


Special Issue Article

The Future of Developmental Psychopathology: Honoring the Contributions of Dante Cicchetti

Principles, policies, and practices: Thoughts on their integration over the rise of the developmental psychopathology perspective and into the future

Erin B. Tone¹  and Christopher C. Henrich²

¹Department of Psychology, Georgia State University, Atlanta, GA, USA and ²Department of Psychology, University of Alabama at Birmingham, Birmingham, AL, USA

Abstract

Developmental psychopathology has, since the late 20th century, offered an influential integrative framework for conceptualizing psychological health, distress, and dysfunction across the lifespan. Leaders in the field have periodically generated predictions about its future and have proposed ways to increase the macroparadigm's impact. In this paper, we examine, using articles sampled from each decade of the journal *Development and Psychopathology's* existence as a rough guide, the degree to which the themes that earlier predictions have emphasized have come to fruition and the ways in which the field might further capitalize on the strengths of this approach to advance knowledge and practice in psychology. We focus in particular on two key themes first, we explore the degree to which researchers have capitalized on the framework's capacity for principled flexibility to generate novel work that integrates neurobiological and/or social-contextual factors measured at multiple levels and offer ideas for moving this kind of work forward. Second, we discuss how extensively articles have emphasized implications for intervention or prevention and how the field might amplify the voice of developmental psychopathology in applied settings.

Keywords: biological; developmental psychopathology; social/contextual

(Received 16 January 2024; accepted 21 January 2024; First Published online 28 February 2024)

Cicchetti (1993) astutely noted in an overview of the field of developmental psychopathology that “prognostication is necessarily a risky enterprise” (p. 471). It can also, however, be a hopeful one and with this frame, since the rise of the developmental psychopathology perspective in the late 20th century, Cicchetti and many other scholars have made predictions based on its promise for improving our understanding of psychological health and dysfunction across the lifespan (e.g., Achenbach, 1987; Boyce et al., 1998; Cicchetti & Toth, 2009; Cicchetti, 1993; Garnezy, 1982; Masten, 2006; Pollak, 2015; Toth & Cicchetti, 2010). In this special issue, we continue to generate predictions in the same tradition: cautious, data-driven, and optimistic. We note in preface that prior looks ahead for developmental psychopathology have identified an array of key themes that have remained consistent for decades and we consider, in our own thoughts about the future of the field, the degree to which these themes have been realized and how they have evolved to suggest novel paths forward.

First among these themes, as Achenbach (1987) suggested in a presidential address to the Society for Research on Child Development, is the idea that developmental psychopathology offered from its inception an “overarching conceptual map” that could inform research and practice by pointing to connections

among and gaps between biomedical, behavioral, psychodynamic, and other more tightly focused paradigms that “contribute to the developmental study of psychopathology” (p. 3). In an era where calls to abandon siloed approaches to the study and promotion of mental health resonate broadly across domains of study (e.g., Bernier et al., 2014; Cowan & Cowan, 2020; McGorry et al., 2020; Villanueva et al., 2021), such maps remain vital tools for guiding conceptual and practical advances.

Second, developmental psychopathology's emphasis on interacting and transactional mechanisms of change along paths to risk and resilience, conceptualized at multiple levels of study encompassing genes, molecules, cells, neural structures and systems, individuals, families, and communities, provided a viable alternative to descriptive or correlative approaches to understanding human behavior and ameliorating distress and dysfunction (Boyce et al., 1998; Pollak, 2015). Research in this tradition could provide novel insights by steering away from, as Sroufe (2013) put it, “the continued search for correlates of DSM-based categories” and instead charting the trajectories of “early patterns of adaptation” and “when and how they may be manifest in disorder” (p. 1221). Moreover, it holds distinctive potential for capturing and explaining the complex “dynamic cybernetic and transactional processes” that unfold asynchronously across development in domains of systems biology, the array of environmental stimuli to which an individual is exposed, and internal processes such as thoughts and feelings, leading in some cases to psychopathology (Nigg, 2023, p. 297).

Corresponding author: E. B. Tone, Email: etone@gsu.edu

Cite this article: Tone, E. B., & Henrich, C. C. (2024). Principles, policies, and practices: Thoughts on their integration over the rise of the developmental psychopathology perspective and into the future. *Development and Psychopathology* 36: 2315–2323, <https://doi.org/10.1017/S0954579424000257>



Third, this macroparadigm has long been hailed for providing an integrative lens through which novel prevention and intervention approaches that can be applied in developmentally congruent ways, as well as inventive and effective policies, might be conceived (Achenbach, 1987; Braet & van Aken, 2006; Cicchetti, 1993; Masten, 2006; Modecki & Uink, 2017; Thompson, 2019). Researchers with interests in promoting mental health and well-being (Hall & Kreppner, 2019) and in preventing and treating conditions ranging from mental illnesses (Kemp et al., 2020; Ricks, 1990) to child maltreatment (Toth & Manly, 2019) to suicide (Cha et al., 2018; Oppenheimer et al., 2022; Zullo et al., 2022) have advocated for the use of the developmental psychopathology paradigm as a guide. Moreover, multiple scholars have highlighted ways in which shaping policy in line with the principles on which the developmental psychopathology perspective rests could lead to improved practice in courts (Modecki & Uink, 2017), social welfare systems (Knitzer et al., 2000), schools (Pianta, 2016), and public health settings (Bohnert et al., 2020; Doom, 2022; MacNeill et al., 2021; Shirk et al., 2000).

It is clear, half a century since the seminal texts on the developmental psychopathology perspective (e.g., Achenbach, 1974) appeared in press, that its impact has been pervasive and that many advances align with predictions made over the years. Moreover, this macroparadigm has guided integrative work aimed at razing the walls that separate historically siloed domains and has opened collaborative doors that might have remained closed in its absence. This article grew out of one such collaboration; although both authors trained in intellectual traditions steeped in developmental psychopathology, we started at widely divergent places on the conceptual map. The developmental psychopathology framework bridged our backgrounds in applied developmental psychology (Henrich), where training focused on the environment, particularly the social context, and its role in shaping psychological risk and resilience and neuroscience-informed clinical psychology (Tone), which emphasized individual psychopathology and health, more specifically the individual's genetic and neural makeup, in exploring contributions to risk and resilience, offering a space where our work could converge in fruitful ways (e.g., Tone & Henrich, 2023).

In this article, we looked at that convergent space, both retrospectively and prospectively, in an effort to summarize how well the promise articulated several years ago has come to fruition and where we see further opportunity for it to be fulfilled or enhanced. We used the journal *Development and Psychopathology* as a source of data to guide our thinking. *Development and Psychopathology* has chronicled the evolution of the macroparadigm since 1989, and its content over the past several decades provides insight into how and to what extent research focused on the social context and research focused on biology/genetics have converged. We examined the frequency with which such anticipated convergences have occurred; we also looked more specifically for evidence of how developmental psychopathology perspectives have contributed to advances in both intervention/prevention and policy. In effect, we traced the developmental story of a journal that has guided the field of developmental psychopathology, looking for markers of where both the field and the journal have gone and where they might most effectively go in the decades to come.

Method

Our approach was to review a series of snapshots of articles in the journal across its three decades in print, tracing themes and patterns in their foci. We started by reviewing the table of contents

of Volume 13, published in 2001, to get a sense of the state of the field, as reflected in the journal, at the start of the 21st century. We then reviewed volumes at the end of each subsequent decade; 2010's Volume 22, and 2020's Volume 32. We concluded by going back in time and reviewing Volume 2, published in 1990. Both authors independently reviewed titles for all articles from 1990, 2001, 2010, and 2020 with the goal of identifying those that emphasized neurobiological and/or social-contextual factors; we also flagged articles that emphasized implications for intervention or prevention. When the information provided in the title was inadequate to enable classification, we examined the abstracts and, in a few cases, the full articles. Based on this review, we classified each article in the volumes as focusing on neurobiological factors, social-contextual factors, both, or neither. We also classified each article according to whether it included prevention/intervention research or applied implications in the abstract. In addition, we examined trends in the topics to which special issues were devoted during the years that we focused on, based on the assumption that these topics might reflect areas of high interest at the time. We met weekly while reviewing the articles and used a consensus coding approach to maintain reliability of ratings (Cornish et al., 2014).

Results and discussion

Our review of *Development and Psychopathology's* articles yielded a number of insights. Most fundamentally, there was a sharp increase in the number of articles published per year, from 28 in 1990 to 141 in 2020. Although this steep trajectory likely stems from multiple factors that amplified publication volume across fields (Kyvik, 2003; Savage & Olejniczak, 2022; Wong, 2019), it also aligns with the establishment of developmental psychopathology as a leading perspective on psychological health and dysfunction, with influence that extends across psychology, psychiatry, and other related fields. Not surprisingly, the published research reliably emphasized developmental psychopathology's core principles, including attention to both typical and atypical developmental trajectories and examination of patterns of stability and change (Cicchetti, 2013). Longitudinal research was, fittingly, a consistent thread, as was work that encompassed multiple stages within the lifespan or examined more than one generation within families.

The published studies showed other trajectories that reflected and contributed to advances in research and statistical methods. Over the life of the journal, for example, contributing authors have increasingly used meta-analytic findings to ground their hypotheses (Mun et al., 2016), decreasing the risk of biased predictions based on findings from select individual studies. Although many of the reviewed studies relied on ANOVA or other traditional linear models, a growing number of authors turned to Bayesian approaches (e.g., Lupien et al., 2020) or used growth modeling variants (e.g., Brown et al., 2020) to facilitate integrated examination of longitudinal data. Moreover, articles in both regular and special issues in our sample rigorously evaluated statistical (e.g., Sterba & Bauer, 2010) approaches to studying developmental psychopathology and presented novel techniques for examining complex and multifaceted datasets (e.g., Jolicoeur-Martineau et al., 2020).

Biological and social-contextual factors

Figure 1 graphically presents our findings on trends in biological and social-contextual factors. In this review, we saw evidence of several trends in line with predictions that scholars have advanced

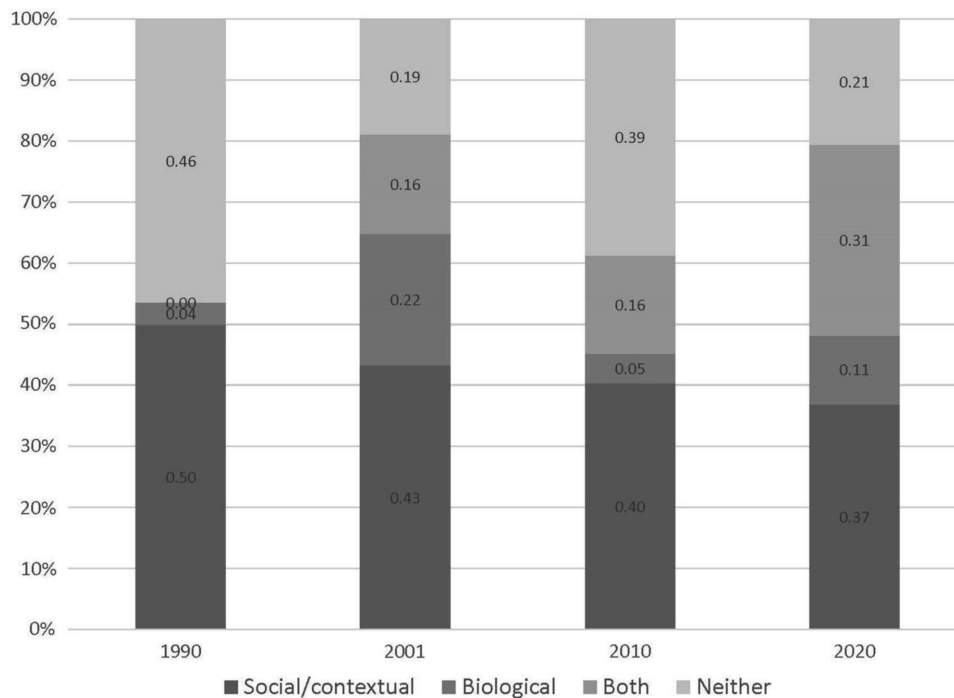


Figure 1. Social/contextual and biological foci: snapshots over time. Bars represent the percentage/proportion of articles in each reviewed year that were classified as emphasizing social/contextual factors, biological factors, both, or neither type of factor.

about the role that the developmental psychopathology paradigm has played in reframing our understanding of the development of psychological health, distress, and dysfunction. First, we saw a move toward work that reflected both social contextual and biological traditions and, by the issues published in 2020, papers that integrated the two were more common than those that focused on one or the other in isolation. Over the decades we sampled from, there were progressive shifts from a majority of papers centered on the social context, toward a more balanced presentation of contextual and biological themes and, finally, toward explicitly integrative work, which represented roughly a third of the articles published in 2020.

This evolution suggested a maturing approach to navigating the conceptual map in ways that capitalize on the advances made across historically isolated subfields. Shifts in the focus of empirical research tracked with the publication of special issues; the degree to which the special issues spurred the field in novel directions versus mirroring already-established lines of interest was not clear, but they followed a similar trend toward integration to that seen in the regular issues. Nonetheless, although there was a substantive move toward integrative work, distinct social/contextual and biological threads remained prominent. Within each, the topics under study varied over time, but studies about attachment, maltreatment, and resilience were consistently common across the issues reviewed.

The clearest trajectory of articles with a social-contextual emphasis is their evolution toward more consistent integration with biological levels of analysis. Another trend we observed is that, by 2020, proportionally fewer articles focused on mother-child attachment, which was a common theme in earlier decades. Few other trends regarding social-contextually centered articles emerged from our review of the snapshots across decades. For example, the number of articles focusing on parental depression and symptomatology—another frequently observed topic—seemed relatively constant over the years, as did the proportion

of articles focusing on maltreatment and other adverse childhood experiences. Of note, few articles in the volumes we reviewed focused on the role of fathers or neighborhood factors in the development of psychopathology, despite urgent calls throughout the last several decades to do so (Cassano et al., 2006; Fabiano & Caserta, 2018; Phares & Compas, 1993).

The biologically oriented papers showed a discernable trajectory that started with isolated articles in regular issues—one on prefrontal cortical development in schizophrenia (Breslin & Weinberger, 1990), for instance, and one on vagal tone and psychopathology (Beauchaine, 2001) that focused on distinct, individual biological systems. By the end of 2001, however, a special issue on biological and psychological consequences of stress across development (Bremner & Vermetten, 2001) appeared to mark a shift, after which the number of biologically focused articles gradually increased. The biological systems of interest evolved over time, in accordance with trends in the study of specific biomarkers (Qian et al., 2022). For example, stress-responsive hormones were more commonly at the heart of studies in earlier years (e.g., Gunnar & Vazquez, 2001; Klimes-Dougan et al., 2001), with a later move toward foci on more varied biological topics, including integrated neural systems (e.g., Davies et al., 2020), genetic predictors of developmental outcomes (e.g., Huang & Starr, 2020), and markers of inflammation (e.g., Entringer et al., 2020).

Studies that integrated contextual and individual biological variables proliferated by the last issues reviewed, accounting for a plurality of the published work in the reviewed issues by the end of 2020. Work in this vein covered a vast range of topics, although most addressed questions regarding the intersection of adverse experiences and individual characteristics—biological and in some instances psychological or cognitive—in the prediction of psychopathology or resilience. Many of these studies centered on caregiving-related early adversities (e.g. Tottenham, 2020) that encompassed insensitive caregiving (e.g., Skibo et al., 2020), neglect

(e.g., Wade et al., 2020), and abuse (e.g., Norman Wells et al., 2020). However, community and societal contextual variables also received attention; these included racial discrimination (e.g., Adam et al., 2020) and classroom climate (e.g., Roubinov et al., 2020).

The studies that integrated contextual and biological themes appeared to offer notable steps forward in efforts to capture the complexity of the dynamically interacting variables that predict psychopathology and resilience. There was a clear trend toward increasing sophistication in the simultaneous examination of data gathered at multiple levels, from the molecular to the community, and effective leveraging of novel technology and continually improving statistical modeling approaches to support such work. This kind of work typically requires large samples, expertise across varied domains, and, in many cases, collection of multimodal data repeatedly over time. Not surprisingly, then, a number of these studies have been conducted by teams, and several drew on large, publicly available longitudinal datasets, such as the Adolescent Brain Cognitive Development Study (<https://abcdstudy.org/>) or the Avon Longitudinal Study of Parents and Children (Boyd et al., 2013) to enable examination of multiple variables across generations (e.g., Fetene et al., 2020) or measures (Thijssen et al., 2020). Others reflected collaborative efforts that made use of data gathered independently by two or more groups (e.g., Chen et al., 2020).

Across the volumes we reviewed, there were also a substantial minority of articles that focused on neither biological or social-contextual factors (from a high of 44% of articles in 1990 to a low of 19% of articles in 2001 and in 2020). Many of these articles were in special issues, including 2010 issues on developmental cascades (Masten & Cicchetti, 2010), a 2010 section on person-oriented methodology (Sterba & Bauer, 2010), and a 2020 issue on Autism Spectrum Disorder (ASD; Elison, 2020). Other themes that emerged in the articles classified as “neither” included phenomenological descriptions of developmental processes (e.g., Campbell et al., 2010; Duggal et al., 2001), correlates of disorders and symptomatology (e.g., Greenberg et al., 2001; Osborne et al., 2020), and neurodiverse populations (with the greatest emphasis on ASD; e.g., Bíró & Russell, 2001; Senju et al., 2010). Indeed, many of the articles in the volumes we reviewed that focused on children with ASD and other neurodevelopmental disabilities were classified as not having either a social-contextual or biological focus. The evolution over time we observed on integration across levels was less pronounced in the articles focusing on these neurodiverse populations.

Developmental psychopathology and prevention/intervention

In a 1992 special issue of the journal on prevention and intervention, Cicchetti and Toth (1992) wrote, “In the future, it is likely that we will learn the most about the causes, course, and sequelae of disorders across the life span by charting normal developmental trajectories and incorporating this knowledge into the development of our approaches to prevention and intervention” (p. 492). Nearly a decade later, in a 2000 special issue on the social policy implications of developmental psychopathology, they wrote, “From its inception, contributors to the flagship journal of the field, *Development and Psychopathology*, have been urged to consider and address social policy aspects of their research” (Cicchetti & Toth, 2000, p. 551). They concluded their editoria by stating that, “The 21st century presents us all with a

unique opportunity to translate rhetoric into action and to truly achieve a research-informed policy agenda that will benefit the welfare of all” (Cicchetti & Toth, 2000, p. 554). These quotes illustrate the emphasis that leaders of the field have placed on the applied value of developmental psychopathology research and the potential that its flagship journal has for applied impacts.

However, of the 267 articles we reviewed from across the decades, only 17 mentioned research applications for prevention or intervention in the title or abstract. Thus, it seems that researchers in the field have not yet fully taken advantage of the “unique opportunity” that Cicchetti and Toth (2000) described. From explicitly outlining implications of basic findings for applied work to generating intervention and prevention approaches that are clearly informed by developmental psychopathology principles, there are many ways in which scholars can help fill this gap. Notably, there are indications that in our current decade, researchers are taking up the mantle. In 2023, for instance, in the most recent volume of the journal (Volume 35), we counted eight articles that included a focus on intervention effects, including two meta-analyses (Bergsund et al., 2023; Van IJzendoorn et al., 2023).

Future directions

We thus see, in snapshots of *Development and Psychopathology* over time, evidence of progress toward the goals that leaders in the field have put forth over the last several decades. We also, however, see areas where predictions and aspirations have yet to come to full fruition. In the following section, we examine these more closely and make our own suggestions about possible ways for the field to continue to move in useful and productive directions that contribute to scientific knowledge and public health.

First and foremost, we see notable success in providing a conceptual map that unites scholars across historically isolated areas of study. By offering a principled framework on which to build both theories and empirical questions, developmental psychopathology has facilitated the union of researchers whose expertise spans an array of fields and subfields. It is exciting to see work that brings together scholars who tackle similar questions from very different angles; the special issues that became increasingly common over the life course of the journal have been particularly important vehicles for this kind of multifaceted examination of core problems and concepts. During the years that we reviewed, special issues focused on types of psychopathology such as autism spectrum disorder (2020), concepts such as developmental cascades (2010), and cross-cutting topics such as biological and psychological consequences of stress across development (2001) provided richer and deeper dives into subject matter than individual articles published sporadically could readily offer. Others have noted the importance of these multidisciplinary special issues (Beauchaine et al., 2018), along with the three editions of the book series *Developmental Psychopathology* (Cicchetti & Cohen, 1995, 2006, 2016), in advancing the integrative research needed to answer complicated questions.

One key way in which this kind of conceptual union has manifested is in a proliferation of articles that integrate conceptual and biological content and methods. The sharp rise in studies that situate biological processes in dynamic interplay with environmental contexts indicates that developmental psychopathology is, as predicted from the start, playing an important role in dismantling long-standing research silos. Our survey of this

literature, however, suggests that there are still important steps to be taken in this direction.

First, despite the heartening increase in integrative research, it remains, for understandable reasons, relatively limited in the richness and breadth with which it captures the complexity of the dynamic, intersecting cycles and cascades that precipitate and perpetuate risk and resilience. In particular, despite long-standing calls for work that adopts an interdisciplinary, multiple-levels-of-analysis approach and the proliferation of funding calls aimed at supporting such work (Cicchetti & Valentino, 2007), few studies that we reviewed integrated data from multiple contexts (e.g., family, school, and community) or multiple biological systems (e.g., brain function, immune markers, and hormones), and even fewer encompassed both types of integrated information. Such multilayered research is relatively novel, even within established subfields; it is only within the last decade or so, for instance, that multimodal neuroimaging research has begun to take off (Calhoun & Sui, 2016), and similar progress has been documented recently in multisystems work on resilience (Masten et al., 2021). This kind of research is costly and labor-intensive; it also typically requires large datasets to power the complex statistics needed to conduct reliable hypothesis tests (although more widespread use of Bayesian analyses could help address the latter issue see Kryptos et al., 2017, for an accessible primer). A slow pace of growth for studies that integrate across multiple levels and systems is thus understandable, but that pace needs to build steadily if the impact of the developmental psychopathology perspective is to be maximized in the coming years.

This kind of growth will demand careful attention to research infrastructure. How, for instance can we facilitate broad and equitable access to large, integrative pools of data relevant to developmental psychopathology? Publicly available datasets offer one means, but they are fraught with pitfalls such as variable or unclear data quality (e.g., Curty et al., 2017) and potential for exploitation of others' data-collection labor (National Academies of Sciences, Engineering, and Medicine, 2018). These are not insurmountable problems; Sielemann et al. (2020) laid out challenges that publicly available data pose, as well as potential solutions that included establishment of internationally adhered-to standards for publication of metadata and clear and widely adopted guidelines for recognition of those who produce data and make them available. International data-sharing groups such as the Enhancing Neuroimaging Genetics through Meta Analysis Consortium (<https://enigma.ini.usc.edu/>) offer another way to involve researchers with varying individual access to research resources in high-powered multimodal studies. Formation of similar teams uniting developmental psychopathology scholars whose work captures data at varied levels of analysis, across different systems, and at multiple points in development would allow for research that is beyond the capability of most individual labs or institutions.

To advance integrative work it will also be important, as Fearon (2018, p. 299) wrote, to “up our game in the conceptualization of environmental influence and, crucially, in the rich but scalable measurement of the environment, integrated, ideally, within genetically informative research designs.” We would broaden this recommendation to promote the use of “biologically informative designs” that encompass both genetic data and information about neural, endocrine, and other bodily systems. Reliable, accurate, and valid measurements of precisely described constructs at all levels of interest are essential if we are to move forward in useful and meaningful ways and given ongoing concerns about adherence

across the field to questionable measurement practices (Flake & Fried, 2020), transparency about measurement decisions and better accounting for measurement error are called for (Blake & Gangestad, 2020; Flake & Fried, 2020).

A second step that will be of value as the field moves forward is renewing our close and continual attention to questions of why we study what we study and the degree to which our answers to those questions are principled and well-reasoned. This idea is neither new nor specific to developmental psychopathology. Sternberg (2017), for example, cautioned psychologists in general to resist the urge to gravitate automatically toward research areas that are “hot,” despite the short-term rewards, such as targeted funding opportunities or cachet on the job market, that they sometimes often offer. Instead, he advocated seeking out and promoting creative approaches that extend current paradigms in novel directions, others that take a contrarian stance and reject the conceptual status quo, and still others that bring current paradigms together in unexpected ways.

Grounded in a carefully conceived conceptual framework, developmental psychopathology is better poised than many subdomains of psychology to support innovative integrative research. Nonetheless, it remains subject to the same pressures and temptations that can lead research on particular topics or using particular methods to follow infatuation/novelty curves, in which they rapidly saturate a field only to disappear (Berlyne, 1970), rather than becoming progressively more deeply integrated into a field as knowledge about them accumulates. Qian et al. (2022) found evidence that biomarker adoption in research on developmental science has been more likely to follow the latter kind of learning curve, which suggests that in at least one way, the field has shown a propensity to limit fad-driven activity.

Attending as well to what we are not studying and why will be similarly valuable. Some conditions or problems for example, were well-represented in the issues we sampled; these included ASD and depression, as well as child maltreatment. In a field as vast as developmental psychopathology, however, there were inevitably areas, such as childhood schizophrenia spectrum disorders, that received less attention and likely many others that were overlooked entirely. Rozin (2007) identified multiple kinds of such holes that exist in any empirical literature, some of which developmental psychopathology has been unusually attentive to (e.g., the emphasis on resilience and health has helped the field avoid negativity bias holes that encompass our tendencies to attend preferentially to what we perceive as bad). Other types of holes, however, have been more likely to elude the focus of scholars in the field; these latter include overkill holes that appear when fads are abandoned; middle holes, which exist between dichotomized concepts; and big pile holes that appear because we simply lack adequate time and money to study everything worthy of attention. New methods and technologies offer fresh ways to approach such holes; recent advances, for example, in gut microbiome science have reinvigorated research into questions about the gut-brain axis (Mayer et al., 2022) that developmental psychopathology researchers are pursuing (Callaghan et al., 2020).

We also see possibilities for increasing the impact of the developmental psychopathology paradigm on intervention and prevention. Key among these is through leveraging of the integrative, multilevel approach that is fundamental to this perspective (Cicchetti, 2018). The promise of this approach has perhaps been most evident in the paradigm's contributions to understanding how to prevent the sequelae of maltreatment (e.g., Cicchetti, 2010). Additionally, examination of the

developmental processes that can lead to psychopathology inform multiple potential points for intervention. Much of the intervention research employing this framework has focused on children within the family context. Community-based interventions that are multilevel (e.g., Trickett, 2009) and population focused (e.g., Hawkins et al, 2008) could provide opportunities for broadening the scope of prevention efforts that use a developmental psychopathology framework. For example, the Communities That Care prevention system, which is a well-validated community-level preventive intervention, has been found to have positive effects on protective factors such as community opportunities for prosocial involvement and interactions with prosocial peers (Kim et al., 2015). A multilevel investigation of resilience within the context of an effective community-level intervention could provide valuable insights into how and why the intervention exerts positive effects, as well as which types of youth could benefit most from it when. This is just one example of the promise that the integrative, multilevel approach heralded in *Development and Psychopathology* has to “benefit the welfare of all” (Cicchetti & Toth, 2000; p. 554).

Conclusions

It is clear that developmental psychopathology has become established as a leading and unifying framework for the study of psychological health, distress, and dysfunction across the human life cycle. Scholars working from this perspective have taken great strides toward bringing to life the ambitious visions that leaders in the field have put forth over the years. The field’s principled approach to thinking about trajectories of risk and resilience, as well as their varied starting points and outcomes has left the field well-positioned to move in novel, integrative, and practically useful directions. The journal *Development and Psychopathology* has played a significant role in guiding the conversation; its special issues seem to have been particularly powerful in bringing important ideas to broad audiences, and we see these as a valuable mechanism for continued progress toward more fully integrative and application-focused research.

The many articles from the journal we reviewed for our snapshots over the years have underscored the promise of the field and predicted its pivotal role in understanding and addressing historically intractable problems, however, brings us back to the risks of prognostication. Some of the key optimistic predictions are not yet fully realized—this state of affairs reflects the difficulty of defining, describing, and measuring, complex constructs, concepts, and experiences, as well as the daunting task of developing and implementing effective methods for change. We stand, however, at an exciting point where increasingly sophisticated tools and burgeoning findings position future investigators well to produce multilevel, integrative, and impactful work. Although it is indeed a risky enterprise, hopeful prognostication can also keep us engaged in pursuit of rewards to come.

Funding statement. None.

Competing interests. None.

References

- Achenbach, T. M. (1974). *Developmental psychopathology*. Ronald Press.
- Achenbach, T. M. (1987). *What is “developmental” about developmental psychopathology?*. Presidential address to the Society for Research on Child Development.
- Adam, E. K., Hittner, E. F., Thomas, S. E., Villalume, S. C., & Nwafor, E. E. (2020). Racial discrimination and ethnic racial identity in adolescence as modulators of HPA axis activity. *Development and Psychopathology*, 32(5), 1669–1684.
- Beauchaine, T. P. (2001). Vagal tone, development, and Gray’s motivational theory: Toward an integrated model of autonomic nervous system functioning in psychopathology. *Development and Psychopathology*, 13(2), 183–214. <https://doi.org/10.1017/S0954579401002012>
- Beauchaine, T. P., Constantino, J. N., & Hayden, E. P. (2018). Psychiatry and developmental psychopathology: Unifying themes and future directions. *Comprehensive Psychiatry*, 87, 143–152. <https://doi.org/10.1016/j.comppsy.2018.10.014>
- Bergsund, H., Drozd, F., Olafsen, K., Nilsen, K., Linnerud, S., Kjøbli, J., & Jacobsen, H. (2023). The effect of relationship-based interventions for maltreated children and adolescents: A systematic review and meta-analysis. *Development and Psychopathology*, 35(3), 1251–1271. <https://doi.org/10.1017/S0954579421001164>
- Berlyne, D. E. (1970). Novelty, complexity, and hedonic value. *Perception & Psychophysics*, 8(5), 279–286. <https://doi.org/10.3758/BF03212593>
- Bernier, A., Matte-Gagné, C., & Bouvette-Turcot, A.-A. (2014). Examining the interface of children’s sleep, executive functioning, and caregiving relationships: A plea against silos in the study of biology, cognition, and relationships. *Current Directions in Psychological Science*, 23(4), 284–289. <https://doi.org/10.1177/0963721414534852>
- Blake, K. R., & Gangestad, S. (2020). On attenuated interactions, measurement error, and statistical power: Guidelines for social and personality psychologists. *Personality and Social Psychology Bulletin*, 46(12), 1702–1711. <https://doi.org/10.1177/0146167220913363>
- Bohnert, A. M., Loren, D. M., & Miller, A. L. (2020). Examining childhood obesity through the lens of developmental psychopathology: Framing the issues to guide best practices in research and intervention. *The American Psychologist*, 75(2), 163–177. <https://doi.org/10.1037/amp0000581>
- Boyce, W. T., Frank, E., Jensen, P. S., Kessler, R. C., Nelson, C. A., Steinberg, L., & The MacArthur Foundation Research Network on Psychopathology and Development (1998). Social context in developmental psychopathology: Recommendations for future research from the macArthur network on psychopathology and development. *Development and Psychopathology*, 10(2), 143–164. <https://doi.org/10.1017/s0954579498001552>
- Boyd, A., Golding, J., Macleod, J., Lawlor, D. A., Fraser, A., Henderson, J., Molloy, L., Ness, A., Ring, S., & Davey Smith, G. (2013). Cohort profile: The children of the 90s—the index offspring of the avon longitudinal study of parents and children. *International Journal of Epidemiology*, 42(1), 111–127. <https://doi.org/10.1093/ije/dys064>
- Braet, C., & van Aken, M. A. (2006). Developmental psychopathology: Substantive, methodological and policy issues. *International Journal of Behavioral Development*, 30(1), 2–4. <https://doi.org/10.1177/0165025406059966>
- Bremner, J. D., & Vermetten, E. (2001). Stress and development: Behavioral and biological consequences. *Development and Psychopathology*, 13(3), 473–489. <https://doi.org/10.1017/S0954579401003042>
- Breslin, N., & Weinberger, D. (1990). Schizophrenia and the normal functional development of the prefrontal cortex. *Development and Psychopathology*, 2(4), 409–424. <https://doi.org/10.1017/S0954579400005800>
- Brown, S. M., Schlueter, L. J., Hurwich-Reiss, E., Dmitrieva, J., Miles, E., & Wataura, S. E. (2020). Parental buffering in the context of poverty: Positive parenting behaviors differentiate young children’s stress reactivity profiles. *Development and Psychopathology*, 32(5), 1778–1787.
- Bíró, S., & Russell, J. (2001). The execution of arbitrary procedures by children with autism. *Development and Psychopathology*, 13(1), 97–110. <https://doi.org/10.1017/s0954579401001079>
- Calhoun, V. D., & Sui, J. (2016). Multimodal fusion of brain imaging data: A key to finding the missing link (s) in complex mental illness. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, 1(3), 230–244. <https://doi.org/10.1016/j.jneumeth.2011.10.031>
- Callaghan, B. L., Fields, A., Gee, D. G., Gabard-Durnam, L., Caldera, C., Humphreys, K. L., & Tottenham, N. (2020). Mind and gut: Associations between mood and gastrointestinal distress in children exposed to adversity. *Development and Psychopathology*, 32(1), 309–328.
- Campbell, S., Spieker, S., Vandergrift, N., Belsky, J., & Burchinal, M. (2010). Predictors and sequelae of trajectories of physical aggression in school-age

- boys and girls. *Development and Psychopathology*, 22(1), 133–150. <https://doi.org/10.1017/S0954579409990319>
- Cassano, M., Adrian, M., Veits, G., & Zeman, J. (2006). The inclusion of fathers in the empirical investigation of child psychopathology: An update. *Journal of Clinical Child and Adolescent Psychology*, 35(4), 583–589. https://doi.org/10.1207/s15374424jccp3504_10
- Cha, C. B., Franz, P. J., Guzmán, M., Glenn, E. C., R., Kleiman, E. M., & Nock, M. K. (2018). Annual research review: Suicide among youth - epidemiology, (potential) etiology, and treatment. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, 59(4), 460–482. <https://doi.org/10.1111/jcpp.12831>
- Chen, L. M., Tollenaar, M. S., Hari Dass, S. A., Bouvette-Turcot, A.-A., Pokhvisneva, I., Gaudreau, H., Hélène Parent, C., Diorio, J., McEwen, L. M., MacIsaac, J. L., Kobor, M. S., Beijers, R., de Weerth, C., Silveira, P. P., Karama, S., Meaney, M. J., O'Donnell, K. J., & MAVAN Study Team (2020). Maternal antenatal depression and child mental health: Moderation by genomic risk for attention-deficit/hyperactivity disorder. *Development and Psychopathology*, 32(5), 1810–1821.
- Cicchetti, D. (1993). Developmental psychopathology: Reactions, reflections, projections. *Developmental Review*, 13(4), 471–502. <https://doi.org/10.1006/drev.1993.1021>
- Cicchetti, D. (2010). Resilience under conditions of extreme stress: A multilevel perspective. *World Psychiatry*, 9(3), 145–154. <https://doi.org/10.1002%2Fj.2051-5545.2010.tb00297.x>
- Cicchetti, D. (2013). An overview of developmental psychopathology. In P. D. Zelazo (Ed.), *The oxford handbook of developmental psychology* (vol. 2, pp. 455–480). Oxford University Press.
- Cicchetti, D. (2018). A multilevel developmental approach to the prevention of psychopathology in children and adolescents. In J. N. Butcher, & P. C. Kendall (Eds.), *APA handbook of psychopathology: Child and adolescent psychopathology* (pp. 37–53). American Psychological Association, <https://doi.org/10.1037/0000065-003>
- Cicchetti, D., & Cohen, D. J. (1995). *Developmental psychopathology*. John Wiley & Sons, Inc.
- Cicchetti, D., & Cohen, D. J. (2006). *Developmental psychopathology* (2nd ed.). John Wiley & Sons, Inc.
- Cicchetti, D., & Cohen, D. J. (2016). *Developmental psychopathology* (3rd ed.). John Wiley & Sons, Inc.
- Cicchetti, D., & Toth, S. L. (1992). The role of developmental theory in prevention and intervention. *Development and Psychopathology*, 4(4), 489–493.
- Cicchetti, D., & Toth, S. L. (2000). Social policy implications of research in developmental psychopathology. *Development and Psychopathology*, 12(4), 551–554. <https://doi.org/10.1017/S0954579400004016>
- Cicchetti, D., & Toth, S. L. (2009). The past achievements and future promises of developmental psychopathology: The coming of age of a discipline. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, 50(1-2), 16–25. <https://doi.org/10.1111/j.1469-7610.2008.01979.x>
- Cicchetti, D., & Valentino, K. (2007). Toward the application of a multiple-levels-of-analysis perspective to research in development and psychopathology. In *Multilevel dynamics in developmental psychopathology: Pathways to the future*. (vol. 34, pp. 243–284). Taylor & Francis Group/Lawrence Erlbaum Associates.
- Cornish, F., Gillespie, A., & Zittoun, T. (2014). Collaborative analysis of qualitative data. In U. Flick (Ed.), *The Sage handbook of qualitative data analysis* (pp. 79–93). Sage Publications.
- Cowan, P. A., & Cowan, C. P. (2020). Breaking down silos with systemically oriented preventive interventions: Implications for family policy. In K. S. Wampler, & L. M. McWey (Eds.), *The handbook of systemic family therapy*. (vol. 2, pp. 645–671). John Wiley and Sons.
- Curtly, R. G., Crowston, K., Specht, A., Grant, B. W., & Dalton, E. D. (2017). Attitudes and norms affecting scientists' data reuse. *PLOS ONE*, 12(12), e0189288. <https://doi.org/10.1371/journal.pone.0189288>
- Davies, P. T., Cicchetti, D., Thompson, M. J., Bascoe, S. M., & Cummings, E. M. (2020). The interplay of polygenic plasticity and adrenocortical activity as sources of variability in pathways among family adversity, youth emotional reactivity, and psychological problems. *Development and Psychopathology*, 32(2), 587–603.
- Doom, J. R. (2022). Advantages of a developmental psychopathology approach to studying the antecedents of physical health. *Infant and Child Development*, 31(1), e2250. <https://doi.org/10.1002/icd.2250>
- Duggal, S., Carlson, E., Sroufe, L., & Egeland, B. (2001). Depressive symptomatology in childhood and adolescence. *Development and Psychopathology*, 13(1), 143–164. <https://doi.org/10.1017/s0954579401001109>
- Elison, J. (2020). Editorial: Considering transient instantiators. *Development and Psychopathology*, 32(4), 1173–1174. <https://doi.org/10.1017/S0954579420001807>
- Entringer, S., de Punder, K., Overfeld, J., Karaboycheva, G., Dittrich, K., Buss, C., Winter, S. M., Binder, E. B., & Heim, C. (2020). Immediate and longitudinal effects of maltreatment on systemic inflammation in young children. *Development and Psychopathology*, 32(5), 1725–1731.
- Fabiano, G. A., & Caserta, A. (2018). Future directions in father inclusion, engagement, retention, and positive outcomes in child and adolescent research. *Journal of Clinical Child & Adolescent Psychology*, 47(5), 847–862. <https://doi.org/10.1080/15374416.2018.1485106>
- Fearon, P. (2018). Reimagining the environment in developmental psychopathology: From molecules to effective interventions. *Journal of Child Psychology and Psychiatry*, 59(4), 299–302. <https://doi.org/10.1111/jcpp.12904>
- Fetene, D. M., Betts, K. S., & Alati, R. (2020). The role of maternal prenatal thyroid function on offspring depression: Findings from the ALSPAC cohort. *Development and Psychopathology*, 32(1), 189–196.
- Flake, J. K., & Fried, E. I. (2020). Measurement schmeasurement: Questionable measurement practices and how to avoid them. *Advances in Methods and Practices in Psychological Science*, 3(4), 456–465. <https://doi.org/10.1177/251524592095239>
- Garmezy, N. (1982). Research in clinical psychology: Serving the future hour. In J. Butcher (Ed.), *Handbook of research methods in clinical psychology* (pp. 677–690). John Wiley & Sons.
- Greenberg, M., Speltz, M., DeKlyen, M., & Jones, K. (2001). Correlates of clinic referral for early conduct problems: Variable- and person-oriented approaches. *Development and Psychopathology*, 13(2), 255–276. <https://doi.org/10.1017/s0954579401002048>
- Gunnar, M. R., & Vazquez, D. M. (2001). Low cortisol and a flattening of expected daytime rhythm: Potential indices of risk in human development. *Development and Psychopathology*, 13(3), 515–538. <https://doi.org/10.1017/S0954579401003066>
- Hall, J. E., & Kreppner, J. M. (2019). How can education better support the mental health and wellbeing of young people? Contributions from developmental psychopathology and educational effectiveness research. *Frontiers in Education*, 4, 93. <https://doi.org/10.3389/educ.2019.00093>
- Hawkins, J. D., Brown, E. C., Oesterle, S., Arthur, M. W., Abbott, R. D., & Catalano, R. F. (2008). Early effects of communities that care on targeted risks and initiation of delinquent behavior and substance use. *Journal of Adolescent Health*, 43(1), 15–22. <https://doi.org/10.1016/j.jadohealth.2008.01.022>
- Huang, M., & Starr, L. R. (2020). Interpersonal childhood adversity and stress generation in adolescence: Moderation by HPA axis multilocus genetic variation. *Development and Psychopathology*, 32(3), 865–878.
- Jolicoeur-Martineau, A., Belsky, J., Szekely, E., Widaman, K. F., Pluess, M., Greenwood, C., & Wazana, A. (2020). Distinguishing differential susceptibility, diathesis-stress, and vantage sensitivity: Beyond the single gene and environment model. *Development and Psychopathology*, 32(1), 73–83.
- Kemp, E. C., Boxer, P., & Frick, P. J. (2020). Treating conduct problems, aggression, and antisocial behavior in children and adolescents. In *Handbook of evidence-based therapies for children and adolescents: Bridging science and practice* (pp. 203–218). Springer Verlag US.
- Kim, B. E., Glidden, K. M., Rhew, I. C., Oesterle, S., & Hawkins, J. D. (2015). Effects of the communities that care prevention system on youth reports of protective factors. *Prevention Science*, 16(5), 652–662. <https://doi.org/10.1007/s11121-014-0524-9>
- Klimes-Dougan, B., Hastings, P. D., Granger, D. A., Usher, B. A., & Zahn-Waxler, C. (2001). Adrenocortical activity in at-risk and normally developing adolescents: Individual differences in salivary cortisol basal levels, diurnal variation, and responses to social challenges. *Development and Psychopathology*, 13(3), 695–719.

- Knitzer, J., Yoshikawa, H., Cauthen, N. K., & Aber, J. L. (2000). Welfare reform, family support, and child development: Perspectives from policy analysis and developmental psychopathology. *Development and Psychopathology*, 12(4), 619–632. <https://doi.org/10.1017/S0954579400004041>
- Kryptos, A. M., Blanken, T. F., Arnaudova, I., Matzke, D., & Beckers, T. (2017). A primer on Bayesian analysis for experimental psychopathologists. *Journal of Experimental Psychopathology*, 8(2), 140–157. <https://doi.org/10.5127/jep.057316>
- Kyvik, S. (2003). Changing trends in publishing behaviour among university faculty, 1980–2000. *Scientometrics*, 58(1), 35–48. <https://doi.org/10.1023/A:1025475423482>
- Lupien, S. J., Roy, D.-C., Raymond, C., Leclaire, S., Wan, N., Labelle, R., Giguère, C.-É., Ouellet-Morin, I. (2020). Stigma associated with parental depression or cancer: Impact on spouse and offspring's cortisol levels and socioemotional functioning. *Development and Psychopathology*, 32(5), 1822–1837.
- MacNeill, L. A., Allen, N. B., Poleon, R. B., Vargas, T., Osborne, K. J., Damme, K. S. F., Barch, D. M., Krogh-Jespersen, S., Nielsen, A. N., Norton, E. S., Smyser, C. D., Rogers, C. E., Luby, J. L., Mittal, V. A., & Wakschlag, L. S. (2021). Translating RDoC to real-world impact in developmental psychopathology: A neurodevelopmental framework for application of mental health risk calculators. *Development and Psychopathology*, 33(5), 1665–1684. <https://doi.org/10.1017/S0954579421000651>
- Masten, A. S. (2006). Developmental psychopathology: Pathways to the future. *International Journal of Behavioral Development*, 30(1), 47–54. <https://doi.org/10.1177/0165025406059974>
- Masten, A. S., & Cicchetti, D. (2010). Developmental cascades [Editorial]. *Development and Psychopathology*, 22(3), 491–495. <https://doi.org/10.1017/S0954579410000222>
- Masten, A. S., Lucke, C. M., Nelson, K. M., & Stallworthy, I. C. (2021). Resilience in development and psychopathology: Multisystem perspectives. *Annual Review of Clinical Psychology*, 17(1), 521–549. <https://doi.org/10.1146/annurev-clinpsy-081219-120307>
- Mayer, E. A., Nance, K., & Chen, S. (2022). The gut-brain axis. *Annual Review of Medicine*, 73(1), 439–453. <https://doi.org/10.1146/annurev-med-042320-014032>
- McGorry, P. D., Nelson, B., Wood, S. J., Shah, J. L., Malla, A., & Yung, A. (2020). Transcending false dichotomies and diagnostic silos to reduce disease burden in mental disorders. *Social Psychiatry and Psychiatric Epidemiology*, 55(9), 1095–1103. <https://doi.org/10.1007/s00127-020-01913-w>
- Modecki, K. L., & Uink, B. N. (2017). How can developmental psychopathology influence social and legal policy? Adolescence, mental health, and decision making. In L. C. Centifanti, & D. M. Williams (Eds.), *The Wiley handbook of developmental psychopathology* (pp. 499–517). Wiley Blackwell. <https://doi.org/10.1002/9781118554470.ch24>
- Mun, E. Y., Jiao, Y., & Xie, M. (2016). Integrative data analysis for research in developmental psychopathology. *Developmental Psychopathology: Theory and Method*, 1, 1042–1087.
- National Academies of Sciences, Engineering, and Medicine (2018). *Open science by design: Realizing a vision for 21st century research*. The National Academies Press.
- Nigg, J. T. (2023). Considerations toward an epigenetic and common pathways theory of mental disorder. *Journal of Psychopathology and Clinical Science*, 132(3), 297–313. <https://doi.org/10.1037/abn0000748>
- Norman Wells, J., Skowron, E. A., Scholtes, C. M., & DeGarmo, D. S. (2020). Differential physiological sensitivity to child compliance behaviors in abusing, neglectful, and non-maltreating mothers. *Development and Psychopathology*, 32(2), 531–543.
- Oppenheimer, C. W., Glenn, C. R., & Miller, A. B. (2022). Future directions in suicide and self-injury revisited: Integrating a developmental psychopathology perspective. *Journal of Clinical Child & Adolescent Psychology*, 51(2), 242–260. <https://doi.org/10.1080/15374416.2022.2051526>
- Osborne, K., Vargas, T., & Mittal, V. (2020). Early childhood social communication deficits in youth at clinical high-risk for psychosis: Associations with functioning and risk. *Development and Psychopathology*, 32(2), 559–572. <https://doi.org/10.1017/S0954579419000385>
- Phares, V., & Compas, B. E. (1993). Fathers and developmental psychopathology. *Current Directions in Psychological Science*, 2(5), 162–165. <https://doi.org/10.1111/1467-8721.ep10768976>
- Pianta, R. C. (2016). Classroom processes and teacher-student interaction: Integrations with a developmental psychopathology perspective. In D. Cicchetti (Ed.), *Developmental psychopathology: Risk, resilience, and intervention* (pp. 770–814). John Wiley & Sons, Inc. <https://doi.org/10.1002/9781119125556.devpsy415>
- Pollak, S. D. (2015). Developmental psychopathology: Recent advances and future challenges. *World Psychiatry*, 14(3), 262–269. <https://doi.org/10.1002/wps.20237>
- Qian, W., Zhang, C., Piersiak, H. A., Humphreys, K. L., & Mitchell, C. (2022). Biomarker adoption in developmental science: A data-driven modelling of trends from 90 biomarkers across 20 years. *Infant and Child Development*, e2366. <https://doi.org/10.1002/icd.2366>
- Ricks, D. F. (1990). Developmental psychopathology and prevention. In P. R. Magrab, & P. Wohlford (Eds.), *Improving psychological services for children and adolescents with severe mental disorders: Clinical training in psychology* (pp. 85–90). American Psychological Association. <https://doi.org/10.1037/10072-009>
- Roubinov, D. S., Bush, N. R., Hagan, M. J., Thompson, J., & Boyce, W. T. (2020). Associations between classroom climate and children's externalizing symptoms: The moderating effect of kindergarten children's parasympathetic reactivity. *Development and Psychopathology*, 32(2), 661–672.
- Rozin, P. (2007). Exploring the landscape of modern academic psychology: Finding and filling the holes. *American Psychologist*, 62(8), 754–766. <https://doi.org/10.1037/0003-066X.62.8.754>
- Savage, W. E., & Olejniczak, A. J. (2022). More journal articles and fewer books: Publication practices in the social sciences in the 2010's. *Plos One*, 17(2), e0263410. <https://doi.org/10.1371/journal.pone.0263410>
- Senju, A., Southgate, V., Miura, Y., Matsui, T., Hasegawa, T., Tojo, Y., Osanai, H., & Csibra, G. (2010). Absence of spontaneous action anticipation by false belief attribution in children with autism spectrum disorder. *Development and Psychopathology*, 22(2), 353–360. <https://doi.org/10.1017/S0954579410000106>
- Shirk, S., Talmi, A., & Olds, D. (2000). A developmental psychopathology perspective on child and adolescent treatment policy. *Development and Psychopathology*, 12(4), 835–855. <https://doi.org/10.1017/S0954579400004144>
- Sielemann, K., Hafner, A., & Pucker, B. (2020). The reuse of public datasets in the life sciences: Potential risks and rewards. *PeerJ*, 8, e9954.
- Skibo, M. A., Sturge-Apple, M. L., & Suor, J. H. (2020). Early experiences of insensitive caregiving and children's self-regulation: Vagal tone as a differential susceptibility factor. *Development and Psychopathology*, 32(4), 1460–1472.
- Sroufe, L. A. (2013). The promise of developmental psychopathology: Past and present. *Development and Psychopathology*, 25(4 Pt 2), 1215–1224. <https://doi.org/10.1017/S0954579413000576>
- Sterba, S., & Bauer, D. (2010). Matching method with theory in person-oriented developmental psychopathology research. *Development and Psychopathology*, 22(2), 239–254. <https://doi.org/10.1017/S0954579410000015>
- Sternberg, R. J. (2017). We can do better than fads. In S. O. Lilienfeld, & I. D. Waldman (Eds.), *Psychological science under scrutiny: Recent challenges and proposed solutions* (pp. 340–348). Wiley.
- Thijssen, S., Collins, P. F., & Luciana, M. (2020). Pubertal development mediates the association between family environment and brain structure and function in childhood. *Development and Psychopathology*, 32(2), 687–702.
- Thompson, R. A. (2019). Translational science: Developmental psychopathology and social policy. In *Conducting research in developmental psychology* (pp. 189–199). Routledge.
- Tone, E. B., & Henrich, C. C. (2023). Peer victimization and social confidence in youth with disabilities. *Journal of Applied Developmental Psychology*, 86, 101519. <https://doi.org/10.1016/j.appdev.2023.101519>
- Toth, S. L., & Cicchetti, D. (2010). The historical origins and developmental pathways of the discipline of developmental psychopathology. *The Israel Journal of Psychiatry and Related Sciences*, 47(2), 95–104.

- Toth, S. L., & Manly, J. T.** (2019). Developmental consequences of child abuse and neglect: Implications for intervention. *Child Development Perspectives*, 13(1), 59–64. <https://doi.org/10.1111/cdep.12317>
- Tottenham, N.** (2020). Neural meaning making, prediction, and prefrontal-subcortical development following early adverse caregiving. *Development and Psychopathology*, 32(5), 1563–1578.
- Trickett, E. J.** (2009). Multilevel community-based culturally situated interventions and community impact: An ecological perspective. *American Journal of Community Psychology*, 43(3-4), 257–266. <https://doi.org/10.1007/s10464-009-9227-y>
- Van IJzendoorn, M., Schuengel, C., Wang, Q., & Bakermans-Kranenburg, M.** (2023). Improving parenting, child attachment, and externalizing behaviors: Meta-analysis of the first 25 randomized controlled trials on the effects of video-feedback intervention to promote positive parenting and sensitive discipline. *Development and Psychopathology*, 35(1), 241–256. <https://doi.org/10.1017/S0954579421001462>
- Villanueva, C. M., Siltan, R. L., Heller, W., Barch, D. M., & Gruber, J.** (2021). Change is on the horizon: Call to action for the study of positive emotion and reward in psychopathology. *Current Opinion in Behavioral Sciences*, 39, 34–40. <https://doi.org/10.1016/j.cobeha.2020.11.008>
- Wade, M., Sheridan, M. A., Zeanah, C. H., Fox, N. A., Nelson, C. A., & McLaughlin, K. A.** (2020). Environmental determinants of physiological reactivity to stress: The interacting effects of early life deprivation, caregiving quality, and stressful life events. *Development and Psychopathology*, 32(5), 1732–1742.
- Wong, C. Y.** (2019). A century of scientific publication: Towards a theorization of growth behavior and research-orientation. *Scientometrics*, 119(1), 357–377. <https://doi.org/10.1007/s11192-019-03048-5>
- Zullo, L., Kodish, T., & Asarnow, J.** (2022). After screening: A developmentally informed approach to safety planning and stabilization. In J. P. Ackerman, & L. M. Horowitz (Ed.), *Youth suicide prevention and intervention* (pp. 71–78). SpringerBriefs in Psychology. Springer, Cham. https://doi.org/10.1007/978-3-031-06127-1_8