Introduction

The social determinants of child health

The health and well-being of children is of special significance. Children are a vulnerable segment of the population, dependent on others for essential biological, social, and economic needs. Childhood is also a critical period in human development, and experiences during childhood have long-lasting effects on health and well-being throughout life. It is therefore not surprising that there has been and continues to be great interest among social scientists on the health and well-being of children. Much of the research linking social factors to child health has focused on developing nations. This focus is also not surprising given that nearly half of the 2.2 billion children globally live in poverty and most of this poverty is concentrated in poorer nations of the world. Nonetheless, child poverty is not uncommon in wealthier countries. More than one-sixth of children across Europe experience some type of deprivation (UNICEF, 2012). Recent trends also suggest that children in developed nations are becoming worse off economically. Beginning in 2000, the real median income for families with children in the United States has been declining, which reversed a long-standing trend of increasing economic wellbeing among children (Foundation for Child Development, 2012; Pilkauskas, Currie, & Garfinkel, 2012). The 2008 global economic crisis has further contributed to child poverty both in developed and developing nations.

Despite great interest in child wellbeing, as well as the implications of child wellbeing for current and future inequality, the social determinants of child health in developed nations remains an understudied area. One exception is health during infancy, which has been studied extensively (e.g., Ehril, 2009; Kotch, 2012). The interest in infant health is likely due to factors such as data availability, medical and public health disciplines devoted to this area (e.g., maternal and child health, pediatrics), and the use of infant mortality as a national marker of wellbeing. Beyond infancy, there has also been interest in the social determinants of mortality during childhood and adolescence (e.g., suicide), but less work has focused on the determinants of health and disease. Thus, there has been and continues to be a need for scholarship on the social determinants of child health beyond the first year of life and for non-fatal outcomes.

The purpose of this Special Issue is to bring together papers on the social determinants of child health, focusing on a wide array of health conditions that affect children throughout the life course. A majority of papers examine child health in the United States, but the volume also includes research from Mexico and review articles that cover low-, middle-, and high-income countries. In the remainder of this editorial, we first provide a brief overview of child health inequalities, with a particular focus on inequalities in the United States, and consider the implications of poor child health on both short- and long-term health and socioeconomic outcomes. Second, we review the contributions of the papers included in this issue. We conclude by discussing directions for future research.

Child health inequalities and its consequences

Child health is not randomly distributed across the population and an increasing body of literature documents considerable disparities in the health and wellbeing of young children in the United States (Aber, Bennett, Conley, & Li, 1997). Inequalities in health begin as early as infancy (Reichman, Hamilton, Hummer, & Padilla, 2008) and perhaps before birth (Kimbro, 2008). These disparities persist as children age (Bloom, Cohen, & Freeman, 2009). Racial/ethnic minority children, children in single-mother families, and children in poor households experience the poorest health (Bloom et al., 2009). For example, data from the National Health Interview Survey (NHIS) show that children in poor families are more than five times as likely as children in non-poor families to have fair/poor health, creating a large public health burden in already disadvantaged families and communities (Bloom et al., 2009; Michaud, Murray, & Bloom, 2001). These children also experience an increased likelihood of having specific health conditions such as asthma, allergies, obesity, and learning disabilities, and are less likely to have health insurance (Bloom et al., 2009).

Child health has important consequences for children's social functioning, educational attainment, and quality of life (Adams, Streisand, Zawacki, & Joseph, 2002). Compared to their counterparts, children in poor health experience more school absences, more bullying experiences in school, and fewer friendships (Herzer, Umfress, Aljadeff, Ghai, & Zakowski, 2009; Jackson, Vann, Kotch, Pahel, & Lee, 2011; Lumeng et al., 2010). These experiences may further compound social functioning by hampering academic achievement and diminishing self-efficacy and self-esteem. Child health may also affect the economic and social wellbeing of family members. Parents of children in poor health are more likely to divorce (Mauldon, 1992), less likely to be employed (Noonan, Reichman, & Corman, 2005), more likely to rely on welfare (Reichman, Corman, & Noonan, 2006), and more likely to experience overcrowding and homelessness (Curtis, Corman, Noonan, & Reichman, 2010).

Child health inequalities may also have long-lasting consequences. Children who experience poor health or chronic illness are more likely than their counterparts to experience a wide range of health problems as adults (Case, Fertig, & Paxson, 2005; Case & Paxson, 2010; Haas, 2007; Smith, 2009). Child health is also associated with educational attainment (Case et al., 2005; Case & Paxson, 2010; Haas, 2006; Palloni, 2006) and other dimensions of socioeconomic status in adulthood (Almond, 2006; Case & Paxson, 2010; ...
Haas, 2006; Jackson, 2010; Palloni, 2006). Thus, child health inequalities may set in motion a pattern of advantage or disadvantage that contributes to creating, maintaining, and amplifying stratification across the life course (Palloni & Milesi, 2006).

Contributions in this volume

The articles in this volume use a variety of data sources from multiple countries, as well as an array of methodological techniques, to examine the social determinants of child health. This research adds to the burgeoning literature that identifies how aspects of families, such as family structure, socioeconomic status, and stress (e.g., maternal depression and paternal incarceration), and aspects of communities, such as racial segregation, unemployment, and violence, influence child health. This growing literature considers health outcomes such as asthma (e.g., Harknett, 2009), behavior problems (e.g., Turney, 2011a), obesity (e.g., Lee, Harris, & Gordon-Larsen, 2009), and overall health (Beck & Bzostek, 2011; Turney, 2011b). The scholarship in this volume considers these and additional outcomes and, more importantly, much of it identifies specific mechanisms that link the contexts where children live, learn, and play to their health. In addition, many of the authors utilize a number of methodological innovations to better isolate the causal role of social factors in impacting child health. Below, we discuss each of these articles and their particular contributions, beginning with a discussion of aggregate trends in child health and health disparities in the United States.

Aggregate trends

The foundational article in this volume (Mehta, Lee, & Ylitalo, 2013) examines population-level patterns and trends in child health and wellbeing over time and across demographic groups. The authors use data from the National Health Interview Survey (NHIS) to examine the prevalence of 17 health indicators (divided into four categories: overall health status, disability, specific conditions, and consequences of illness) among children under the age of 17. They find large racial/ethnic disparities in children’s health, with non-Hispanic Black children generally having the highest prevalence of poor health and non-Hispanic Asian children having the lowest prevalence. They also find that racial/ethnic disparities in child health have changed very little over the period examined (1988–2009). Moreover, for certain illnesses such as asthma, Black-White disparities grew significantly larger over time. These aggregate trends serve not only as a national indicator of health and wellbeing, but also provide a foundation for situating child health research into a broader context.

Family determinants of child health

To understand the social determinants of child health, it is crucial to situate children in the social, physical, and political environments in which they are born, grow, and develop (Bronfenbrenner & Morris, 1998). Family context is a critical social determinant of child health. The family context may be especially important for young children, as young children are dependent on their parents, have little exposure to social settings outside the home, and may be less equipped than older children to understand and cope with stressors to the family environment. The percent of children living in single-parent families globally has increased, due to increases in nonmarital childbirth and divorce. In the United States, infants born to unmarried parents, now account for 41% of all U.S. births. Increasingly, children are living in segregated, disadvantaged, and polluted neighborhoods and attending schools that are losing funding for physical education and other programs (Reardon, Grewal, Kalogrides, & Greenberg, 2012; Williams & Collins, 2001). Seven papers in this volume explore various aspects of the family environment—including family structure, intra-household bargaining, social support, parental employment, and stress—that may be related to child health and wellbeing.

Family structure is perhaps the most frequently studied family determinant of child health. Non-traditional family structures (e.g., single parenthood) and family instability (e.g., divorce) are often shown to be negatively associated with children's health and wellbeing (e.g., Bzostek & Beck, 2011). In this volume, Schmeer (2013) extends this research, using data from the Mexico Family Life Survey, by considering how parents’ relationship status, multigenerational households, and fathers’ migration are associated with anemia in Mexican children. She finds that unmarried parenthood is associated with a greater risk of anemia and the presence of a maternal grandparent is associated with a lower risk of anemia. Interestingly, she finds no association between fathers’ migration and childhood anemia, a finding that highlights the complex influences of family contexts on child health.

Richards et al. (2013) examine the significance of gendered intra-household bargaining power to child health and nutrition. Reviewing research from low- and middle-income countries, the authors find that two aspects of intra-household bargaining power are especially relevant to children’s health: (1) the role of women’s decision-making power and access to resources and (2) the importance of household headship, structure, and composition. They conclude that children generally benefit when women have more decision-making power. Their review suggests that children in female-headed households often have better health than those in male-headed households, net of household resources. Their review also suggests that grandmothers may improve children’s health, which is consistent with Schmeer’s (2013) findings. Both papers highlight the complexities in understanding the role of the family environment and highlight how these factors may similarly and differently affect child health across countries.

Two papers in this volume examine the role of parental social support in understanding child health, which extends a large body of literature on the importance of social relationships for health (House, Landis, & Umberson, 1988). To begin with, Turney (2013) uses longitudinal data from the Fragile Families and Child Wellbeing Study to estimate children’s health. Using fixed-effects regression models, which take into account time-invariant unobserved heterogeneity, she finds that mothers’ perceived instrumental support is positively associated with children’s overall health at ages three, five, and nine. Importantly, perceived instrumental support is not associated with specific indicators of health (asthma, overweight/obese, and number of emergency room visits), suggesting that it is important to understand the validity of reported measures of children’s overall health. Additionally, Gage (2013) uses data from 76 in-depth interviews with parents of pediatric cancer patients to examine how social networks operate and function. She finds that though many parents do not seek out social networks, most end up connecting to other families with similar experiences. She examines how parental employment matters for children’s health. Ziol-Guest, Dunifon, & Kalil (2013), using data from the National Longitudinal Study of Youth 1979 (NLSY79), find that maternal weekly work hours, averaged over the course of children’s lives, is positively associated with BMI, overweight, and obesity.
among 13- to 14-year-old children. They find this association is concentrated among highly educated mothers, and that children’s TV watching mediates a small portion of the association between maternal employment and BMI. Morrissey (2013) uses data from the National Institute of Child Health and Human Development (NICHD) Study of Early Child Care and Youth Development and growth curve models to consider how maternal and paternal employment trajectories are associated with BMI trajectories from ages 2 to 15. Maternal employment duration, as well as combined maternal and paternal employment duration, is associated with higher BMI, and this association is strongest when children are in preschool.

Finally, in this volume, authors introduce two new concepts to the study of children’s health: chaos and turbulence. Kamp Dush, Schmeer, and Taylor (2013) define chaos as “crowded, noisy, disorganized, unpredictable settings.” Using data from the Fragile Families and Child Wellbeing Study, they estimate a series of cross-lagged path models to consider the reciprocal relationships between chaos and young children’s overall health. They find that household chaos and maternal work chaos—but not child care/overwork chaos—is negatively associated with children’s overall health, and, contrary to expectations, that children’s health is not predictive of chaos. Boynton-Jarrett, Hair, & Zuckerman (2013) measure turbulence as residential mobility, homelessness, school transitions, and family structure disruptions. They use data from the NLSY79 and find that turbulence across adolescence and early adulthood is associated with a greater exposure to violence. Both turbulence and violence are associated with more risky health behaviors, greater mental health problems, and a reduced likelihood of high school completion in early adulthood. Both of these articles suggest the importance of a more nuanced understanding of the home environment and the role of uncertainty in family wellbeing and child health (Burton & Tucker, 2009).

Community determinants of child health

Increasingly, children are living in segregated, disadvantaged, and polluted neighborhoods and attending schools that are losing funding for physical education and other programs (Reardon et al., 2012; Williams & Collins, 2001). Several papers in this volume examine community context as a social determinant of child health. First, Mazumdar, Winter, Lui, & Bearman (2013) use administrative data to examine how spatial clusters of autism births and spatial clusters of autism diagnoses differentially affect the prevalence of autism, which allows the authors to gain leverage on the mechanisms of autism clustering. They find that there are both birth and diagnostic clusters and that these clusters sometimes overlap. There is a strong positive association between neighborhood-level diagnostic resources and diagnostic clusters, and high-functioning autistic children in these clusters are more likely to be diagnosed than low-functioning autistic children. Finally, they find that children who move into neighborhoods with greater diagnostic resources, compared to children who move into neighborhoods with no change in diagnostic resources, are more likely to receive a diagnosis.

Second, Kimbro and Denney (2013) use individual- and neighborhood-level data from the Early Childhood Longitudinal Study-Kindergarten Cohort (ECLS-K) to examine race/ethnic differences in kindergarten children’s obesity, neighborhood variation in obesity, and how neighborhood disadvantage and neighborhood ethnic composition reduce racial/ethnic differences in obesity. They find that, compared to non-Hispanic White children, Hispanic children have a greater likelihood of obesity, and neighborhood characteristics (including poverty, education, and unemployment), though, are independently linked to obesity in the expected directions, net of individual-level characteristics.

Another paper in the volume highlights the importance of community context for children’s health. Carroll-Scott et al. (2013), using data from fifth- and sixth-grade students living in New Haven, CT, consider how various aspects of the neighborhood—measured by the built environment, the socioeconomic environment, and the social environment—are differentially linked to children’s BMI, diet, and physical activity. They extend much prior research by showing that different domains of the neighborhood are differentially associated with outcomes. For example, they find that the built environment and the social environment, but not the socioeconomic environment, are associated with weight and physical activity. They also find that affluent neighborhood conditions are more predictive of children’s outcomes than disadvantaged neighborhood conditions.

Finally, Priest et al. (2013) review research that examines the association between self- or parent-reported racial discrimination and health among children. Although an individual-level measure, self-reported discrimination is often the result of living in a racialized community context, as individuals living in racially hostile communities experience more discrimination than their counterparts (Harrell, 2000; Williams, Neighbors, & Jackson, 2003). This systematic review, which is based on 121 studies, finds that most research examines mental health outcomes such as depression and anxiety. A minority of studies considers outcomes including physical health (e.g., blood pressure), behavioral problems (e.g., ADHD and delinquency), health behaviors (e.g., alcohol abuse) and health care utilization. The authors identify several limitations to existing research and suggest data, measurement, and study design improvements needed to move this research forward.

Methodological innovations

Several papers in this proposal use methodological approaches that address issues of causal inference. Research by Mazumdar et al. (2013), described above, is innovative in that it combines administrative data from the California Department of Developmental Services with California birth records to identify “birth clusters” of autism (areas with a high proportion of children born with autism) and “diagnostic clusters” of autism (areas with a high proportion of children diagnosed with autism after birth). They find that these two types of clusters do not overlap and, as such, suggest that contextual mechanisms (i.e., neighborhood-level resources) are associated with the development of diagnostic clusters. Other papers in this volume use various techniques for taking into account observed and unobserved heterogeneity. Martin-Anderson (2013), for example, uses propensity score matching techniques to show that the negative association between WIC participation and breastfeeding duration, found in previous work, results from a differential likelihood of participating in WIC. Ziol-Guest et al. (2013) and Turney (2013) use fixed-effects regression models that account for time-invariant unobserved heterogeneity. Further, another paper (Kamp Dush et al., 2013) uses cross-lagged regression models to consider the possibility of reverse causality between chaos and children’s health. Each of these papers demonstrates the importance of considering causal inference when making estimates about the social determinants of child health.

Directions for future research

In many ways, research about the social determinants of child health faces similar challenges to that of research on the social determinants of adult health, including difficulties inferring causality, accurately measuring social conditions, and translating research
knowledge into policy. However, research on child health also faces unique challenges. One of the most important is data availability. For example, many papers in this volume highlight that families are a key social determinant of children’s health in the United States and elsewhere. But data sources used to study families (e.g., Fragile Families and National Survey of Families and Households) often ask few questions about children’s health, and studies about health (e.g., National Health Interview Survey) often ask few questions about family life (especially complex measures of family instability or family functioning). It is important that future studies appropriately incorporate nuanced measures of the familial environment, including social support, social capital, chaos, turbulence, and other important stressors.

Additionally, accurately and appropriately measuring child health is a reoccurring theme in all articles and measurement is an important direction for future research (see, especially, Mehta et al., 2013; Morrissey, 2013; Priest et al., 2013; Turney, 2013; Ziol-Guest et al., 2013). Future research should work to validate parental-reported child health measures (with clinical measures where appropriate). Future research should also work to understand how parental reports of overall child health are correlated with specific health indicators and associated with later life course outcomes, as has been done with respect to adult self-rated health.

A third direction for future research is to identify and measure the key proximal mechanisms that link social factors to child health. Several studies in this volume address mechanisms. Turney (2013), for example, finds that the association between perceived instrumental support and children’s health is mediated by mothers’ economic security and wellbeing. Ziol-Guest et al. (2013) find that daily TV watching—but not other hypothesized mechanisms—explains some of the association between maternal employment and children’s BMI. Understanding what does and does not link social factors to children’s health is crucial for developing and modifying meaningful theoretical frameworks and for developing appropriate interventions to improve the lives of children.

Finally, progress in understanding the social determinants of child health requires appropriate data covering large representative populations of children. Two population-based, longitudinal, birth cohort studies in the United States—the Early Childhood Longitudinal Study–Birth Cohort (ECLS-B) and the Fragile Families and Child Wellbeing Study—have yielded a large number of studies on child health that have significantly advanced this field. But additional data sources are necessary, as the ECLS-B data only follows children through kindergarten and the Fragile Families sampling frame yielded children of mostly unmarried parents in urban areas (and, therefore, a sample of relatively disadvantaged children).

There are numerous data collection efforts now underway that will further enable us to study the social determinants of child health. In the United States, researchers have completed pilot studies (with mixed success) of the National Children’s Study (NCS), a research effort that will follow a large group of children from birth to adulthood to examine how the social and physical environmental influences children’s health and development (Kaiser, 2013). This study is similar to the Danish National Birth Cohort, a study of 100,000 pregnant women and their children, who will be followed from conception to death, and the Norwegian Mother and Child Cohort Study (Magnus et al., 2006). In addition, at least a dozen large birth cohort studies are now underway in other countries, such as the Millennium Cohort Study in the United Kingdom (Kaiser, 2013).

In sum, the purpose of this volume is to highlight the current state of research on the social determinants of child health. Of course, the social determinants of child health is a large multidisciplinary area and the works presented here are only a small sample of the type of research that is currently being conducted. We hope that with continued methodological advancements and the availability of new data (now and in the near future), the study of the social determinants of child health will continue to evolve and that the research generated will positively influence child health and health disparities.

Acknowledgements

Funding for this research was supported by postdoctoral fellowships, for all three authors, from the Robert Wood Johnson Foundation Health & Society Scholars Program. Kristin Turney and Neel Mehta were additionally supported by the National Institute on Minority Health and Health Disparities’ Loan Repayment Program.

References
