related to the prevention of or desistance from specific problem behaviors including but not limited to high-risk sexual behavior, early school dropout, aggression and violence, juvenile delinquency, and substance use and abuse.

We issued an open call for manuscripts, encouraging submission of empirical studies of developmental processes, health promotion, prevention, and intervention. We asked that studies reflect a translational research orientation, with a clear discussion of how research questions were linked to real-world needs (use-inspired research) and how findings were relevant for facilitating healthy development or preventing major problems of childhood and adolescence. We also requested that careful attention be given to cultural and contextual influences on development and strategies for increasing the capacity and skills of families, schools, and communities to raise healthy children.

From over 100 inquiries in response to the open call, we invited 55 submissions and included 23 articles, a lead essay, and a commentary in the special issue. On average, the articles focused more on social and emotional outcomes and prevention of problem behaviors, with fewer articles focusing on physical health. The articles were most readily organized into three sections according to the major developmental contexts addressed.

Section 1 is titled *Economic, Work, and Community Influences on Child Well-Being.* Two of the six articles in this section addressed how variation in socioeconomic status (SES) influenced child and adolescent outcomes in both rural (Schofield et al., this issue) and urban settings (McLoyd, Kaplan, Purtell, & Huston, this issue). Two articles on work as a developmental context examined how mother's work schedules, both standard and nonstandard, affect their children's physical health status (Morrisey, Dunifon, & Kalil, this issue), and the impact of part-time work during high school on adolescents' academic, psychological, and behavioral outcomes (Monahan, Lee, & Steinberg, this issue). The broader community as a developmental context for preschool children was explored in the last two articles that focused on the interaction between home and child-care settings (Watamura, Phillips, Morrisey, McCartney, & Bub, this issue) and what young children learn from screen media such as videos and television (Richert, Robb, & Smith, this issue).

The family as a developmental context is the focus of Section 2, titled *How Families Influence Children's Health and Development.* Three of the nine articles in this section examined how parent factors influence child outcomes, including continuity in the relation between maternal abuse history and child victimization (Berlin, Appleyard, & Dodge, this issue), the ways that parents can buffer or moderate the relation between negative peer influ-

ences and child aggression (Farrell, Henry, Mays, & Schoeny, this issue), and the influence of positive parenting strategies such as effective communication during family mealtimes on child health (Fiese, Winter, & Botti, this issue). Three articles focused on the effectiveness of various parent and family intervention strategies for young children from vulnerable families (Brotman et al., this issue; Lowell, Carter, Godoy, Paulicin, & Briggs-Gowan, this issue; Thomas & Zimmer-Gembeck, this issue). The remaining three articles addressed mental health and coping processes in families and children including the links between parent and child depression (Garber, Ciesla, McCauley, Diamond, & Schloredt, this issue), and the use of innovative approaches that engage families to promote mental health among middle school youth (Stormshak et al., this issue) and help children cope with the consequences of divorce (Vélez, Wolchik, Tein, & Sandler, this issue).

Section 3, titled *Schools and Youth-Service Agencies as Important Developmental Settings*, turns to schools and youth-service agencies as developmental contexts. The eight articles in this section span a range of diverse topics looking at the etiology of problems such as bullying, the short-term and long-term effectiveness of interventions on promotion of child well-being and prevention of problems, specific mechanisms of program impact, and cost–benefits of selected programs. One article provided a mixed methods study examining the causes and dynamics of bullying across the school years (Guerra, Williams, & Sadek, this issue). Another related article provided data on the effectiveness of a large-scale antibullying intervention in Finland (Kärnä et al., 2011). Two articles examined mechanisms of program impact, including how youth programs contribute to the development of agency skills during adolescence (Larson & Angus, this issue) and the effects of preschool enrichment programs on preschoolers' self-regulation skills (Raver et al., this issue). The importance of comprehensive interventions that are extended in time was reflected in two articles emphasizing cost–benefit analyses (Reynolds, Temple, White, Ou, & Robertson, this issue) and the long-term effects of programs that impact multiple developmental contexts (Conduct Problems Prevention Research Group, this issue). The last two articles provide insights into how schools can promote healthy development and related challenges, including a careful evaluation of the well-known Big Brothers Big Sisters school-based mentoring program (Herrera, Grossman, Kauh, & McMaken, this issue) and a comprehensive meta-analysis of school-based universal interventions to promote social and emotional learning (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, this issue).

These important articles are anchored by a lead essay and a final commentary. In the lead essay (Shonkoff & Bales, this issue), a 6-year effort spearheaded by the National Council for the Developing Child is described. The purpose of that effort was to communicate the science of early childhood development to key policymakers in the United States. This was done through an evolving partnership of communications researchers, economists, developmental psychologists, neuroscientists, and pediatricians, illustrating the importance of interdisciplinary engagement. In the commentary, Dodge (this issue) highlights the challenges of translational science in child development, citing multiple examples from the articles in this special issue and elsewhere on how context matters, particularly when translating efficacy and effectiveness trials of promising interventions to large-scale implementation and related policies that impact diverse communities.

Each of the articles included in the special issue addresses one or more of the four themes discussed previously that are relevant for building a translational research agenda in developmental science. We briefly discuss and illustrate these themes with some examples from articles in this special issue.

The Translational Chain From Basic Research to Integration Into Service Systems

The National Institutes of Health (NIH) Roadmap was the basis for a national shift emphasizing translational research in biomedical and related fields. Aimed at reframing the clinical research enterprise, the roadmap emphasized the utilization and usefulness of ideas, insights, and discoveries generated through basic scientific research for the treatment or prevention of human disease (Zerhouni, 2003). The focus on translational research was intended to reduce the gap between research and practice, provide for timely delivery of new treatments, and encourage novel interdisciplinary partnerships and practitioner–scientist collaborations. The agenda continues to unfold—ambiguity remains as to the definition of translational research, what qualifies as translational, where the translational chain should begin (e.g., behavior genetics, biological

processes), how best to achieve a productive and bidirectional feedback loop between basic research and practice, and how to account for contextual influences when moving from the laboratory into the community.

Much of the work in translational science has followed a multiphase model based on a series of discrete steps needed to move basic science to practice. For example, the Centers for Disease Control and Prevention follow a five-phase model. The five phases are: (a) epidemiological studies to identify the problems that present the greatest risk to health and well-being; (b) etiological studies that identify risk and protective factors for the problem or disorder that can be addressed through systematic prevention or intervention programs; (c) intervention design, pilot testing, and efficacy trials under controlled conditions; (d) effectiveness trials in real-world settings; and (e) dissemination trials (Mrazek & Haggerty, 1994). These correspond to the NIH categories. Specifically, Type 1 refers to the first four phases above, emphasizing the application of basic science research to the development and early testing of interventions. Type 2 is consistent with the fifth phase, emphasizing the adoption, implementation, and sustainability of evidence-based interventions by service systems, although these considerations may need to be addressed during the early phases of intervention development rather than at the end of the cycle (Sandler et al., 2005).

Studies in the special issue illustrate these different phases of translational research and their relevance to optimizing positive developmental outcomes across proximal and distal contexts. For example, Farrell et al. (this issue) use growth curve models to demonstrate increases during the middle school years in physical aggression, normative support for aggression, delinquent peer associations, and parental support for aggression. These findings highlight the importance of documenting the developmental period where problems of concern spike in order to focus prevention efforts, in this case toward middle school youth. Focusing on family influences on development, Berlin et al. (this issue) emphasize the importance of understanding more fully the processes underlying the intergenerational transmission of child maltreatment. As they discuss, the influence of mothers' childhood physical abuse on victimization of their children was mediated by their own mental health problems, social isolation, and aggressive social information processing patterns. These findings point to potential targets or venues for intervention to interrupt this cycle.

Looking at the relation between income and developmental outcomes, Schofield et al. (this issue) provide support for an interactionist model of SES and human development. In addition to the well-established finding that low-SES compromises child well-being, they found that healthy child development (including social competence, goal-setting, hard work, and emotional stability) translates into increased future income and subsequent family investments in the next generation of children. These findings have direct bearing on child policy because they demonstrate that investments in today's children also impact the children of tomorrow.

Building on basic research, several reports are about developmentally informed prevention and intervention programs. Others focus on larger scale efforts in well-established areas such as early child development, emphasizing effectiveness in real-world settings. A number of articles in this special issue evaluated the effectiveness of prevention and intervention programs targeting school-related risk factors (Herrera et al., this issue; Kärnä et al., this issue), family involvement (Lowell et al., this issue; Stormshak et al., this issue), risk related to the effects of detrimental effects poverty on school readiness (Raver et al., this issue) and youth employment (McLoyd et al., this issue), and risk across multiple contexts from childhood to adolescence (Conduct Problems Prevention Research Group, this issue). A noted feature of many of these studies is an emphasis on mediators and moderators of program effects, providing for further refinement in program content and appropriate targeting of services. For example, the study by the Conduct Problems Prevention Research Group (this issue) reported that the comprehensive Fast Track intervention had a positive cumulative effect on the lifetime prevalence for multiple conduct and behavior problems but only among those at highest initial risk. An emphasis on developmental processes underlying preventive effects and the importance of studying for whom interventions work best is now an expectation for prevention and intervention research.

Developmental science has placed less emphasis on Type 2 translational research, focused specifically on factors that can facilitate or interfere with the adoption, implementation, and sustainability of evidence-based practices. In part, this was due to the dependence of such translation on efficacy findings and subsequent or longer term

evaluation of practical impact. However, as Dodge (this issue) notes in his commentary to this special issue, a separate problem lies in questions regarding the generalizability of laboratory studies to community context, and the lack of rigorous scientific research on community processes and population outcomes for children. From the perspective of social policy, an added concern is the cost of the program (Huston, 2008). It is often the case that funded prevention research studies emphasize whether a behavior can be changed, not how much this will cost and whether the observed benefits offset the actual costs. The study by Reynolds et al. (this issue) is an exception, providing a cost–benefit analyses of a sustained and publically funded early intervention, the Child-Parent Center Program that has been conducted in Chicago public schools for over four decades. As the authors illustrate, the net returns of the preschool, school age, and extended intervention were substantial, particularly for males and children from higher risk families.

The Bi-directional Relation Between Research and Practice and the Need to Address Pressing Human Problems

The notion of ''use-inspired research'' takes center stage in translational science (Stokes, 1997). This does not mean that translational research *requires* the design, testing, and dissemination of prevention, intervention, or treatment programs. Rather, it suggests that all research, whether basic or applied, be developed with a consideration of how it can inform future application. As Cicchetti and Toth (2006, p. 621) note: ''Before appropriate treatments can be developed and evaluated, there must be a clear understanding of the mechanisms and processes that initiate and maintain the developmental pathways to disease.'' Beyond developmental psychopathology, this framework also is useful for driving efforts to prevent problem behaviors and promote healthy development among children and youth.

Most developmental research inherently is relevant for understanding normative and atypical progressions and how healthy development can be optimized. Still, it often is the case that the relevance to application receives minimal attention, frequently relegated to one or two paragraphs at the end of a discussion section of an article. In many instances, these recommendations take the form of broad, general statements such

as ''the findings suggest that we should teach children to be more prosocial from an early age''—statements unlikely to generate disagreement even absent empirical support. Perhaps it would be useful to require researchers to state in the introduction of their study the reasons why this is an important area to study and the potential utility of findings for policy and/or practices, including systems and agencies that could be impacted. In the discussion section, further detail could be provided, including how findings fit within an emerging body of evidence with clear implications for real-world settings. As this illustrates, translational research in child development is not limited to prevention trials but rather includes all research with a central theme of end utility for improving children's lives.

In addition to use-inspired research, it is important to consider ''need-inspired'' research. In many instances, the agenda for what is needed in child development research is set by funding bodies and driven by political and public policy concerns. Clearly, there are different approaches to determining what is needed. One strategy is to identify the greatest threats to healthy development based on leading causes of death. For children ages 10–24 in the United States, these are unintentional injury, homicide, and suicide. We also can identify debilitating risk factors that are associated with involvement in systems such as child welfare and juvenile justice. As Dodge (this issue) notes in his commentary to the special issue, in spite of progress on understanding etiology and evaluating preventive interventions, over the past decades, rates of serious child problems including conduct disorder and depression actually have increased.

Several articles in this special issue are relevant for understanding the developmental course, etiology, and preventive interventions for addressing health-compromising outcomes of serious concern to anyone concerned with the health and welfare of children. For example, Berlin et al. (this issue) examined the specific mechanisms impacting the intergenerational transmission of child maltreatment. Farrell et al. (this issue) examined the dual influence of peers and parents on the development of aggression during middle school. Studies in this special issue also examine large-scale programs to prevent bullying (Kärnä et al., this issue) as well as targeted programs for at-risk youth aimed at preventing conduct disorder (Conduct Problems Prevention Research Group, this issue). Many of these programs involve families. For example, Stormshak et al. (this issue) examined

the effects of a three-session Family Check Up on promoting mental health and preventing anti-social behavior and substance use among middle school youth. Garber et al. (this issue) found that improvements in parents' depressive symptoms translated into reductions in their children's level of depression.

The need for a specific research focus also can be determined by the relevance of the research topic to pressing social issues and public concerns. For example, much of the research on the effects of child care has been driven by the increased entry of mothers into the workforce beginning in the 1980s. In this special issue, many of the topics addressed currently are on the national agenda and have important implications for policy and practice. This includes research on the benefits and risks of adolescent employment presented by Monahan et al. (this issue), the research on young children's learning from media presented by Richert et al. (this issue), a study on childhood obesity and how it is affected by mother's work schedules by Morrisey et al. (this issue) and the study by Vélez et al. (this issue) on the negative effects of divorce on children and how these can be prevented.

Translational research can be informed by understanding how the everyday contexts of children's lives impact healthy development. Because interventions are costly and require a high level of support for implementation, it is important to examine common practices that may be more easily supported. For example, the study of family mealtimes by Fiese et al. (this issue) found that positive communication during family mealtimes predicted quality of life for children with persistent asthma. As another example of how to improve the regular contexts of children's lives, the study by Larson and Angus (this issue) supports the importance of extracurricular activities in youth-service agencies in helping youth to think strategically and develop a sense of personal agency and initiative.

The utility of child development research for everyday applications can be enhanced by incorporating multiple methods into research designs. Although there have been several calls for more mixed methods research in child development (e.g., Torney-Purta, 2009; Yoshikawa, Weisner, Kalil, & Way, 2008), to date, developmental research has been dominated by quantitative methods. Yet, as Guerra et al. (this issue) discuss in this special issue, qualitative and mixed methods research can provide a more complete story of problems such as

bullying in schools by allowing for more in-depth incorporation of children's points of view. For instance, their study revealed the sexualized nature of bullying in middle and high school that often is overlooked in developmental and prevention research on bullying.

Finally, the increase in practitioner–scientist collaborations over the past decade or so has greatly advanced the connections between science and practice and facilitated bidirectional communication. Rather than scientists telling practitioners how best to facilitate healthy child development, these partnerships encourage a dialogue that can help identify key research issues, viable settings and practices to implement, and potential barriers to adoption at the outset of a research program. Many of the articles included in the special issue represent long-term, multidisciplinary collaborations among scientists and relevant community partners.

Testing Promising Interventions to Build an Evidence Base

Across multiple disciplines and agencies, the past two decades have witnessed a marked shift toward requiring scientific evidence as the basis for policy and practice. The term *evidence-based practices* extends from medicine to education to child welfare, with federal and state agencies routinely requiring documentation of program effectiveness for funding. This has led to the establishment of centers dedicated to reviewing evidence and certifying programs, clearinghouses for ''what works,'' and collaborations dedicated to the systematic review of evidence, such as the Campbell Collaboration to document the effects of social interventions in education, crime and justice, and social welfare (http://www.campbellcollaboration.org).

It is important to be clear about what the term *evidence-based practices* actually means for translational research in child development. Does practice refer to a name-brand program certified by an official group or center tasked with vetting the scientific rigor and outcomes of empirical evaluations in relation to identified child outcomes? Or does it refer to a general strategy for health promotion and prevention of problems, derived from scientific evidence, and including optimal conditions for implementation? In either case, are there common standards that dictate the level of evidence required as well as how to incorporate findings that fail to validate the effectiveness of a proven or promising program or strategy?

At this stage, the requirements for establishing scientific effectiveness of programs and practices relevant to child development outcomes vary across centers, agencies, and reviewers. Most frequently, proven programs are determined by one rigorous scientific evaluation and one replication. To be designated as a model program, the program developers and evaluators often must apply for certification and be able to sustain large-scale dissemination, leading to lists of brand-name programs offered in manualized versions with training and technical assistance available from dedicated organizations. Such programs generally follow at least some of the phases in the CDC model of moving science to practice, particularly the utilization of basic research on developmental processes and child outcomes for the design and testing of prevention and intervention programs.

This has led to a number of evidence-based programs relevant for diverse child development outcomes. For example, programs that have been certified as effective in preventing aggression include Families and Schools Together (FAST), the PATHS social-emotional learning curriculum, Big Brothers Big Sisters Community-Based Mentoring, and Multisystemic Family Therapy (MST). Some of the studies included in the special issue either build on or test modifications of these evidence-based programs. For example, the Fast Track Program (Conduct Problems Prevention Research Group, this issue) includes the PATHS curriculum in its comprehensive program. The evaluation of Big Brothers Big Sisters school-based mentoring represents a variation of the community-based program, albeit with less positive effects on behavior and school success (Herrera et al., this issue).

A somewhat different approach to documenting evidence-based practices is to identify strategies across multiple studies that lead to positive child development outcomes. These strategies are components of programs and consequently have been subjected to empirical test. Often referred to as ''principles'' or ''practices,'' examples relevant to child development outcomes include social-emotional learning, cross-age tutoring, mentoring, and cognitive-behavioral therapy. Reviews and meta-analytic inquiries can help determine the best practices to prevent specific problems and promote children's health and well-being. For example, the meta-analyses of school-based social-emotional learning programs in this issue by Durlak et al. (this issue) found that such pro-grams result in a positive impact on attitudes, behaviors, and academic performance across age and ethnic groups. Identifying evidence-based practices may also facilitate more careful tailoring of prevention programs across diverse community contexts, addressing some of the concerns raised by Dodge (this issue) in his commentary.

Communicating Science to the Public

Huston (2008) noted in her 2007 Presidential Address to SRCD that scientific information is only one factor in social policy decisions. Granted that political values and social ideologies also drive policies and practices, it is still the case that a goal of developmental science should be to raise the bar for the inclusion of scientific knowledge in these decisions. This goal requires both good science and the ability to effectively communicate relevant findings. However, as Shonkoff and Bales (this issue) discuss in their lead essay of this special issue, ''science does not speak for itself.'' For a translational agenda to take hold, child development researchers must do more to communicate their findings effectively. Not only does this require building a culture of explanation within the research community, but it also requires developing a science of translation that subjects different communication strategies to empirical investigation. This essay is a valuable first step in describing a novel approach based on the clever framing of key issues. An important next step is to evaluate through rigorous scientific methods the impact of these practices on relevant outcomes.

A critical issue is when science is ''ready'' to communicate, given that scientific inquiry is an ongoing process. Stated otherwise, ''what'' and ''when'' findings are ready for translation is not always apparent. In the case of early childhood development described in the lead essay, there is significant consensus after decades of research from multiple disciplines on the importance of early experience. In more recently emerging fields, such as the study of adolescent brain development, dissemination efforts have been slower to take hold. In some sense, the difficulties translating findings from adolescent neuroscience to practice lie in the meaning of these findings rather than their scientific integrity. Brain functioning differs on many levels from childhood through old age, but rarely is this used to justify specific actions or policies beyond childhood. As Steinberg (in press) notes, ''Reasonable people (and even

some unreasonable ones) can disagree about what, if anything, these findings tell us about how we should treat young people under the law, but there is little room for disagreement about the fact that adolescence is a period of substantial brain maturation.''

This raises additional concerns about the distinction between developmental research and child advocacy. Whereas science is impartial, advocacy is not. This is exacerbated when researchers advocate for or promote a specific assessment tool or program they are financially invested in. Solving this problem requires independent evaluations from impartial scientists. For example, as Richert et al. (this issue) point out in this issue, popular programs such as ''Baby Einstein'' do not promote young children's learning—a finding that led the Walt Disney Company in 2009 to issue refunds for all Baby Einstein videos and DVDs. Accordingly, it is important to include impartial evaluations of specific programs and interventions in order to establish an independent evidence base for these programs. On the other hand, replication studies that fail to confirm effectiveness can provide valuable information regarding the conditions needed for successful implementation, participants who are most likely to benefit, and sustainability of outcomes over time.

Next Steps for a Translational Research Agenda in Developmental Science

Although the present collection of articles touches on many aspects of translational research in child development, it is far from a comprehensive rendering of the state of the science, nor is it an authoritative guide for future work. This excellent work does provide many examples of how to conduct studies grounded in a translational framework. Recent advances highlighted here include the need to include multidisciplinary teams of scientists and practitioners, the value of mixed-method research, the importance of attention to mediators and moderators of prevention impact, and the need to focus on the end-use of all research, whether it be basic or applied.

Although translational research faces several challenges, a clear next step is to build multidisciplinary work with overlapping foci within a common research project that incorporates and accounts for the settings in which it will be used. For example, partnerships of neuroscientists, developmental psychologists, and intervention researchers can produce longitudinal studies that allow for mapping of biomarkers, basic psychological developmental processes, and attempts to change or modify these processes. These collaborations require active relating of theories, methods, and empirical findings across disciplines and areas of expertise. However, they also require ongoing collaboration with those who will use the findings. Ultimately, such efforts should increase the efficiency of translational findings, improve consistency in studies and ease of comparison, and build an integrated understanding of biological, psychological, and social aspects of child development that should enhance our ability to raise healthy children.

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