

Commentary: Resilience Defined: An Alternative Perspective

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We commend Drs. Hilliard, McQuaid, Nabors, and Hood on their thoughtful introduction to the *Journal of Pediatric Psychology* special issue on resilience (Hilliard, McQuaid, Nabors, & Hood, 2015). In particular, we greatly appreciate their description of the various, sometimes conflicting, conceptualizations of resilience in the literature, as well as their suggestion that a common definition may serve as a foundation for further research and clinical care. Dr. Hilliard et al. propose: "In the context of pediatric/health psychology, resilience is the demonstration of emotional, behavioral, or health outcomes that match or surpass normative developmental milestones, behavioral functioning, or emotional well-being despite exposure to the substantial challenges of living with and managing a medical or developmental condition." They go on to explain that such "resilient outcomes" may include positive experiences, maintenance of a typical trajectory, or the absence of negative experiences. Furthermore, they suggest that static factors (defined as immutable "resources" such as optimism and family cohesion) and dynamic factors (defined as mutable, adaptive behaviors such as acceptance, or positive interactions such as supportive communication) may both be protective. While we applaud the authors' proposal and attention to this important topic, we hope to promote and emphasize a definition of resilience that goes beyond outcomes-based research, and to encourage the scientific observations and interest in the *process* of harnessing resilience resources as a critical dimension of resilience research. We make three main points to emphasize our suggestion.

For clarity, we first define the following terms. "Outcomes" are consequences of illness (either positive or negative), which may only be measured after the experience of a significant stressor like serious illness. A "process" represents a fluid procedure that evolves over time. In the context of serious illness and resilience, it may represent individual or family-based coping and adaptive methods, as well as the recognition and gathering of necessary psychosocial supports. Finally, although Hilliard et al. define "resources" as fixed and preexisting protective factors that enable patient resilience, we define resources as both preexisting *and* newly learned assets that patients and families can draw on to promote well-being. These may be individual personality traits or skills, community supports, and existential or spiritual beliefs (Southwick, Bonanno, Masten, Panter-Brick, & Yehuda, 2014).

Heterogeneity and Timing of Resilience "Outcomes"

If we solely define resilience as an outcome (or as multiple simultaneous outcomes), it becomes difficult to consistently identify resilience across diverse populations and settings. In this special issue alone, described resilience "outcomes" are extremely heterogeneous and include quality of life (Cousins, Cohen, & Venable, 2015; Germann et al., 2015; Lord, Rumburg, & Jaser, 2015), psychological growth (Cousins, Kalapurakkel, Cohen, & Simons, 2015; Phipps et al., 2015; Yi, Zebrack, Kim, & Cousino, 2015), absence of psychopathology (Germann et al., 2015; Lennon, Murray, Bechtel, & Holmbeck, 2015; Monaghan, Clary, Stern, Hilliard, & Streisand, 2015; Phipps et al., 2015), physical functioning (Cousins,

Cohen, et al., 2015; Cousins, Kalapurakkel, et al., 2015; Kalapurakkel, Carpino, Lebel, & Simons, 2015), family cohesion (Lennon et al., 2015), school functioning (Kalapurakkel et al., 2015), glycemic control (Lord et al., 2015; Monaghan et al., 2015; Rohan et al., 2015), asthma control (Koinis-Mitchell et al., 2015), and language development (Madigan, Wade, Plamondon, Browne, & Jenkins, 2015). Not all authors explicitly label their outcome as definitive of resilience; rather, their discussions suggest it is *indicative* (or a surrogate marker) of resilience. This is additionally complicated because multiple outcomes are often included in the same study and few suggest how to integrate and label conflicting outcomes. It is unclear which outcomes are necessary or sufficient for identifying resilience, nor how to balance the perspectives of patients, their parents, and their professional caregivers. For example, in a patient with both posttraumatic stress and posttraumatic growth, an outcomes-only approach toward resilience makes this patient difficult to categorize.

The timing of resilience is also problematic when defining it solely as an outcome. For example, three studies in this issue described glycemic control as evidence of resilience among patients with Type 1 diabetes. Two involved cross-sectional associations (Lord et al., 2015; Monaghan et al., 2015), and one described trajectories of resilience outcomes over a 3-year period (Rohan et al., 2015). As diabetes is a lifelong disease characterized by changing stressors and challenges, equating hemoglobin A1C at any given time-point with “resilience” can be inconclusive and limiting when only using an outcome-based definition of the construct.

The Challenge of Outcomes-Targeted Intervention

The heterogeneity of “resilience outcomes” and their specificity to unique diagnoses limit the ability to evaluate, design, and develop interventions to improve resilience across diagnosis groups. In contrast, resilience resources may be amenable to comparison across study populations and to intervention design (Ager, 2013; Cicchetti, 2013; Davidov, Knafo-Noam, Serbin, & Moss, 2015; Davies, Thind, Chandler, & Tucker, 2011; Kazak, Schneider, Didonato, & Pai, 2015; Khanlou & Wray, 2014; Klika & Herrenkohl, 2013; Richaud, 2013; Rutter, 1987; Tol, Song, & Jordans, 2013). Indeed, in this special issue, two groups describe resilience-promoting interventions, and both target resilience resources (Kichler & Kaugars, 2015; Rosenberg et al., 2015). Similarly, regardless of the ultimate selected resilience outcome, healthcare providers at the bedside may minimize patient suffering and promote health more immediately by enabling the harnessing of patient and family resources.

Resilience Resources Are Universal

Hilliard and colleagues suggest that resilience “resources” are static and separate from dynamic processes (Hilliard et al., 2015). We believe that resilience resources can include both. Many conceptualizations of resilience suggest that it is defined by a set of resources including internal sources (both inherent traits and learned skills), external sources (*dynamic* social support and community), as well as existential sources (*ongoing* meaning-making, legacy-building, and faith) (Rosenberg, Baker, Syrjala, Back, & Wolfe, 2013; Southwick et al., 2014). Most of the studies in this special issue describe resilience resources as both static and dynamic, including optimism, mindfulness, self-efficacy, acceptance, committed action, stress, sleep health, adjustment, family behaviors, social support, and hope (Cousins, Cohen, et al., 2015; Cousins, Kalapurakkel, et al., 2015; Germann et al., 2015; Holbein et al., 2015; Kalapurakkel et al., 2015; Koinis-Mitchell et al., 2015; Lord et al., 2015; Monaghan et al., 2015; Phipps et al., 2015; Rohan et al., 2015; Rosenberg et al., 2015; Yi et al., 2015). Notably, many of these resources may change or be learned with time and all are associated with positive health and psychosocial outcomes.

For all of these reasons, we propose an expansion of Hilliard et al.’s proposed definition of resilience research in pediatrics by also highlighting the importance of including the process of identifying and harnessing new and existing resources to maintain well-being during and after any stressor. This conceptualization is similar to positive development theory, which suggests that the support and promotion of individual capacities (e.g., mindfulness) and learned skills (e.g., navigation of emotions and social challenges) directly increases successful functioning and optimizes psychosocial outcomes (Tolan, 2014). Indeed, in this special issue, Kichler and colleagues argue that this approach is directly relevant to and offers a common language within resilience research (Kichler & Kaugars, 2015).

We acknowledge that this definition has its own limitations. For example, what if a patient harnesses all his/her available resources and still has a poor outcome? We might argue that the selected outcome poorly reflects this patient’s resilience. Indeed, subjective and objective measurements of resilience outcomes in pediatric cancer are inconsistently aligned (Rosenberg, Starks, & Jones, 2014). Alternatively, perhaps we failed to recognize and/or promote the most critical or relevant combination of resources. Perhaps, additional interventions are needed to bolster available or build new resources. How to identify and measure processes of harnessing resources is also unclear. Clinicians at the bedside can help patients and families recognize what is individually relevant to

them, but investigators must work to identify a core set of resources relevant and amenable to ongoing study. Future, prospective research must determine which resources and outcomes are most important (and to whom), as well as identify consistent ways to promote and sustain them.

In summary, we suggest that resilience be operationalized as a process of harnessing resources, rather than solely by particular outcomes. Resilience outcomes of interest depend on the illness and the perspective (and values) of the person measuring them. They are inherently diverse and therefore represent a challenging way to identify resilience. While we agree that relatively positive outcomes may be *evidence* of resilience, we do not believe they define it. Rather, what is universal about serious pediatric illness is the journey. How do people get to the ultimate outcome(s)? And, perhaps most importantly, how can we help them get there?

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