

Chapter 8

Understanding Environmental Impacts on Family Functioning in Service of Resilience and Equity



Devin Malloy McCauley and Jordan E. Jackson

The chapters in this volume provide insights into the many ways in which environmental factors shape the functioning, health, and well-being of families and their members. Our goal in this final chapter is to integrate the diversity of knowledge, perspectives, and research methodologies in this volume to highlight salient themes addressed by the authors – centering the concepts of family resilience and social equity. Toward this goal, we have organized this concluding chapter around three broad questions that emerged from the previous chapters:

- (a) How does the built environment shape family relationships and well-being?
- (b) How do families respond and adapt to disasters?
- (c) How does climate change impact family functioning?

In addressing these questions, we begin from a micro-level perspective, drawing on insights from the family systems framework, and then expand our scope to examine how environmental factors interact with social structures and systems to shape families and children at the population level. We conclude by highlighting key topics to be addressed by future research and prevention efforts related to environmental impacts on families.

D. M. McCauley (✉)

Department of Pediatrics, Stanford University School of Medicine, Stanford, CA, USA
e-mail: dmm16@stanford.edu

J. E. Jackson

Department of Sociology, Penn State, University Park, PA, USA
e-mail: jej5332@psu.edu

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S. E. Ortiz et al. (eds.), *Environmental Impacts on Families*, National
Symposium on Family Issues 12, https://doi.org/10.1007/978-3-031-22649-6_8

A Family Systems Perspective for Studying Environmental Impacts on Families

The family systems framework offers a number of foundational principles that characterize family functioning and in turn provide insight into the health and well-being of its individual members. Notably, the concept of *wholism* emphasizes that families are systems governed by patterns and rules and that individual behavior is best understood within the broader family context (Minuchin, 1985). Similarly, the principle of *interdependence* highlights the relational and interactive nature of family processes, whereas *circular causality* reveals that family interactions tend to be patterned and reciprocal rather than linear (Minuchin, 1985; Nichols & Everett, 1986).

These principles direct attention to the complexities of family functioning and illuminate the ways in which the development and well-being of individual members are contextualized by broader family patterns and relationships. Therefore, from a family systems perspective, instilling positive change for children and adults requires evaluating and addressing the relational aspects of the family unit as whole, rather than evaluating and treating individuals in isolation (Minuchin, 1974). For this reason, families are salient contexts for both empirical investigation and prevention efforts aimed at supporting healthy human development (e.g., Connell et al. (2015), Kumpfer and Alvarado (2003)).

Though family research and prevention efforts often focus on intrafamily dynamics, the systems framework also emphasizes that families are *open systems* – meaning that family functioning is influenced by interactions with the surrounding environment (Nichols & Everett, 1986). This concept is supported empirically. For example, on days when adolescents experience problems at school, they are more likely to report conflictual interactions with their parents at home (Timmons & Margolin, 2015), and parents' daily stressful experiences in the workplace are linked to later family interactions at home (Repetti & Wang, 2010). Sociocultural factors, such as racial identity, experiences of racial discrimination, and racial socialization, also have implications for couple and parent-child relationships (Jenkins et al., 2020; Lavner et al., 2018).

The concept of families as open systems is particularly valuable when conceptualizing family stress and resilience, as it draws our attention to the risks, resources, and support systems embedded throughout the families' broader environments (Masten, 2021; Witting et al., 2021). As demonstrated throughout this volume, nesting family science within bioecological models of development yields a deeper understanding of the myriad ways in which environments directly and indirectly impact family functioning, bringing to light novel implications for prevention, policy, and future research (Bronfenbrenner & Morris, 2006). Shifting our lens to a macro-level perspective, several chapters in this volume also demonstrate how structural characteristics of environments – including economic, geographic, environmental, and political factors – impact family functioning in ways that account for disparities in health and well-being at the population level. Collectively, the diversity of perspectives and approaches in this volume exemplifies the ways in

which strengthening an interdisciplinary approach to family science can enhance understanding of family risk and resilience and also inform and guide efforts aimed at promoting greater equity in our societies. In an ever-evolving world with growing wealth inequality, persistent housing insecurity, changing environmental conditions, and more frequent and intense natural and human-made disasters, the need for interdisciplinary study of environmental impacts on family functioning becomes all the more pressing. With this in mind, we now examine how the chapters in this volume address the role of the built environment in family functioning.

The Built Environment Shapes Family Relationships and Well-Being

Ferguson and Evans (Chap. 5) advance the concept of the family as an open system by drawing upon an extension of Bronfenbrenner's (1977) bioecological model to illuminate the ways in which the physical environment shapes family processes and child's well-being. The bioecological model emphasizes that the home and surrounding areas, such as neighborhoods, parks, and schools, are formative spaces for human development (Bronfenbrenner & Morris, 2006). How, then, might physical surroundings characterized by toxins, pollutants, water insecurity, extreme temperatures, lighting, noise, and crowding impact the family relationships, processes, and routines that guide child development?

The direct impacts of such physical factors on child health are generally well studied, with noted effects on physical, cognitive, and socioemotional well-being (see Evans (2006), Ferguson et al. (2013)). However, the ways in which such factors *indirectly* affect child health through disruptions in family routines and relationships represent a crucial domain for future investigation. In this case, embedding the family systems concept of *interdependence* within a bioecological framework may guide future inquiry. For example, parents working in noisy or chaotic environments are susceptible to fatigue and psychological stress, which may in turn influence parenting practices and family routines in ways that impact child development. Exposure to toxins or lack of access to clean water impacts not only children's physical health (Bartlett, 2003; Ferguson et al., 2013) but may result in increased absences from school – further disrupting opportunities for children's learning, social interactions, and growth (Bartlett, 2003; Eccles & Roeser, 2015).

Notably, Ferguson and Evans (Chap. 5) emphasize that the direct and indirect effects of the physical environment do not act in isolation but rather interact in complex ways to shape family processes and child development. Furthermore, structural forces such as housing segregation and school districting also create vast inequities in the quality of physical environments in and around the home – leaving some populations with greater exposure to multiple physical risk factors (Shonkoff et al., 2021). Therefore, accounting for the cumulative effects of physical environmental factors within and beyond the home is essential for understanding the risks faced by

families and children and for designing effective and equitable interventions for improving physical spaces in support of healthy child development.

Binet and Arcaya (Chap. 7) expand upon the bioecological perspective introduced by Ferguson and Evans (Chap. 5) to examine how families navigate the goals and demands of caregiving within modern urban environments. As articulated by the participants in Binet and Arcaya's study, caregiving is not a dyadic act confined to the home but rather relies upon and contends with the networks of private (e.g., home), public (e.g., parks, playgrounds, transportation), and professional (e.g., health clinics) spaces that comprise families' built environments. However, understanding the demands of caregiving in urban settings also requires shifting our focus to the structural forces that guide their development and design. Despite the centrality of caregiving for human relationships and development, many capitalist societies have increasingly relegated the burden of care to families while allocating fewer resources to institutions and social programs that support care. The result is a privatization and commodification of care with ever-widening disparities in who can afford access and who must bear the burdens on their own.

What does this "crisis of care" look like for families? Interviews with participants in the Healthy Neighborhoods Study revealed common ways in which caregiving demands are shaped by constraints of urban environments. Many caregivers discussed the complexity of balancing employment opportunities with accessibility to schools, affordable housing, and other institutional supports. Caregivers also shared their difficulties in managing their dependents' exposure to unsafe spaces in their own neighborhoods while still fostering opportunities for social interactions and growth. Notably, many participants reported having to invest substantial time and effort into creating their own networks of care within their neighborhoods and communities in order to provide for their dependents. In many cases, the constraints of their urban environments made it impossible to meet all caregiving goals at once, leaving families to consistently seek alternative solutions for managing the burdens of care. Unsurprisingly, the unequal distribution of caregiving burdens along racial, gender, and class only perpetuates social inequities along such lines (Daming, 2019; Duffy, 2011; Folbre, 2012). Therefore, solving this crisis requires investing in structural changes through policy and urban planning efforts that prioritize the demands of caregiving. In other words, building "infrastructures of care" will not only support dyadic caregiving but address broader societal inequities in the burdens of care.

Thus far, these two chapters have enriched our conceptualization of families as open systems. Ferguson and Evans (Chap. 5) illustrate how a bioecological framework can reveal cumulative risk to family functioning within the proximal physical environment, and Binet and Arcaya (Chap. 7) demonstrate that caregiving in urban environments is often constrained by structural forces in ways that perpetuate population-level disparities in family health. In combination, this work illustrates a clear and urgent need for interventions that facilitate change in the built environment in support of family health and well-being. Given this clear need, how can we begin to address the crisis of care and environmental risks to family and child health?

Lachance et al. (Chap. 6) answer this question by providing a framework for supporting community-driven efforts to create lasting, sustainable change in support of child and family health. As they emphasize, the physical health of children and families is dependent on broader social and economic conditions that shape the infrastructure of communities and in turn provide opportunities for physical activity. Efforts to create meaningful change in the built environment are best served by centering equity via community-driven approaches and systems-level thinking. These values were applied by Lachance and colleagues in the Lower Rouge River project, which focused on collaborating with Michigan communities to create safe and equitable opportunities for physical activity along Lower Rouge waterways. For example, assessing the structural determinants of and barriers to physical activity within participating communities ensured that these factors informed the priorities of the project, resulting in *equitable* and safe opportunities for physical health. Adopting a *community-driven* approach meant amplifying the voices of community members and empowering them to author their own vision and goals for the project. *Thinking systemically* required accounting for the interconnected institutions, organizations, and stakeholders within and across these communities and forging coalitions among them in order to build community-wide investment and support for the project. Through adherence to such principles, the Lower Rouge River project was able to empower communities to facilitate structural changes in the built environment that created access to and engagement with the Lower Rouge waterways, in turn promoting equitable and safe opportunities for family physical activity and health.

How Families Respond and Adapt to Disasters

Rapid environmental changes and destruction wrought by disasters carry unique challenges for families and often exacerbate societal and global inequities. Such disasters – natural, technological, human-made, or biological – impact physical and mental health, alter life trajectories, and generally create instability (Abramson, 2021). Though the literature on disasters focuses mainly on individuals and/or communities as the unit of analysis, studying families in the context of disasters provides novel and valuable insights that may facilitate recovery efforts and opportunities for intervention.

During a disaster, families may experience injuries and property destruction, which may in turn precipitate long-term consequences such as housing loss, economic hardships, and separation from community support systems (Abramson, 2021). These acute and chronic stressors collectively increase risk for parents' psychological distress and disrupted parenting – factors that compound risks to children's own recovery and well-being (e.g., Cobham et al. (2016)). Integrating family resilience theories with disaster research provides a framework for examining the interplay of (a) stressors induced by disaster exposure and (b) the family's resources in shaping coping and recovery over time (Figley & Kiser, 2013). Family cohesion,

communication, supportiveness, and problem-solving skills during and after a disaster may support individual members' coping and recovery. However, families are embedded within broader social ecologies that carry their own risk and resilience factors, contributing to collective stressors that are not distributed equally among all who are affected by a disaster. Socioeconomic status, access to resources, and community supports shape families' pre-hazard vulnerabilities and play an important role in disaster recovery. Therefore, preparing communities to adapt to environmental disasters may benefit from equity-focused strategies that bolster family and community resilience, while also accounting for immediate disaster-related stressors as well as those that unfold along the road to recovery.

Empirical knowledge of family resilience post-disaster is provided via longitudinal data and natural experiments. Frankenberg et al. (Chap. 1) utilizes one such dataset to predict variation in long-term mental health and mortality outcomes for survivors of the 2004 tsunami in Indonesia. Some communities suffered high death rates, while other communities nearby were relatively unaffected, providing an opportunity to draw comparisons between the long-term outcomes of survivors residing in both types of communities. This study found that communities unaffected by the tsunami had a higher mortality rate at the 15-year follow-up compared to communities hit hard by the tsunami (27% and 23%, respectively). Although perhaps surprising initially, these differences in community-level mortality rate suggest that the tsunami killed mostly frail individuals, leaving the tsunami-affected communities with a more robust population on average compared to the communities unaffected by the tsunami. On an individual level, Frankenberg and colleagues (Chap. 1) show how loss of a spouse and/or close kin influences both mortality and post-traumatic stress many years after the disaster. However, these links vary by gender. Regression results disaggregated by age and gender show that older men who lost a spouse had reduced mortality risk while older women who lost a spouse had increased mortality risk. Further, younger women in communities who experienced the death of spouse or close kin displayed long-lasting psychological difficulties five and ten years after the tsunami. Such gender disparities in mortality and mental health highlight the need for attention to the distinctive experiences of women and men and have important implications for disaster-related intervention and policy. Findings also showed that poor housing conditions predicted both mortality and poorer mental health for women and men of all ages, pointing to a need for housing assistance and higher-quality housing for families in the wake of climate disasters. Together the findings highlight the importance of conceptualizing disaster resilience as a process that unfolds across time, including different outcomes based on gender, age, and family role. By altering the structure of families through mortality, housing insecurity, and displacement, disasters continue to impact the functioning of surviving family members long after the initial event.

While disasters have been shown to cause lasting trauma for survivors, some disaster research has provided a foundation for interventions designed to mitigate risk and alleviate symptoms. Powell et al. (Chap. 2) describe one such intervention, which was aimed at reducing psychopathology for adolescents experiencing anxiety, depression, and post-traumatic stress disorder after Hurricane Katrina. The

intervention, Journey of Hope, involves eight group sessions wherein youth learn how to process difficult emotions and engage in positive peer interactions. Additionally, two caregiver sessions help caregivers cope with the effects of the disaster and support their children. Research has shown that Journey of Hope is effective at both reducing stress and increasing coping skills for children and caregivers. Thus, the program has been adapted and implemented in many different countries. For example, after the 2011 earthquake in Christchurch, New Zealand, local stakeholders, including staff from Save the Children, New Zealand, psychologists, and social workers adapted the Journey of Hope program to fit the cultural needs of New Zealand children. In this case, American English was changed to New Zealand English, terminology was changed to reflect the New Zealand education system, and books that were used in the USA were substituted for ones used throughout the New Zealand educational curricula. As Journey of Hope continues to provide services to youth and caregivers post-disaster, collecting data on program implementation, including fidelity and acceptability, as well as program effectiveness, including the long-term impacts of program participation, remains a priority.

How Climate Change Impacts Family Functioning

In addition to the impacts of the built environment and disasters, climate change also has distinctive impacts on families. Such impacts are evident in many facets of family life, including but not limited to family members' physical health (Dorélien & Grace, Chap. 3), mental and behavioral health (Billiot, 2021), family migration (Carrico, Chap. 4), and more broadly community cohesion (Billiot, 2021). As with other environmental impacts, climate change interacts with geographic, economic, and cultural factors to produce unique challenges for families – as well as opportunities for adaptation. Understanding the complex intersection of these dynamic factors is imperative for supporting family adaptation in the context of environmental disruptions due to climate change.

Beyond the connections between the environment and long-term mental health outcomes (Frankenberg et al., Chap. 1), changing climate conditions can interact with a community's cultural history to yield complex challenges (Billiot, 2021). For example, indigenous populations in the USA have experienced unique health challenges resulting from the nation's history of colonial discrimination. Despite well-documented health disparities for tribal populations, the effects of exposure to climate change on indigenous health has not been adequately studied. As described by Billiot in her presentation at the 2021 National Symposium on Family Issues, on which this volume is based, indigenous tribal communities living in coastal regions in Louisiana have suffered substantial land loss, which threatens not only their agricultural livelihood but intergenerational transfer of cultural knowledge grounded in these ancestral lands (Billiot et al., 2019). Billiot (2021) described how indigenous sovereignty, tribal approval, indigenous knowledge, and collective community action must be prioritized in research on climate change adaptation within indigenous

communities. Decolonial methods include seeking participation *with* rather than imposing interventions *upon* indigenous people, eliminating power imbalances between Western knowledge and indigenous knowledge, and rethinking community engagement research to match indigenous worldviews. This work demonstrates the critical intersectionality of place, history, and culture in family-based climate change research. Applying an intersectional framework better positions research to provide richer and more accurate descriptions of social inequalities toward potential directions for addressing the human and social challenges that arise in the context of environmental change and challenge.

Carrico (Chap. 4) examines a different problem related to climate change – the role of families in climate migration. While migration theories agree that family is at the center of migration, few empirical studies have examined climate migration in a family context. For example, in the new economics of labor migration theory, migration is theorized as a family-negotiated coping technique, with the decision to send a migrant serving to diversify family risk and increase family opportunity (Massey et al., 1999; Stark & Bloom, 1985). Other theories, such as the sustainable livelihoods framework (Bebbington, 1999), consider migration as an adaptation to stressors, with household resources impacting the decision to migrate. Carrico (Chap. 4) draws on both frameworks in study of connections between environmental shocks and characteristics of migrant trips. The health of climate migrants and non-climate migrants was roughly equivalent. However, migrants whose trips occurred during or soon after an environmental shock stay abroad for longer periods of time and are more likely to engage in agriculture at their destination. Carrico concluded that while families and households are central components of migration theory, future migration studies should treat families as the unit of analysis and conduct interdisciplinary research involving both family and migration scholars to address the impacts of climate migration on families.

As climate change escalates, innovative family demography research on climate change may be supported by publicly available data resources that capture spatial and temporal nuances. Dorélien and Grace (Chap. 3), for example, provide guidance for researchers on how to link climate change with demographic patterns and cite a number of publicly available datasets that can be linked to climate data. The Demographic and Health Survey (DHS), the Malaria Indicator Survey (MIS), the Multiple Indicator Cluster Surveys (MICS), the Performance Monitoring for Action (PMA), and the World Bank Living Standards Measurement Study – Integrated Surveys on Agriculture (LSMS-ISA) – all include potentially relevant information and allow for such linking capability. In addition, more recently developed datasets now contain the geocodes needed for merging climate data. While demographic data can be high in resolution, however, climate data are often more spatially coarse, leading to coarser data after merging and reduced specificity (see Fig. 3.1, Chap. 3).

Merging demographic and climate data can provide novel insights about population health, migration, and fertility, as well as issues pertaining to spatial and temporal patterns – all of interest to family demographers. Temporal data, such as date of birth, for example, can reveal how individuals exposed to the same climate at given points in time may nonetheless have different health outcomes depending on

the life course stage of their exposure. Further, datasets such as the DHS provide data at the individual, household, and spatial cluster levels, allowing researchers to examine multiple levels of potentially influential factors (see Fig. 3.3, Chap. 3). For example, temperature and rain irregularities can impact families in different ways depending on the household's rural or urban status. Urban places often have hotter temperatures compared to rural places, whereas droughts tend to more severely impact rural households.

These data are not without limitations. Dorélien and Grace (Chap. 3) describe how it is sometimes difficult to accurately identify which individuals were exposed to a specific climate event. In addition, because much of the publicly available data focus on health, it is often difficult to measure migration. For example, survey data post-climate exposure does not include information from those who have already migrated and thus will not capture the range of outcomes associated with climate exposures. Another limitation of these data includes age exclusions. For example, many surveys do not include the elderly in their responses, which leaves researchers with incomplete knowledge about aging, migration, and climate change.

Despite limitations, as Dorélien and Grace (Chap. 3) show, these datasets provide opportunities for rich empirical analysis. Using DHS and climate data, for example, Dorélien and Grace documented how environmental changes can impact maternal and child's health. Specifically, their findings revealed that pregnant women's exposure to more hot days was associated with increased risk of stillbirth or miscarriage as well as lower birth weights. In Mali, improved agriculture seasons may help to mitigate these risks by supplying more food during the hunger season and thus increase child birthweight. Future climate research should focus on elderly populations, as well as on couples and households. In addition to expanding scientific knowledge, such research may have important implications for targeting international aid and policy, more generally.

Lessons Learned and Future Directions

What lessons can we learn through an interdisciplinary approach to investigating environmental impacts on family functioning and well-being? We conclude by highlighting two key lessons evident across the chapters in this volume and consider how they may inform future family scholarship.

Thinking Systemically

Integrating family scholarship with research on climate and other components of the physical environment is enriched by systems thinking. Families themselves are complex systems that are guided by patterns and rules, but they are also deeply embedded within broader social, geographic, and political systems. Interdisciplinary

efforts to bridge across more micro and more macro theory, data, and methods offer great promise for enriching family science. For example, Carrico (Chap. 4) emphasizes that although climate migrants are often conceptualized as acting individually, their plans, efforts, and decisions are shaped not only by environmental factors but by their relationships and roles within their families. Binet and Arcaya's (Chap. 7) work illustrates how the dyadic relationship between caregiver and dependent is in fact deeply embedded within structural dimensions of the urban environment and broader social policies.

There are many avenues for progressing understanding of family functioning within its environmental context.

First, family scholars should strive to further integrate a family systems framework with a multicultural perspective in order to better understand racial, ethnic, and cultural diversity in family norms and how such norms are shaped by and respond to broader environmental factors and forces. For example, studying the impact of immigration policies, housing opportunities, or disaster response efforts on family functioning requires careful consideration of the culturally specific rules, patterns, histories, and practices that characterize family functioning for the population in question. As described by Billiot (2021), developing effective interventions to support health among an indigenous tribe in Louisiana required understanding the complex intersection between the tribe's history of colonial institutional discrimination, their cultural values, and the environmental conditions affecting their lands throughout Louisiana. Similarly, future research should strive to better understand heterogeneity in family structures, family structure changes and transitions, and how diverse family structures respond to environmental challenges and adapt to climate disasters.

Advancing methodologies in study of environmental impacts on families also offers great promise for future scholarship. As suggested by Ferguson and Evans (Chap. 5), applying intensive longitudinal methods would provide insight into how short-term fluctuations in environmental stressors (e.g., heat exposure, air quality) correspond with changes in family relationships and family members' psychological and physical health on situational or daily timescales (Bolger & Laurenceau, 2013). Pairing these methods with longer-term data collection (e.g., years, decades), as demonstrated by Frankenberg and colleagues (Chap. 1), would progress understanding of the different timescales along which environmental factors shape family risk and resilience. Applying intensive longitudinal methods and long-term data collected at different points in the lifespan would also provide nuanced insights into how environmental factors differentially shape risk and resilience processes as a function of development. Furthermore, as argued by Dorélien and Grace (Chap. 3), improving disciplinary terminology, data linking methods, and spatial resolution are key to understanding how subtle differences in climate and other characteristics of the environment may shape family risks, adaptive strategies, and outcomes.

Community-Driven Family Research and Equity

Several authors in this volume invested in community-based and participatory research. As demonstrated by Binet and Arcaya (Chap. 7) and LaChance and colleagues (Chap. 6), for example, partnering with families and communities in research not only advances scientific discovery but provides a foundation for facilitating positive, long-lasting structural changes to environments. It remains crucial that such efforts are guided by equity principles to ensure that intervention efforts account for the voices, needs, and decisions of community members who are likely to be most impacted. Otherwise, research and intervention efforts run the risk of perpetuating inequities in access to benefits and resources and their associated outcomes that may be afforded by research-driven policies and programs. Notably, an important debate remains as scholars from across disciplines strive to promote equity and positive change while questioning whether to move quickly versus more slowly. As articulated by LaChance and colleagues (Chap. 6), due diligence and investment in systemic changes may take considerable time and effort on the parts of researchers and community members, but in many cases, such time investments may be more likely to yield lasting structural changes in service of equity. There are cases, however, in which interventions cannot be delayed, for example, in the aftermath of climate-induced disasters. Powell and colleagues' (Chap. 2) descriptions of the Journey of Hope demonstrate how a timely and effective intervention can be delivered in support of families' post-disaster recovery and yet exist within a broader partnership framework that facilitates scale-up and contextual adaptations across the globe. In this case, investing in a prevention infrastructure facilitates rapid and culturally relevant responses to climate disasters. For interventions, both fast and slow, striving to center equity when integrating family and environmental science frameworks promises to reveal novel insights about how to empower families and communities facing ever-increasing environmental risks and challenges.

References

- Abramson, D. (2021, October 25). Family resilience and disasters [paper presentation]. In *29th Annual National Symposium on Family Issues*. Penn State.
- Bartlett, S. (2003). Water, sanitation and urban children: The need to go beyond "improved" provision. *Environment & Urbanization*, *15*(2), 57–70. [Water, sanitation and urban children: the need to go beyond "improved" provision \(sagepub.com\)](#)
- Bebbington, A. (1999). Capitals and capabilities: A framework for analyzing peasant viability, rural livelihoods and poverty. *World Development*, *27*(12), 2021–2044. [https://doi.org/10.1016/S0305-750X\(99\)00104-7](https://doi.org/10.1016/S0305-750X(99)00104-7)
- Billiot, S. (2021, October 25). Building community-based adaptations to address health implications of exposure to environmental changes among indigenous peoples [paper presentation]. In *29th Annual National Symposium on Family Issues*. Penn State.

- Billiot, S., Kwon, S., & Burnette, C. E. (2019). Repeated disasters and chronic environmental changes impede generational transmission of indigenous knowledge. *Journal of Family Strengths*, 19(1) <https://digitalcommons.library.tmc.edu/jfs/vol19/iss1/11>
- Bolger, N., & Laurenceau, J. P. (2013). *Intensive longitudinal methods: An introduction to diary and experience sampling research*. Guilford Press.
- Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist*, 32(7), 513–531. <https://doi.org/10.1037/0003-066X.32.7.513>
- Bronfenbrenner, U., & Morris, P. A. (2006). The bioecological model of human development. In R. M. Lerner (Ed.), *Handbook of child development* (Vol. 1. *Theoretical models of human development*, 6th ed., pp. 793–828). Wiley.
- Cobham, V. E., McDermott, B., Haslam, D., & Sanders, M. R. (2016). The role of parents, parenting and the family environment in children's post-disaster mental health. *Current Psychiatry Reports*, 18(6), 53. <https://doi.org/10.1007/s11920-016-0691-4>
- Connell, A. M., Stormshak, E., Dishion, T., Fosco, G., & Van Ryzin, M. (2015). The family check up and adolescent depression: An examination of treatment responders and non-responders. *Prevention Science*, 19(1), 16–26. <https://doi.org/10.1007/2Fs11121-015-0586-3>
- Daminger, A. (2019). The cognitive dimension of household labor. *American Sociological Review*, 84(4), 609–633. <https://doi.org/10.1177/0003122419859007>
- Duffy, M. (2011). *Making care count: A century of gender, race, and paid care work*. Rutgers University Press. Making Care Count | Rutgers University Press.
- Eccles, J. S., & Roeser, R. W. (2015). School and community influences on human development. In M. H. Bornstein & M. E. Lamb (Eds.), *Developmental science: An advanced textbook* (pp. 513–555). Lawrence Erlbaum.
- Evans, G. W. (2006). Child development and the physical environment. *Annual Review of Psychology*, 57, 423–451. <https://doi.org/10.1146/annurev.psych.57.102904.190057>
- Ferguson, K. T., Cassells, R. C., MacAllister, J. W., & Evans, G. W. (2013). The physical environment and child development: An international review. *International Journal of Psychology*, 48(4), 437–468. <https://dx.doi.org/10.1080/2F00207594.2013.804190>
- Figley, C., & Kiser, L. (2013). *Helping traumatized families*. Routledge.
- Folbre, N. (2012). *For love and money: Care provision in the United States*. Russell Sage Foundation.
- Jenkins, A. I., Fredman, S. J., Le, Y., Sun, X., Brick, T. R., Skinner, O. D., & McHale, S. M. (2020). Prospective associations between depressive symptoms and marital satisfaction in black couples. *Journal of Family Psychology*, 34(1), 12–23. <https://doi.org/10.1037/fam0000573>
- Kumpfer, K. L., & Alvarado, R. (2003). Family-strengthening approaches for the prevention of youth problem behaviors. *American Psychologist*, 58(6–7), 457–465. <https://doi.org/10.1037/0003-066x.58.6-7.457>
- Lavner, J. A., Barton, A. W., Bryant, C. M., & Beach, S. R. H. (2018). Racial discrimination and relationship functioning among African American couples. *Journal of Family Psychology*, 32(5), 686–691. <https://doi.org/10.1037/fam0000415.suppl>
- Massey, D. S., Arango, J., Hugo, G., Kouaouci, A., & Pellegrino, A. (1999). *Worlds in motion: Understanding international migration at the end of the millennium*. Clarendon Press.
- Masten, A. S. (2021). Multisystem resilience: Pathways to an integrated framework. *Research in Human Development*, 18(3), 153–163. <https://doi.org/10.1080/15427609.2021.1958604>
- Minuchin, S. (1974). *Families and family therapy*. Harvard University Press.
- Minuchin, P. (1985). Families and individual development: Provocations from the field of family therapy. *Child Development*, 56(2), 289–302. <https://doi.org/10.2307/1129720>
- Nichols, W. C., & Everett, C. A. (1986). *Systemic family therapy: An integrative approach*. Guilford Press.
- Repetti, R., & Wang, S. (2010). Parent employment and chaos in the family. In G. W. Evans & T. D. Wachs (Eds.), *Chaos and its influence on children's development: An ecological perspective* (pp. 191–208). American Psychological Association.

- Shonkoff, J. P., Slopen, N., & Williams, D. R. (2021). Early childhood adversity, toxic stress, and the impacts of racism on the foundations of health. *Annual Review of Public Health, 42*, 115–134. <https://doi.org/10.1146/annurev-publhealth-090419-101940>
- Stark, O., & Bloom, D. E. (1985). The new economics of labor migration. *The American Economic Review, 75*(2), 173–178.
- Timmons, A. C., & Margolin, G. (2015). Family conflict, mood, and adolescents' daily school problems: Moderating roles of internalizing and externalizing symptoms. *Child Development, 86*(1), 241–258. <https://doi.org/10.1111/cdev.12300>
- Witting, A. B., Bagley, L. A., Nelson, K., & Lindsay, T. (2021). Natural disasters and the relational study of the family: A 2-decade scoping review. *International Journal of Disaster Risk Reduction, 52*. <https://doi.org/10.1016/j.ijdrr.2020.101990>