The Health Significance of Families Seen through the Recent Measles Outbreak

Molly A. Martin

Department of Sociology, Pennsylvania State University, University Park, Pennsylvania, USA

Corresponding author: Molly A. Martin, Associate Professor, Pennsylvania State University, Sociology, 212 Oswald, University Park, PA 16802, United States, Tel: +814-863-5508; E-mail: mamb6@psu.edu

A key stumbling block for creating a family-focused research agenda is that families’ structural traits, meaning their shared social characteristics, are typically labeled as individual traits. For example, marital status, parenthood, and socioeconomic status are often viewed as personal attributes, but they are family characteristics. It takes (at least) two to create a family.
least) two people to get married and birth or adopt children and couples coordinate their employment decisions [13]. Individual action creates and reinforces the family, but once created, families are more than the sum of their parts [14] and become important health contexts unto their own.

There are two broad dimensions of family life that matter for individual health – the family's interpersonal processes and their structural traits. I next describe each dimension and demonstrate their importance for children's risks for contracting measles.

**Family interpersonal processes**

Through the content and patterning of their communication and behavior, family members can influence each other's health. This dimension comprises families' dynamic relationships, though it is often captured with measures from a single point in time. It includes adults' joint decision-making, caregiving relationships, and children's socialization. Hierarchies within the family govern these interactions, such that each family member does not have equal authority and influence. Over time, repeated patterns and communication styles create an emotional climate [15], which affects individuals' physical and psychological health [16,17].

Family interpersonal processes can directly alter biological states or indirectly affect health by influencing individuals' behavior. Direct effects can occur, for example, in abusive situations [18–20] or when family conversations produce a hyper-reactive stress response [21]. Yet most health effects are indirect, such as when parents safeguard their children's long-term health by teaching them to wash their hands. In fact, the avenues of indirect family influence are numerous: family members help establish our health-related identities and norms [22,23], transmit health-related information and resources [24–26], care for us through illness and other difficulties [27], and serve as healthcare consultants [28].

Returning to the measles example, we can see how family interpersonal processes matter. First, it is clear that anti-vaccination parents' authority creates children's vulnerabilities. Second, parents' vaccination decisions are influenced by the information and perspectives of their family members [29].

**Family structural characteristics**

Family structural traits include the family's religion, race, social class, residential location, the quality of communal meals, and shared routines. This is family as context; it constrains and enables members' health-related behaviors. Like other institutions, families have various capacities and subsystems that can change over time [30].

Two fundamental structural features are families' resources and composition. Family resources include their economic wealth, social connections, literacy and shared information, and political power [31]. These resources derive from and intersect with the family's race, ethnicity and immigration history [31].

By expanding the family information collected in bio-medical and epidemiological studies, we can better test whether and how families' social traits matter for health. The risk, however, is that our theoretical and empirical knowledge will remain stunted if family traits are simply appended to individual data. Specifically, we run the risk of committing an "atomistic" or "individualistic" fallacy, which occurs when group-level causal processes are investigated at the individual level [44]. It is the converse of an "ecological fallacy," yet leads to the same empirical risk: we may arrive at incorrect conclusions because individual-level estimates may differ from group-level (i.e., family-
level) estimates [44]. If we only utilize data with individuals as the unit of analysis, we will misconstrue the role of families for health.

To focus on families as the unit of analysis, we could exploit existing social science datasets with multiple family members nested within families, like the Panel Study of Income Dynamics [45] or the Fragile Families and Child Well-Being Study [46]. While these data have rich, longitudinal information about the family’s composition and members’ characteristics, the challenge is that these data sets have fewer health measures and a limited capacity to uncover the mechanisms by which family social traits lead to various health conditions.

Lastly, we could develop studies with detailed health measures and high-quality social indicators about multiple family members and their shared family traits. To create such an ideal study, we can borrow from various data collection and analysis tools depending on our theoretical model. For example, if we suspect that contagion processes are at work within the family, then we could collect social network data with a focus on family relationships and utilize appropriate network modeling techniques. Alternatively, we could directly query several family members about their health beliefs, health behaviors, and the quality of their family relationships. If scholars collect paired data (e.g., from couples), then they could utilize dyadic data analysis techniques [47]. With two or more family members, researchers can use hierarchical linear modeling [48], or structural equation modeling techniques [49], and even account for family members’ genetic resemblance [50]. If biological specimens and laboratory measurements were also collected, then the research possibilities abound. Interdisciplinary, collaborative teams, like the Work, Family & Health Network, could identify the requisite survey questions and critical laboratory and examination procedures needed for a thorough study of particular health outcomes.

By expanding the amount and kinds of family data we collect, we can explore new research questions and new avenues by which we can improve health. Family members can affect individual and population health because of who they are and what they do. With a greater recognition that “illness is a family affair” [23], we can provide better medical care and advance public health.

References


