

Developing the Resilience Framework for Nursing and Healthcare

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Abstract

Despite four decades of resilience research, resilience remains a poor fit for practice as a scientific construct. Using the literature, we explored the concepts attributed to the development of resilience, identifying those that mitigate symptoms of distress caused by adversity and facilitate coping in seven classes of illness: transplants, cancer, mental illness, episodic illness, chronic and painful illness, unexpected events, and illness within a dyadic relationship. We identified protective, compensatory, and challenge-related coping-concept strategies that healthcare workers and patients use during the adversity experience. Healthcare-worker assessment and selection of appropriate coping concepts enable the individual to control their distress, resulting in attainment of equanimity and the state of resilience, permitting the resilient individual to work toward recovery, recalibration, and readjustment. We inductively developed and linked these conceptual components into a dynamic framework, *The Resilience Framework for Nursing and Healthcare*, making it widely applicable for healthcare across a variety of patients.

Keywords

adversity, resilience, coping concepts, equanimity, recovery, caregivers, transplants, episodic illness, chronic illness, traumatic injury, cancer, mental illness, COVID "Long Haulers", framework development

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Adversity, which has been studied through many lenses, is constant throughout life, but the recovery process following these adversities has received significantly less attention in social-sciences research. Resilience is the concept or construct that most frequently addresses this gap. However, the resilience construct has various adversities, mechanisms, and applications in multiple disciplines and cohorts. Here, we have developed a comprehensive framework to synthesize resilience and its application in healthcare: *The Resilience Framework for Nursing and Healthcare*.

Background Perspective/Theories of Resilience

While resilience is a scientific concept, there is no scientific agreement about its definition. Is it a state or a process? A

concept or a construct? Does it originate from a specific adverse event, or is it a general response to adversity? How is the state or process of resilience defined? Is it achieved by "protective factors" available to the individual, or is the state of resilience an inner strength ("stealing it," "taking it"), a

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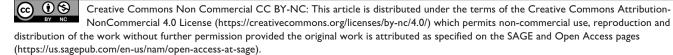
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process of adaptation, or a means of learning to reduce the effect of the stressor (Shin et al., 2012)? Resilience is a construct that includes a conglomerate of concepts. But which concepts enable the individual to adapt to or cope with the stressor? If the adversity should return or recur, does the individual return to or reenter the resiliency process? If resilience is indeed a process, as we propose, does it lead to adaptation once achieved? And if so, how can that state be defined? Analysis of the various definitions of resilience used by researchers reflects their perspectives on these questions.

Despite four decades of research, there has been no agreement on these fundamental questions. Resilience originates from the Latin "resilere," which means to jump back (Kumpfer, 1999). Resilience first developed as a scientific concept in 1867 to describe how metals "bend back again" when placed under stress. ("Resilience," OED, 2020). This general concept was then used repeatedly throughout many disciplines: theology, entomology, and physics ("Resilience," OED, 2020). There was no consistent use of a definition or application, however, until approximately the 1980s when the term was adopted in psychology in relation to the study of childhood trauma. Yet even in this literature, there was a lack of agreement about its application as a concept (Olsson et al., 2003), construct (Tusaie & Dyer, 2004), model (Vinson, 2002), framework (Fleming & Ledogar, 2008), or theory (Brown, 2006; Richardson, 2002).

What explains this diversity of perspectives? The conceptualization of the construct differs from the disciplinary focus of the researchers, and this difference is directly associated with its clinical application or use (Markstrom et al., 2001). Our goal was to develop a *framework*—defined as "an entity between a 'model' and a 'method' . . . (that) contains an incompletely detailed structure or system for the realization of a defined goal." Therefore, to explore the relevance of resilience to the care and management of disease and illness, we began by defining resilience via our extensive literature review and by identifying the associated concepts.

Description of Resilience in the Literature

Resilience as a state. Resilience is most frequently described as a construct that includes a cluster of concepts. Resilience as a state incorporates concepts of maintenance (Stewart & Yuen, 2011), equilibrium (Bonanno, 2004; Wagnild & Young, 1990), hardiness (Wilks et al., 2011), psychosocial well-being (Bekhet & Avery, 2017; Fletcher & Sarkar, 2013; Gillespie et al., 2007; ; Shaw et al., 2009), and equanimity (Wagnild, 2003). Resilience is seen as a positive and sustaining outcome, often allowing an individual to flourish despite their present life circumstances (Molina et al., 2014). Mancini and Bonanno (2009) further considered resilience as a particular trajectory or mechanism of positive adaptation that changes over time and protects against psychological distress.

Resilience as a process. Resilience as a process reiterates "the action or an act of rebounding or springing back; rebound, recoil" ("Resilience," OED, 2020, Entry 163619). Securing internal and external resources to flexibly manage illness articulates this process of resilience (Haase et al., 2017). Competency (Greene et al., 2004; Haase et al., 2017; Masten, 1994), adaptation (Kimura et al., 2019), and positive adjustment during adversity outline actions taken during a changed life trajectory (Alizadeh et al., 2018; Black & Dorstyn, 2015).

Most authors agree, however, that resilience commences with adversity (Ungar, 2003). Some recognize that this adversity is an event (e.g., acquiring a spinal cord injury, cancer diagnosis); others might consider it the result of a long-term stressor (e.g., mental-health issues or an abusive home environment). Longstanding risk factors include poverty (Garmezy, 1993), being shamed or bullied (Brown, 2006), homelessness (Rew & Horner, 2003), and post-traumatic stress disorder (Zarzaur et al., 2017), all of which are considered adversarial to the individual.

The conseptualization of resilience as strength-based. A strengthbased conceptual consideration is inherent in reviewing resilience as both a state and a process. A strength-based perspective is a construct used by social work and psychology to identify internal, positive strengths that the client brings to a situation. These can include past experiences, talents, and skills and are vital components of the person's ability to "bounce back" after a life-altering diagnosis. An illness, or a new diagnosis of illness in their loved one, poses a unique and uncharted challenge. A strength-based consideration weaves exclusive internal elements and physical deficits that the patient is experiencing, and this, in turn, sustains resilience (Greene et al., 2004). Bonanno et al. (2006) note the many unforged "pathways to resilience" (p. 20) that exemplify the strengths an individual possesses, and they identify practices that can accentuate this internal attribute.

Theoretical perspectives. The following authors have developed major research programs exploring resilience.

Bonanno (2004). Bonanno's contribution to the field is the recognition that resilience is the most common, natural reaction to loss or trauma, including post-traumatic stress disorder (Bonanno, 2004). He introduced a rigorous method of research applicable to both bereavement and trauma. Bonanno and his colleagues focused on what goes wrong with people who become chronically symptomatic with poor functioning after adversity while simultaneously seeking to learn which natural mechanisms allow people to cope with adversity (Southwick et al., 2014).

Rutter (2012). Rutter viewed resilience through the lens of child development. As a child psychologist, his research examined the varied responses to stress experienced

by children and the supporting role that the environment, genetics, family, and peers play to influence risk factors (Rutter, 1979, 2012; Rutter & Rutter, 1993). Resilience comprises internal and external supports that act as protective factors (Rutter, 2012). These polarize the effects of stress, accentuating positive responses, and mitigating negative ones as they relate to emotional and cognitive development in children (Rutter & Rutter, 1993).

Greene (2002). From the field of social work, Greene offered an alternative perspective on resilience, namely, that it is a biopsychosocial and spiritual phenomenon involving a transactional dynamic process of person-environment exchanges. Greene proposed that resilience encompasses an adaptational process of goodness-of-fit and occurs across the life course with individuals, families, and communities experiencing unique paths of development.

Resilience in nursing and health. Stewart and Yuen (2011) explored resilience research and conducted a systematic review comparing psychological factors and coping strategies in adults with children with chronic illness. They concluded that resilience matched with symptoms associated with physical illness, demonstrating that pain is more prominent with a debilitating physical disease like arthritis (Stewart & Yuen, 2011). In their systematic review there was little mention of the role healthcare providers have in maintaining or regaining mental health in their patients who are experiencing adversity.

Many concepts shown to enhance resilience during the management of chronic illness or during the course of a disability have been incorporated independently into nursing theory. While resilience in itself is extremely relevant to nursing care and therapeutic outcomes, nursing has not embraced resilience per se. Some nurse researchers have explored resilience as a concept (Ahern et al., 2006; Olsson et al., 2003), but treating resilience as a concept does not enable the development of a caregiving and supportive framework that might enhance nursing.

One exception is the extensive research program by Haase and her colleagues, which explored resilience as a concept, developed an instrument to measure resilience (Haase et al., 1999), presented a mid-range theory (Haase & Peterson, 2015), and conducted subsequent quantitative testing (Haase et al., 2017). Haase's research program targeted adolescents with cancer and explored concepts that enabled resilience, such as spirituality (Taylor et al., 2015), family communication and cohesion (Bell et al., 2007), social support (Bell et al., 2007), and information needs (Decker et al., 2004). The Adolescent Resilience Model (Haase, 2004) was developed to guide interventions for adolescents with cancer. From Haase's work, a consensus statement (Nelson et al., 2004) and interventions were developed and applied using *The Adolescent* Resilience Model to improve care to adolescents with cancer and their families (Haase, 2004). Haase's contribution to our

understanding of resilience is extraordinary, but it is targeted exclusively to adolescent oncology. A less specific framework for the conceptualization and application of resilience for illness and utilization in nursing has yet to be proposed.

Conceptual Contributions of Interdisciplinary Research

Researchers have noted numerous and varied concepts that the individual uses to assist in achieving resilience. It should be a matter of concern that there is no overall agreement about the components of resilience. Through our literature review, however, we have identified the following concepts most commonly included in resilience theory: acceptance, communication, courage, determination, hardiness, hope, humor, knowledge, locus of control, mindfulness, optimism, perseverance, personal mastery, perspective, reassurance, resourcefulness, self-care, self-compassion, self-efficacy, self-reliance, social support, spirituality, and well-being.

Purpose of the Project

This general lack of agreement regarding what resilience is, and the level of conceptualization, components, mechanisms, and outcomes of resilience have left it "open" for further consideration and application to nursing and health. While researchers from psychology and sociology have examined resilience within topics that are pertinent to health, such applications are tangential to nursing—the profession of those charged with the primary responsibility for the provision of care for the ill.

Thus, the purpose of this project was to explore resilience from the disciplinary perspective of nursing by focusing on the individuals', caregivers', and families' experiences of illness² and, using modified method for developing theoretical-coalescence frameworks, to develop *The Resilience Framework for Nursing and Healthcare*.

Methods

We used a hypo-deductive process of theory-building resembling those techniques used in qualitative model- and theory-building. Rather than using raw data obtained from qualitative research (Bradshaw et al., 2017), we used a compendium of diverse literature to identify psychosocial problems associated with sets of illnesses, isolate related concepts, and build and link these to construct the framework.

This method of framework development is a means of creating a pragmatic conceptual infrastructure for higher-level ("parent") concepts, and it is a basic operation of theory development in qualiaitve research, such as grounded theory and often in ethnography. It is a means of identifying and logically placing relevant concepts, both hierarchically and longitudinally, so that the parent concept becomes comprehensible, attainable, and useful.

This method of framework development is:

 not concept development, most commonly constructed from data

(data \rightarrow thematic/content analysis \rightarrow identification of attributes \rightarrow concept)

- not meta-analysis of the label-smoothing type
 (search for similar concepts/models/theories → search for commonalities → blend)
- but is similar to *Theoretical Coalescence*(a compilation of manifestations of a concept, derived from different contexts and conditions, netted together to create a stronger, higher-level "meta"-concept. This develops a complementary structure, both temporal and horizontal, thereby increasing the scope of the concept. [See the example of enduring, Morse, 2018].)

In this project, we are using a modification of theoretical coalescence to identify from the literature relevant psychosocial problems inherent in illnesses, and mature scientific concepts representing these problems. The psychological concepts will enable the development and attainment of resilience. We are creating a logical and "developmental" pragmatic structure that enables clinicians to support patients in accessing and attaining a resilience state. The framework will help researchers to explore and further develop this higher-level concept. Psychosocial theorists have created a large pool of independent and sometimes competing scientific concepts, but they have rarely explored their linkages, their complementary applications and their possible communal, complementary contributions to higher-level concepts in order to create frameworks, models and theory. Rather than exploring these concepts internally, one by one, we are using them as the internal structure to understand how resilience develops (through a process) and exists once it is achieved (as a state).

We selected a goal and a definition of primary concepts that fit the appropriate level of description [in this case the individual and related context (family, staff, setting)]. Using *resilience* as a search term, our search yielded 2,620,000 results in Google Scholar, and we approached the resilience systematically by conducting a series of targeted literature reviews, as classes of illnesses, concepts and other models/conceptualizations of resilience were required.

The first search was to identify the major research programs in resilience so as to identify the major definitions and scope. Once we had reviewed the major definitions of resilience and the perspectives of the major research programs, we then narrowed our search to explore the scope of resilience research programs in nursing, and the major definitions of resilience used in patient care. We identified illnesses and accidents most commonly encountered in nursing that resulted in a resilience response from the patients, using these as index cases.³ We identified the major characteristics

of those illnesses and expanded our search⁴ to incorporate clusters of illness with similar characteristics, or similar patterns or stages of the illness trajectory (i.e., deteriorating or terminal illness, long-term illness, episodic illness, convalescence, mental illness), forming groups which we called "classes of illness."

Our next aim in searching the qualitative nursing and health literatures was to identify descriptions of patients displaying resilience, or responses to each class of illness. By searching the qualitative literature, we were seeking inductive descriptions of the patients' common psychosocial problems, thus identifying the coping concepts⁵ used for attaining resilience. By this means we determined that resilience was a process-oriented concept, and that resilience as an end result was attained by the individual through the use of both internal and external resources.⁶

Taking note that resilience was a process-oriented concept attained by the individual through both internal and external resources, we sorted these common psychosocial problems and related coping concepts functionally into protective, compensatory, and challenge-related concepts. The phrase "protective concepts" refers to those resources that ameliorate an adversity event; "compensatory concepts" refers to a person's active countermeasures against an adversity event; and "challenge-related concepts" refers to the person's coping efforts to moderate or overcome adversity events. We note that these concepts can be used individually, or as sets of related concepts, or even as mid-range theories. We recognize that, as resilience attainment varies with each of these classes of illness and stages of disease, as well as with internal abilities to become resilient (Rutter & Rutter, 1993), protective, compensatory and challenge-related factors can be incorporated as nursing interventions, and are individualized to each patient, with the nurse responding and adjusting these interventions according to the patient cues. Therefore, in practice, nurses are selecting from a "menu" of protective, compensatory, or challenge-related coping concepts according to patient-assessed needs and stages of illness, in concert with the patient. Finally, we searched the qualitative literature for outcomes—descriptions of the state that indicated the person had become resilient—and for behavioral indicators of equanimity. As some trajectories of illness included recurrence, we recognized that a subsequent episode incorporated experiential learning, which can ease and expedite resilience.

We then placed these descriptions into a table so that they could be compared and contrasted. We were able to identify coping concepts related to the psychosocial problems for each class of illness, grouping similar concepts (for instance, "family cohesion" was categorized under the category of "social support"). Similarly, allied concepts were classified under the parent concept (e.g., "faith" and "religiosity" were incorporated into "spirituality").

Thus, by identifying the commonalities within each class of illness and the concepts used by individuals to mitigate

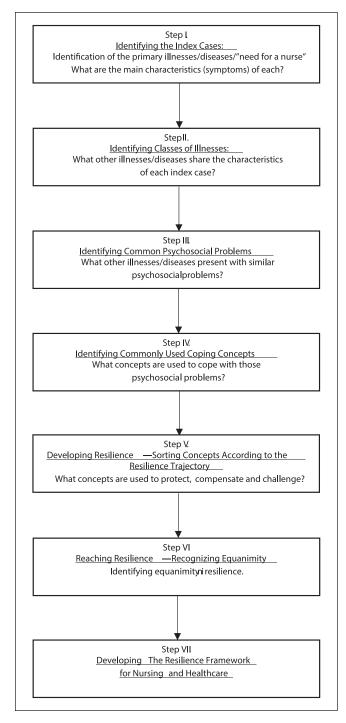


Figure 1. Process of developing the resilience framework for nursing and healthcare.

and cope with these psychosocial problems, we were able to reduce the number of coping-related concepts into those most frequently used and most consistently present throughout their respective illness trajectories. These concept clusters facilitated coping in the individuals' responses to illness; distress was replaced with equanimity as they achieved resilience. This process is illustrated in Figure 1.

Thus, from the literature, we developed a framework of resilience directly applicable to nursing, while considering the adversity experienced.

Results

From a nursing perspective, resilience is both a process that is built within the course of illness and also a state to be achieved. Once resilience is achieved, distress is no longer present, and equanimity enables optimal functioning in the individual (Emlet et al., 2011; Hutchinson, 1993; Janssen et al., 2011; Wagnild & Young, 1990). We conceptualize resilience as both a process that enables the individual's recovery and as a state. Resilience enables the individual's recalibration and adjustment to the ramifications of the physical and psychological changes from the illness or accident, thereby moving the individual toward optimal health and the prevention of recurrence. The findings related to each phase will be presented.

In this context, we propose the following definition of resilience: Resilience is a process and state that develops as a response to adversity, resulting in the individual's dynamic and active use of coping strategies until a state of equanimity is reached. Dynamic and active use of protective, compensatory, and challenge-related concept strategies allows the individual to recover, recalibrate, and readjust so that they can become resilient, and ultimately attain health.⁷

Overview of the Process

We categorized coping concepts as protective, compensatory, and/or challenge-related (Fleming & Ledogar, 2008) in order to organize the various functions of the concepts of coping according to the trajectory of developing resilience, but we applied these at a different level. Rather than placing these concepts in the context of individual-and-community interaction, we used them to refer to individual-and-caregiving interaction. "Protective factors" (Garmezy, 1985; Rutter, 1979; Spratling & Weaver, 2012) are listed throughout the resilience literature and, in particular, have been adopted by family theories (see, Benzies & Mychasiuk, 2002). We considered this term too passive, however, to represent the necessary work required for attaining resilience in illness, even in the initial stages when the individual was adjusting to the adversity. Moreover, both compensatory and challengerelated concepts are also essential components as the individual is increasingly able to participate in therapy and progresses toward rehabilitation. Additionally, external resources (care providers, family, and support groups) directly link to personal resilience development in an individual, enhancing the work effort of resilience development. The first stage in the development of the framework (Step I) was to search the literature for conditons in which resilience was described as assisting the individual to cope with disease. This process resulted in the identification of our *index*

cases. We then identified the main characteristics of each illness shared by common conditions of the index cases, and sorted them into broader classes of illness (Step II). Next, we identified from the literature the common psychosocial problems commonly associated with these conditions (Step III), and the frequently used coping-concept strategies associated with each class of illness (Step IV). As we identified appropriate concepts that mitigated these psychosocial problems, we sorted them according to the functions they performed in attaining resilience: to protect, compensate, and challenge (Step V). We identified equanimity as an indicator of the attainment of resilience (Step VI), resulting in the development of *The Resilience Framework for Nursing and Healthcare* (Step VII).

Step I. Identifying Primary Classes of Illness Applicable to Resilience Theory: The Index Case

The first level of analysis was to identify primary illnesses in which resilience was perceived to be significant, and to describe the experience of living with each illness from the perspective of the individuals' emotional responses to illness. We referred to the conditions as the index case. The seven index cases (i.e., conditions) that were initially identified as requiring a resilience response from the individual were: (a) lung transplant; (b) breast cancer; (c) self-awareness of mental illness; (d) arthritis; (e) asthma; (f) major trauma; and (g) dependent relationships in persons with Alzheimer's disease. Recognizing that living with these conditions had much in common with related illnesses or conditions, we then referred to these clusters as a class of illness. Each of these index cases and related conditions were seen to share the same characteristics, thereby forming a class of illness, as discussed below.

Step II. Identifying the Class of Related Illnesses for Each Index Case

The characteristics of each of these index cases included the suddenness and/or insidious nature of their onset; the trajectory of the illness; the prognosis and threat to self; the presence of pain; and the degree of disability present and applicable to resilience theory. These were identified so that the original index case represented a class of illness or groupings of allied conditions. For instance, caregivers of persons with Alzheimer's disease represented a class of individuals responsible for the care of the dependent persons, and transplant survivors represented survivors of all transplant patients who were required to embody and live with a "new" organ. These classes of illness share common emotional responses (primarily the emotional distress of suffering), and these are referred to throughout this article as coping concepts. Our focus on concepts relating to individuals' emotional experiences led to the exclusion of parallel concepts such as age, socioeconomic status, health systems, and environmental concepts that are also relevant to the

attainment of resilience and commonly used to describe patient groupings.

Resilience as a response to surgical transplants

Class of Illness: Major solid-organ transplants.

Index case: Patients who experience lung transplants.

Those who require lung transplants have experiences similar to those who undergo any major solid-organ transplant. They usually have a period of illness and physical decline prior to their transplant. The transplant itself is a major surgical event with a long period of recovery, continuous medication and medical surveillance; and it involves uncertainty of success. The waiting period prior to transplant includes significant loss, changes in role identity, attention to the medical system, and introspection (Brown et al., 2006). Continuous medical monitoring for signs of rejection or infection continue postoperatively.

We identified the index case of lung transplant as it includes coping concepts applicable to all solid-organ transplant survivors. Lung transplant recipients, for example, originate from several different processes varying from chronic obstructive pulmonary disease (COPD) to cystic fibrosis. Although improvements to survival increase each year, the peak quality of life post-transplant is noted around 12 months post-surgery (Rosenberger et al., 2012). Concepts enabling resilience concepts post-operatively protect against psychosocial problems of persistent fears of transplant rejection and despair associated with a return of hypoxia (Cohen, 2014; Rosenberger et al., 2012). Resilience enables toleration of activity restrictions, and challenges patients to adopt new stress-reduction techniques and to comply with complex treatment regimens (Barbour et al., 2006; Singer & Singer, 2013).

The patient who experiences living with a lung transplant has commonalties with other solid-organ transplant survivors, expanding this class of illness. Major transplant survivors use strategies represented by protective coping concepts of hopefulness (Molina et al., 2014), mastery and religiosity (Myaskovsky et al., 2006), optimism (Molina et al., 2014), regimental control (Rosenberger et al., 2012), and a pessimism-realism orientation (Brügger et al., 2014). Compensatory coping concepts in transplant survivors include those for the management of fear (Husain et al, 1999), inadequacy (Singer & Singer, 2013), uncertainty (Naef & Bournes, 2009), post-traumatic stress disorder (Cohen, 2014), stigma/guilt (Brügger et al., 2014; Rosenberger et al., 2012), and vulnerability (Husain et al, 1999).

Resilience as a response to living with cancer

Class of Illness: Living with uncertain prognosis. Index case: Breast cancer.

Breast cancer was initially identified as the index case, yet has many commonalities with the class of all cancers, albeit

differing in prognosis, trajectory and outcome. The diagnosis of cancer is usually stressful, life-threatening (Morse et al., 2014) and followed by two broad trajectories. Both of these trajectories usually commence with treatment of the cancer, which might include surgery, chemotherapy, and radiation. The first trajectory is when the cancer is malignant and advanced and these treatments are of limited effectiveness, and the patient might decline, entering a time of increasing debility, and potentially palliative care and death. In the event of treatment, the second trajectory is predominantly one of uncertainty and hope over time. With respect to surgery and prolonged therapies, monitoring for possible recurrence and pacing through milestones-most commonly 5 years "cancer-free"—become significant markers. Should the monitoring reveal recurrence of the cancer, or should the cancer metastasize to other sites in the body, the trajectory might move to increasing debility, palliative care and death.

Regardless of the course of the disease, the initial diagnosis causes emotional distress (Breen et al., 2009; Harrison & Maguir, 1994; Morse, 2011; Weisman, 1979). Protective concepts enter at this stage. Self-compassion and social support play an important role during the diagnosis and treatment for the attainment of resilience. The ability of an individual to adjust through both physical and emotional adversity requires the extensive use of strategies represented by compensatory coping concepts, which contribute to building resilience, including hope, motivation (de Moor et al., 2006), optimism (Gardenhire et al., 2019), a sense of coherence (Boscaglia & Clarke, 2007), preexisting and perceived social support, spirituality (Herth, 1992; Lo et al., 2010; Snyder et al., 1991), self-compassion, and a sense of belonging. Challenge-related concepts include knowledge, quality of life, and positive adjustment (Aspinwall & MacNamara, 2005). If the cancer patients are able to cope and develop resilience, they might be less dependent on psychosocial support for the management of their stressful conditions relative to those with low resilience (Brix et al., 2008).

Resilience as response to living with mental illness

Class of Illness: Self-awareness of Mental Illness. Index Case: Anxiety.

Of those mental illnesses of which the persons themselves are aware, a defining feature is the psychological distress that those affected will suffer as a direct result of these illnesses. The specific identification of generalized anxiety disorder (GAD), major depressive disorder (MDD), and post-traumatic stress discorder (PTSD) was derived from the broader category of psychiatric illnesses with self-awareness. Becoming resilient has been noted to act potentially as a buffer that helps to reduce the prevalence of these mental-health conditions (Sheerin et al., 2017; Thompson et al., 2018a).

These diseases are often highly visible to the affected individual and to others, and have the potential to cause devastation to physical health, social, and family relationships, employment, and other critical aspects of life. Shame and stigma can inhibit the individual's ability to seek care. Common problems encountered in this group are anxiety, behavior disengagement, denial, depression, fatigue, fear, guilt, shame, isolation, numbing, self-blame, stigma, stress, substance use, suicidality, venting, and vulnerability (Mong et al., 2012; Neria et al., 2010; Thompson et al., 2018a; Villaggi et al, 2015). This emotional upheaval serves as a powerful barrier or means to self-protect (or protect), by using self-managing concepts that lead to successful coping (Villaggi et al., 2015). Concepts that have been identified as frequently supporting resilience by compensation include acceptance, hope, humor, self-efficacy, social support, spiritual belief, and physical exercise. Planning, purpose, positive reframing, and mindfulness, (Min et al., 2013; Mong et al., 2012; Thompson et al., 2018a) can be considered challengerelated concepts. One who copes well following adversity or stressors is generally termed resilient in the mental-health community (Sheerin et al., 2017). Yet this prompts the guestions, why do some individuals seem to possess more resilience, and how can those deemed to have poor resilience and coping ability develop these skills to aid in recovery and prevent recurrence? Harnessing resilience-focused concepts enable individuals with mental-health disorders to adapt successfully to equanimity and buffer against future hardship.

Resilience as a response to living with chronic pain

Class of Illness: Ongoing Chronic Painful Conditions. Index Case: Arthritis.

Arthritis is a chronic painful condition which shares common characteristics with osteoarthritis and rheumatoid arthritis, as well as back pain and fibromyalgia. These ongoing chronic painful conditions are a class of conditions that create unique challenges to those affected. While chronic pain conditions do not present a direct threat to life, they can affect ability, mental outlook, job performance, and mobility for the remainder of the afflicted person's life (King et al., 2003; Tokish et al., 2017). Osteoarthritis and rheumatoid arthritis present clinically with joint swelling, pain, and immobility (Beeckman et al., 2019; Mangelli et al., 2002). Specific concerns about these chronic painful conditions relating to mobility include preclusion from event attendance, physical vulnerability, and isolation (Beeckman et al., 2019; Liu et al., 2017; Shaw et al., 2019). People living with arthritis also bear worries about future immobility limitations that might require the use of canes, walkers and wheelchairs.

Resilience concepts help improve the pain and procedural outcomes for chronic painful conditions (Hemington et al., 2018; Thompson et al., 2018b; Tokish et al., 2017), and improve adaptability to life changes with arthritis (Hemington et al., 2018). These changes require active "work" throughout the process of seeking resilience. The following concepts

have been linked to working toward resilience: acceptance (Shaw et al., 2019), autonomy (Becker & Newson, 2005; Cartwright et al., 2015; Hassani et al., 2017; Mangelli et al., 2002), hope (Xu et al., 2017), optimism (Shaw et al., 2019; Thompson et al., 2018b; Xu et al., 2017), patience (Hassani et al., 2017), perseverance (Shaw et al., 2019), sense of purpose (Hassani et al., 2017; King et al., 2003; Liu et al., 2017; Mangelli et al., 2002; Rojas et al., 2018), self-efficacy (Xu et al., 2017), self-growth (Cartwright et al., 2015; Mangelli et al., 2002), social support (Cartwright et al., 2015; Hassani et al., 2017; King et al., 2003; Mangelli et al., 2002; Musich et al., 2019; Robinson et al., 2019; Shaw et al., 2019; Xu et al., 2017), and well-being (Beeckman et al., 2019; Hassani et al., 2017; Mangelli et al., 2002). Chronic pain researchers also identified these coping concepts as contributors to a resilience outcome (Cartwright et al., 2015; Hassani et al., 2017; Hemington et al., 2018; Rojas et al., 2018; Shaw et al., 2019).

Resilience as a response to incurable episodic illness

Class of Illness: Episodic Illnesses. Index case: Asthma.

A class of illnesses that occur as episodes, or repeated "attacks," such as asthma, provides the person and their family or support system with the opportunity to recognize the onset of the occurrence of the disease and to learn emergency responses in order to intervene, control and even prevent more serious and debilitating consequences of the disease—that is, to learn to become resilient over time. Episodic illness in this category includes such conditions as asthma, migraine, and sickle-cell disease.

For example, asthma is a disease of airways currently without a cure and can only be managed (Asthma Society of Canada, 2020). The condition will not only compromise physical well-being, but will also associate with a range of psychological consequences. Common symptoms like shortness of breath, regular coughing, wheezing, trouble sleeping, and limited physical activities inhibit the patient from leading a "normal" life. In addition to the symptoms, the patient might feel abused, depressed, afraid, lonely, mentally fatigued, shamed, stressed, vulnerable, and inadequate (Barton et al., 2003; Coogan et al., 2013; Lehrer et al., 2002; Metting et al., 2016). In the US, over 24 million people are suffering and coping with this incurable illness (CDC, 2018). Management of symptoms might be the only way for this population to lead a normal life.

For incurable episodic illnesses (i.e., sickle-cell disease, asthma, migraine), therefore, the focus is on control, management, and readjustment after every episode of the syndrome (Bromberg et al., 2012; Vinson, 2002; Williams-Gray & Senreich, 2015). Additionally, over time, such patients might improve their management skills by achieving equanimity. Therefore, concepts of coping are the key to boosting

resilience in episodic illnesses. Frequently used protective coping-concept strategies are family cohesion (Fuggle et al., 1996; Koinis Mitchell et al., 2004), hope (Simon et al., 2009; Vinson, 2002; Ziadni et al., 2011), humor (Williams-Gray & Senreich, 2015), knowledge (Fuggle et al., 1996), mutual aid (Ladd et al., 2014), social support (Chen et al., 2011; Montoya et al., 2004; Vinson, 2002), and spiritual belief (Williams-Gray & Senreich, 2015). Frequently used compensatory-concept strategies are empowerment (Vinson, 2002; Williams-Gray & Senreich, 2015), management (Bromberg et al., 2012; Fuggle et al., 1996), and optimism (Chen et al., 2011; Vinson, 2002). Finally, frequently used challenge-concept strategies are empowerment (Vinson, 2002; Williams-Gray & Senreich, 2015), normalization (Protudjer et al., 2009), and self-esteem (Chen et al., 2011; Vinson, 2002). These coping-concept strategies guide patients with episodic illnesses to recalibrate and readjust, thus improving their ability to be resilient.

Resilience as a response to trauma

Class of Illness: Unexpected and unanticipated accidents or trauma.

INDEX CASE: SPINAL-CORD INJURY.

An adverse traumatic event that results in injury is the index case in this class. These injuries can have catastrophic effects on the injured and those close to them. Examples in this category include injuries from major unexpected or unanticipated events, resulting in a major traumatic injury, such as war injuries or motor-vehicle accidents which require extensive intervention.

Consider, for instance, our index case—a major accident resulting in a spinal-cord injury that upends a person's life, creating a new state of dependence during performance of activities of daily living and causing chronic pain, anxiety, social stressors, and prolonged rehabilitation (Craig et al., 2014, Guest et al., 2015). Distress, depression and altered functioning are frequent outcomes; and the inability to accept the current status makes it difficult to progress toward rehabilitation and overall improved wellness (Bonanno et al., 2012).

Over time, those who consider injury a challenge to be overcome and who use coping skills—both inherent and learned—have a higher likelihood of recovery (Bonanno et al., 2012; Kornhaber et al., 2018; Machida et al., 2013). It has been shown that exhibiting resilience is predictive of psychological, physiological, and sociological wellness among those with a sudden injury or accident such as a spinal-cord injury (McDonald et al., 2019). Some of these learned behaviors include mood management, not just physical recovery (Kilic et al., 2013). One of the most pertinent compensatory coping-concept strategies for those with a sudden illness or injury is optimism (Edward, 2013; McDonald et al., 2019; Stewart & Yuen, 2011; Wagnild, 2003).

Strong social support encompasses protective, compensatory, and challenge-related coping-concept strategies (Ahern et al., 2006; Bhattarai et al., 2018; Edward, 2013; Machida et al., 2013; Monden et al., 2014; Shin et al., 2012; Spratling & Weaver, 2012). The ability to adapt to injury and resultant changes (Ahern et al., 2006; Bhattarai et al., 2018; Edward, 2013; Hunter & Chandler, 1999; Jones et al., 2019; Kornhaber et al., 2018; Machida et al, 2013; McDonald et al., 2019; Monden et al., 2014; Spratling & Weaver, 2012), and the act of serving as a role model or inspiring others (Monden et al., 2014), are key challenge-related coping-concepts strategies. Salient protective coping-concept strategies include spirituality (Bhattarai et al., 2018; Jones et al., 2019; Monden et al., 2014); psychological strength (Monden et al., 2014; Tusaie & Dyer, 2004); and perspective (Garmezy, 1993; Monden et al., 2014). Once obtained, resilience enables the individual to thrive despite the injury (Shin et al., 2012).

Resilience as a response to dyadic dependency

Class of illiness: Caregiving for the frail and ill.

Index case: Caregiving for a person with Alzheimer's disease.

Caregivers as a group have been selected and included as a class because these individuals, and those they care for, must be considered as a unit, and their dyadic responsibilities to the frail and ill, are important to health and resilience. Additionally, health implications and resulting sequelae (including stress responses) are directly related to caregiving responsibilities for the caregivers themselves.

Informal caregivers, representing nearly 30% of the adult American population, provide essential assistance with activities of daily living and medical care (Hudson et al., 2020). Caregivers help to facilitate resilience in those they care for by buffering the adversity and stress experienced by the ill person; in this way, such caregiving acts as a protective factor.

Studies, however, have documented physical and mental consequences of caregiver burden, including depression, anxiety, social isolation, loneliness, difficulty balancing professional and personal responsibilities, increased occurrence of chronic conditions (Aoun et al., 2018; Brodaty & Donkin, 2009; Deist & Greeff, 2017), difficulty accessing support resources, compassion fatigue (Ferrell et al., 2019), and suicidal ideation (dos Santos Treichel et al., 2018), underlining the importance of developing resilience in the context of caregivers themselves.

Alzheimer's caregivers have been identified as our index case of caregivers, as they frequently experience both physical and mental psychosocial problems because of the nature and demands of their role. Persons with Alzheimer's will experience declines in cognitive functions which ultimately impact their ability to carry out activities of daily living (ADLs), resulting in their dependence on formal or, more often, informal caregivers (Plassman et al., 2007). Coping-concept strategies that support resilience in caregiving for

persons with Alzheimer's encompass challenge-related coping-concept strategies such as the finding of meaning in their role as a caregiver. Protective and compensatory coping-concept strategies associated with caregiving for persons with Alzheimer's include spirituality, optimism, resourcefulness, self-care, knowledge (about the disease), positive communication patterns, family connectedness, and social support (Aoun et al., 2018, Bekhet & Avery, 2017; Deist & Greeff, 2017).

Expanding this class of conditions to caregiving situations in which the person is dependent for most ADLs can also include persons with other types of dementia, parents of disabled children, caregivers of person with cancer, and caregivers of those with mental illness or severe mental deficits. Caregiver stressors might mirror the needs of those for whom they provide care. For example, caregivers of those who have physical deficits will likely provide more assistance with ADLs. Caregivers of persons with mental illness and/or deficits may or may not provide as much help with ADLs, but these caregivers might be at greater risk for experiencing problems with family dynamics. They can have more difficulty securing additional support and resources for such psychosocial issues (Ferrell et al., 2019). These examples illustrate how developing resilience in caregivers subsequently optimizes functioning, both in the dependent person and within the family unit.

These classes of illness discussed above and the psychosocial problems associated with them are summarized on Table 1. Note that these seven index cases and classes of illness are not exclusive—for instance we have not included palliative care and the patients who are dying, infectious diseases, cardiac diseases, and so forth, but those presented here provide a beginning, and a useful taxonomy that addresses the psychosocial aspects of care and associated coping concepts.

Step III. Identifying Common Psychosocial Problems

As many psychosocial problems commonly occur in all illnesses (Table 1), it is clear from this analysis that these are clustered. Most classes of illness cause profound emotional responses in the individuals. While some of these responses occur in several classes, most differ between classes, forming distinct patterns.

Step IV. Identifying Frequently Used Coping Concepts

Emotional states that frequently interfere with the individual's ability to cope and that prevent the attainment of resilience include despair, fear, anxiety, depression, hopelessness, loneliness, disabilities, and inabilities (see Table 1). Protective concepts are considered by resilience theorists to

Table 1. Common Psychosocial Problems and Coping Concepts for Index Cases and Classes of Illnesses.

I. Identifying the Lung Transplant	e Index Cases ↓ Breast Cancer	Anxiety	Arthritis	Asthma	Spinal-Cord Injury	Alzheimer's Caregiver
II. Identifying th	e Classes of Illn	esses ↓				Gai ogivei
Major Solid-Organ Transplants	Living with Uncertain Prognosis	Self-Awareness of Mental Illness	Ongoing Chronic Painful Conditions	Episodic Illnesses	Unexpected and Unanticipated Accidents or Trauma	Dyadic caregiving for the Frail and III
III. Identifying C	Common Psycho	social Problems	5 ↓			
Anger Anxiety Depression Exhaustion Fear Hopelessness Inadequacy Role modification Stigma/guilt Uncertainty Vulnerability	Anxiety Depression Distress Exhaustion Fatigue Fear Mental adjustment Stress	Anxiety Depression Fatigue Fear Isolation Stress Vulnerability	Chronic pain Depression Isolation Social functioning Stress Vulnerability	Abuse Depression Fear Isolation Mental fatigue Shame Stress Vulnerability Sense of inadequacy	Anger Anxiety Comorbidities Chronic pain Dependency Fear Grief Hopelessness Isolation Vulnerability	Altered self- identity Anxiety Comorbidities Depression Isolation Vulnerability
IV. Identifying C	Commonly Used	Coping Conce	ots 🗸			
Disability status Hopefulness Mastery Optimism Pessimism/realism Spirituality Regimental control Social support	Communication Emotional processing Hope Optimism Positive appraisal Social support Spirituality	Acceptance Hope Humor Mindfulness Planning Reframing Self-efficacy Social support Spirituality	Acceptance Autonomy Hope Optimism Patience Perseverance Purpose Self-efficacy Self-growth Social support Well-being	Empowerment Hope Humor Normalization Optimism Social support Spirituality Self-esteem	Acceptance Adaptation Experience Hope Inspiration Mentorship Optimism Perseverance Self-care Social support Spirituality	Acceptance Communication Knowledge Mastery Meaning finding Optimism Perspective Resourcefulness Self-care Self-efficacy Social support Spirituality

- VII. Development of The Resilience Framework for Nursing and Healthcare

shield against those negative states—for instance, optimism, which counters despair. In this framework we have kept the label "protective concepts" but applied this to selected concepts used at the beginning of the resilience work. As individuals realize that they are capable of adopting and utilizing strategies that will enable them to cope with the situation and ease their distress, they move to less passive concepts that imply engagement and work on the part of the individual: compensatory and challenge-related coping concepts (defined below).

Step V. Sorting Concepts According to the Resilience Trajectory

As we further considered the concepts for each class of illness, we were able to sort them into three functions—to protect, to compensate, and to challenge (see Table 2). These three concepts sequentially assist the individual in phases to be more resilient and to work toward a state of resilience. These groups of concepts are:

- Protective concepts: These are coping-concept strategies representing assets and resources that the individual can use to protect the self. These protective concepts help the individual to recognize, accept, and cope with their altered condition in particular in the initial phases of the illness.
- Compensatory concepts: Once the individual has recognized their illness, coping concept strategies that supplement, replace, and/or support the individual can help them to mitigate and cope with their present condition.
- 3. Challenge-related concepts: Later in the illness trajectory, challenge-related concepts are coping-concept strategies that enable the individual to accept and work to overcome physical and psychological challenges and barriers so as to reach equanimity and be resilient (Fleming & Ledogar, 2008, p. 1).

When using strategies represented by these coping concepts, the individuals must have the ability to assess their

 Table 2.
 Concepts Sorted into Classes of Illness by the Stages of Coping.

Classes of illness®	Maior rolid-	l iving with	Self-awareness of	Opagoing chronic		Inexpected	Dvadic caregiving
Stages of coping	organ transplants	cancer	mental illness	painful conditions	Episodic illness	unanticipated events	for the frail & ill
Protective	Baseline fitness	Acceptance	Internal locus	Acceptance	Hope	Acceptance	Optimism
concepts	Emotional health	Hope	Perspective	Autonomy	Social support	Experience	Perspective
	Financial	Humor	Self-efficacy	Hope	Spirituality	Hope	Resourcefulness
	resources	Self-efficacy	Spirituality	Optimism	Humor	Optimism	Self-care
	Pessimism/	Self-discipline		Patience		Social support	Social support
	realism	Social support		Perseverance		Spirituality	Spirituality
	Social support	Survival instinct		Purpose			Well-being
	Spirituality			Social support			
Compensatory	Environment	Adaptation	Acceptance	Patience	Empowerment	Optimism	Acceptance
concepts	Family support	Personal	Adaptation	Purpose	Optimism	Opportunity	Communication
	Hopefulness	mastery	Hope	Self-efficacy		Self-car	Knowledge
	Optimism	Optimism	Humor	Self-growth		Social support	Perspective
	Spirituality		Mindfulness	Well-being			Self-care
			Social support				Social support
			Planning				
			Reframing				
Challenge	Ambition	Balance	Compassion	Autonomy	Empowerment	Acceptance	Knowledge
concepts	Family support	Communication	Courage	Coping	Normalization	Adaptation	Mastery
	Mastery	Determination	Endurance	Patience	Self-esteem	Inspiration	Meaning finding
	Social support	Endurance	Knowledge	Perseverance		Mentor	Perspective
		Knowledge		Purpose		Perseverance	Self-efficacy
				Well-being		Social support	Social support
							Spirituality

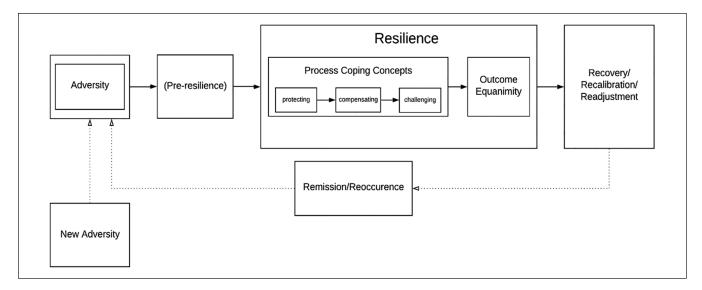


Figure 2. The resilience framework for nursing and healthcare.

predicament and envision their future, at least in a limited way. They realize that they are capable of utilizing strategies that will enable them to cope with the situation and ease their distress. Examples are the use of social support, spirituality, and concepts to reduce fear and regain hope. Individuals can visualize what will be reasonably achievable in their current situation, and this provides them with a realistic perspective.

Step VI. Identifying Equanimity as Reaching the State of Resilience

As the individual becomes more adept at coping, equanimity enables the individual to overcome the distress, and hence to attain resilience. Equanimity is characterized by a realistic acceptance of what cannot be changed, and an optimistic appraisal of possibilities for the future (Emlet, et al., 2011). It is an indicator that resilience has been attained. Equanimity is the level-headed acceptance of life's circumstances with a degree of confidence that is not present in its counterpart, resignation. Equanamity is, therefore, a emotional state that indicates that resilience may now be achieved.

Step VII. Developing the Resilience Framework for Nursing and Healthcare

From the above analysis of the literature we developed a framework of resilience conceptualizing the process that individuals in various classes of illness use to establish resilience. The framework provides possible ways to facilitate patients' development of resilience in the face of the various adversities they encounter. The process will be reviewed in detail here (see Figure 2).

Working to become resilient requires life readjustments and uses the processes of compensatory, protective, and challenge-related concept strategies previously reviewed (see Figure 2 and Table 2). The framework begins with an event of adversity. Adversity can originate from multiple scenarios that vary from a negative health diagnosis, to a traumatic event or serious illness, or to caregiving of a fragile family member. After a person encounters this devastating and life-altering adversity, they enter a phase of pre-resilience, of shock and enduring (Morse, 2010) that occurs with this sudden life change. The person initially begins to recognize, and then to confront their new limitations and recognize that interventions are necessary to sustain life. The outcome of the adverse event is uncertain, yet the person realizes that their illness or accident has drastically altered their life, and that resources for recovery, recalibration, and readjustment are currently out of reach. For instance, a person might feel that there is no alternative but to endure the pain, with all of their energy focusing on "bearing it" and suppressing emotions (Morse, 2010).8 During this phase the protective strategies are essential.

Once individuals become aware that they are an active participant in their recovery, they begin to recognize the additional resources that are available to help them cope with the work of recovery. In this phase, their capacity for compensatory coping is important and they develop obtainable therapeutic goals. While they recognize that the healthcare team and others in their social network are willing to participate in their recovery, they also recognize that the bulk of this effort must be their own, and move to challenge-related concepts.

These coping mechanisms help get the individual's perspective and distress under control and provide a state of "self-possession, level-headedness, presence of mind, self-restraint, self-confidence, and equilibrium" (Hutchinson, 1993, p. 217). The person works through these processes and develops a state of equanimity. Equanimity enables

hope, to establish realistic goals, to work to achieve these goals, and to be resilient.

Nevertheless, the adversity event might recur through remission (episodic, chronic, or degenerative) or a new experience might occur, such that the person will again move into the process of becoming resilient (see Figure 2). If a new adversity event occurs, the individual who has previously developed resilience can transfer previous experience into becoming resilient more quickly (Hildon et al., 2008). With recurring adversity, learning has occurred, so attaining resilience is abbreviated, the person is more proficient and knows what to expect and how to use the coping strategies.

Connecting the Resilience Framework to Nursing and Healthcare

The Resilience Framework for Nursing and Healthcare has the potential to be a powerful and significant framework that can help experienced nurses and healthcare providers, who are knowledgeable in psychosocial care, establish resilience for those in their care. The framework demands that the nurses have extensive knowledge about classes of illness for patients and their corresponding protective, compensatory, and challenge-related coping needs. These nurses must also possess extensive knowledge of therapeutic mechanisms and the application of coping concepts that can be used to help and support the patient as they navigate the process toward becoming resilient. Through introduction of The Resilience Framework for Nursing and Healthcare, we have provided a significant and versatile framework for improving nursing practice.

Exploring the Application of Resilience to Nursing-Care Situations

This framework has potentially useful applications in nursing and healthcare. However, using this framework demands that nurses broaden their focus beyond medical diagnoses and immediate presenting symptoms, to encompass patient problems inherent in their care. Moreover, they should consider their patients' range of dynamic problems as belonging to common classes of illness that present with common psychosocial problems, which override the categorization of medical diagnoses that the patients are primarily living with. Furthermore, these problems can be addressed or mitigated by carefully selecting coping-concept strategies. Identifying concepts is not a matter of prescribing a concept label (such as "social support") without an understanding of the complexities and intricacies of the dynamic mechanisms and types of support that lie within the concepts and the stage of the illness trajectory. For instance, patients with protective needs require social support that includes comforting and reassurance; patients with compensatory needs require advocacy and assistive social support; and patients with challenge-related needs require mentorship in setting achievable

types of support. These separate and varied needs of individuals are required for different classes of illness, with differing concept sets, at different intensities and at different times in the trajectory or course of their illness. This individualization within *The Resilience Framework for Nursing and Healthcare* is one of the strengths of this approach. Nurses can use their assessment skills, knowledge of nursing concepts and theory and intuition when selecting appropriate coping concepts to incorporate into their care plan and to evaluate the effectiveness of each approach.

One current application that we have identified as *Class of Illness: Living with the Uncertain Prognosis* is the recently identifed COVID-19 diagnosis known as "long haulers" (Rubin, 2020). To date, approximately 10% of patients who have recovered from Sars-Cov-2 chronically suffer from or relapse into a complex post-viral syndrome with respiratory complaints, dyspnea, fatigue, lingering loss of smell or taste, cardiomyopathy, myalgia, "brain fog," headaches, and mental illness (Carfi et al., 2020; Greenhalgh et al., 2020). Use of *The Resilience Framework for Nursing and Healthcare* enables delivery of tailored healthcare by recognizing commonalities with other illness classes. This example illustrates that a knowledge of other illness classes can transfer to compensatory, protective, and challenge-related concepts to this novel condition.

Psychosocial assessment skills are used to identify appropriate coping concepts, to open these concepts, and to determine how the conceptual attributes might match the patient's needs. For example, should the nurse determine that a patient is hoping unrealistically, the nurse has to understand hope theory thoroughly enough to be able to work with the patient to modify the hoped-for goals, and to establish intermediate steps that can be taken to achieve the overall goal. Exploring the concept of hope and its different mechanisms within hoping in a heart-transplant survivor, in a spinal-cord injury patient, in mothers attempting to breastfeed when returning to work, and in women undergoing recovery from breast cancer, reveals different patterns and modes of obtaining hope for each condition (Morse & Doberneck, 1995).

The usefulness of this framework in practice is likely to depend on the ongoing development of a compendium of coping concepts to the level of mid-range theory, and their translation into practice so that they can contribute to optimal patient care. Coping concepts diminish the untenable aspects of illness by harnessing the strengths of the individual, thereby helping them to develop skills to support the process of building resilience, to achieve and improve outcomes. There is presently a myriad of concepts available within nursing to facilitate the use of this framework, but much urgent work is required to develop these concepts so they can be applied in clinical practice. In addition, this framework is versatile, and can be manipulated to fit the needs of the individual in the selection and pacing of coping concepts.

How should this framework be evaluated? Internally, the framework must be logical, coherent and comprehensive.

Externally, evaluation will be determined by the implementation of the framework, as evidenced by its incorporation into nursing texts, curricula, research, and citation rates. The most significant criteria will be the usefulness of the framework, and its fit with nursing practice, and within research demonstrating evidenced-based, patient care outcomes.

Discussion

The Resilience Framework for Nursing and Healthcare provides a versatile and dynamic framework to guide nurses in assisting patients in using coping processes that build their resilience, thereby enabling them to alleviate their distress and to focus on the work of recovery. The utilization of this framework requires nurses to be adept and knowledgeable about assessment and selection of appropriate concepts and their application. Unfortunately, our present level of understanding of concepts, and our research to develop them, have focused narrowly on the meaning of the concept, largely ignoring the interaction of their attributes, their interaction with other concepts, and the versatility of their application in various situations. This work is in its infancy. Without such investigation into the significant concepts for enabling resilience, the selection of appropriate concepts is impotent. As an example, social support, when identified as a concept, will have different attributes and interactions for the stage of protection than it will have for the stage of challenge, and it will assume different roles in enabling social support from nursing and the family.

What Resilience Is and Is Not

Working toward the goal of attainment of resilience requires the nurse to fully comprehend what resilience is and is not. Some authors, taking the perspective of "strength," have included gender differences in the expression of distress (see, Masood et al., 2016). Concealing distress is a part of enduring (Morse, 2010). It is not an indicator of resilience. Those who are suppressing or blocking emotions as a means of enduring do not have the ability to set future goals, an ability they must have in the process of becoming resilient.

The Versatility of the Framework

As noted earlier, individuals might have multiple psychosocial problems simultaneously. Based on *The Framework*, these should be assessed so that interventions can be developed that will address the various individual needs of each patient. As such, this should be entered into the patients' medical record in such a way that all healthcare members are able to analyze and act on this information and thereby ensure coordination in achieving these goals. While some concepts might be prioritized according to immediate needs, this framework does not restrict the caregiver to the use of a single concept, nor only to those listed in Table 2.

Protective factors. In this framework some coping concepts may be categorized as protective in nature, in that they assist in alleviating the initial distress. However, based on the evidence in this analysis, we dispute the application of the term "protective factors" to all coping concepts, as the term fails to account for the work of resilience and mutes the role of compensatory and challenge-related concepts in contributing to the work of becoming resilient. All coping concepts are not "protective."

The state of equanimity. Here, we have selected the emotional state of equanimity as the outcome of the process of becoming resilient. Bonanno (2004) is correct when he writes that "resilience is different from recovery" (p. 20). Equanimity enables the channeling of energy from distress to the focus on coping-concept strategies and therapeutic programs, thereby enabling the final stage of recovery, recalibration, and readjustment toward health. Equanimity is the realistic acceptance of the impact of the individual's current health status and their prognosis (Emlet et al., 2011), and is an indicator that the individual has attained resilience. Acceptance in equanimity is different from acceptance in self-transcendence (Mayan et al., 2006). Equanimity is active. Self-transcendence is the passive peace that occurs with the acceptance of a terminal diagnosis.

The particularity of coping concepts. Some researchers have suggested that there is a set of concepts that occur in all illnesses for the attainment of resilience. For example, optimism, social support, spirituality, and hope are commonly used. In this study, we have found that some concepts are relevant to certain classes of illness, but that only social support was relevant to all illness classes. Our review of the literature and synthesis of coping concepts found that some coping concepts were evident within many of the classes of illness. It must be noted, however, that we were unable to identify a list of universal coping concepts related to obtaining resilience across all classes of illness. By examining Table 2 we can see that specific concept sets relate to particular classes of illness. This is extremely important; extensive work and investigation should be undertaken in order to understand the needs of each class of illness so as to help patients attain the state of resilience.

The state of resilience. Resilience is a patient-centered concept, and the processes of attaining resilience have been described from the perspective of the patient. Yet attaining resilience is an interactive process, involving caregivers and significant others, particularly in the protective set of coping concepts. For instance, social support plays a significant role (in its various types—which, incidentally, have yet to be delineated or described), particularly in caregivers and significant others (when considered in the context of compensatory and challenge-related concepts). It is astonishing that trust is not predominant in this literature [for instance, see

Robinson's (2016) analysis of trust in the caregiver relationship]. Given one's disabilities, handicaps, and impairments, the state of resilience enables one to achieve relative optimal health.

Does resilience go away? It becomes a part of the individual's experiential memory (Srivastava & Sinha, 2012). Individuals do not have to be working toward resilience when operating in a state of equanimity. This is a more efficient form of maintaining resilience, one in which the individual can focus on regaining the activities of daily living.

Recurring adveristy. When another adverse event occurs and the person again responds with distress, the person leaves equanimity and reenters the framework at the beginning of pre-resilience (as seen in Figure 2). Prior experience with adversity will make this action more efficient and enable the individual to reach resilience more quickly. Internal and external supports might be needed, however, to buffer the challenge of experiencing so many adverse events in such short succession that their experience could overwhelm pre-established coping mechanisms.

Another aspect to consider in this process would be the duration of time between adverse events and how this time-line might impact an individual's ability to efficiently reenter the resilience framework. Should too much time pass, will these learned behaviors be forgotten? Will the resources available to the individual have changed radically during this time? And will that change alter, in turn, the individual's approach and coping concepts employed to navigate through the resilience framework?

Limitations. Rather than collecting targeted "raw" data within a specific project to develop this framework, we constructed the components using qualitative literature. While this means that the framework has the limitation of not been tested "in the real world" or in the clinical setting, the logical application and support of exising literature is a strength.

Conclusion

The framework of resilience proposed in this article is targeted toward the context for which it is intended: that is, the state of the ill who are experiencing profound, devastating, and rapid life-threatening changes. The weakness of our proposed framework lies in the state of the development of the concepts that will be identified and used to attain coping, equanimity, and resilience, and that will, in turn, permit the ill individual to move into the work of recovery, recalibration, and readjustment. The utilization of concepts per se has moved into nursing curricula and mid-range theory. Although these have been a primary interest among nurse researchers, much work into the opening of concepts and development of mid-range theory for nursing praxis remains to be completed. We have

briefly mentioned the inadequacies of social support and anxiety, but this list of concepts in need of understanding and development for application is very long. Even the major umbrella concepts in this framework—coping, resilience, and equanimity—demand immediate attention and development in the context of illness. Much inquiry into the strategies of assessment for the selection and utilization of the menu of concepts identified here must be funded, explored, then moved into nursing education and clinical practice. Until nursing itself has developed adequate midrange theory to practice wisely, appropriately, and effectively, as well as the ability to demonstrate and document the changes in patients' emotional states that result from such practice interventions, nursing will remain incomplete, ineffective, and weighted toward a technical, procedure-driven profession.

Resilience, as an important concept for attaining wellness, has been available to nursing for four decades. As previously stated, Haase's work focused on developing resilience as a concept per se, identified the attributes, conducted quantitative testing of these variables, and even prepared a program to enhance resilience in adolescents with cancer (Haase, 2004; Haase et al, 2017). Her conception of resilience has application only to adolescents, linked narrowly to adolescent oncology and not to overall practice—a crucial yet missing step for our applied discipline. Her contribution is impactful, but specific. The Framework developed here, however, is different. It is versatile, fluid and adaptable for individual patient needs, available resources, and state-of-the-art concept development. Research into the practical application of midrange theories for developing coping and the coping concepts identified here will move this framework forward.

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Notes

- Best Practice, Model, Framework, Method, Guidance, Standard: toward a consistent use of terminology—revised (Dec 18, 2019). https://www.vanharen.net/blog/best-practice-model-framework-method-guidance-standard-towards-consistent-use-terminology/
- Here we are also including the role of prevention and the role of advanced practice.
- We borrowed this term from epidemiology, where index case refers "the first identifiable" case. It is used in this instance to refer to the most typical example in which resilience is perceived to place a significant role.
- 4. Rather that adding a static list of uncited references for each index case, an inclass "exercise" may be using Google Scholar, the Index case and "resilience" as key words, as a means of "testing" and expanding the framework.
- In 1962 Lois Murphy introduced the notion of "coping skills" in children learning to cope with new situations (Murphy, 1962)].
- As previously mentioned we adapted constructs from earlier theorist, "Protective" introduced by Rutter (1979), and the application of Fleming & Ledogar's, 2008) individualcommunity framework to patient care: "compensatory" and "challenge."
- This definition was synthesized from the literature within this project.
- According to the Praxis Theory of Suffering (Morse, 2010), this phase concludes once the person begins to comprehend that they cannot change what has happened, then moves into emotional suffering, and finally, accepts whatever has happened.

References

- Ahern, N. R., Kiehl, E. M., Sole, M. L., & Byers, J. (2006).
 A review of instruments measuring resilience. *Issues in Comprehensive Pediatric Nursing*, 29(2), 103–125. https://doi.org/10.1080/01460860600677643
- Alizadeh, S., Khanahmadi, S., Vedadhir, A., & Barjasteh, S. (2018). The relationship between resilience with self-compassion, social support and sense of belonging in women with breast cancer. *Asian Pacific Journal of Cancer Prevention*, 19(9), 2469–2474. https://doi.org/10.22034/APJCP.2018.19.9.2469
- Aoun, S. M., Toye, C., Slatyer, S., Robinson, A., & Beattie, E. (2018). A person-centred approach to family carer needs assessment and support in dementia community care in Western Australia. *Health & Social Care in the Community*, 26(4), e578–e586. https://doi.org/10.1111/hsc.12575.
- Aspinwall, L. G., & MacNamara, A. (2005). Taking positive changes seriously. Cancer, 104(S11), 2549–2556. https://doi. org/10.1002/cncr.21244
- Asthma Society of Canada. (2020). *Understanding asthma*. Retrieved October 17, 2020, from https://asthma.ca/get-help/understanding-asthma/
- Barbour, K. A., Blumenthal, J. A., & Palmer, S. M. (2006). Psychosocial issues in the assessment and management of patients undergoing lung transplantation. *Chest*, 129(5), 1367–1374. https://doi.org/10.1378/chest.129.5.1367
- Barton, C., Clarke, D., Sulaiman, N., & Abramson, M. (2003). Coping as a mediator of psychosocial impediments to optimal

- management and control of asthma. Respiratory Medicine, 97(7), 747-761.
- Becker, G., & Newsom, E. (2005). Resilience in the face of serious illness among chronically ill African Americans in later life. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 60(4), S214–S223.
- Beeckman, M., Hughes, S., Van Ryckeghem, D., Van Hoecke, E., Dehoorne, J., Joos, R., & Goubert, L. (2019). Resilience factors in children with juvenile idiopathic arthritis and their parents: The role of child and parent psychological flexibility. *Pain Medicine*, 20(6), 1120–1131.
- Bekhet, A. K., & Avery, J. S. (2017). Resilience from the perspective of caregivers of persons with dementia. *Archives of Psychiatric Nursing*, 32(1), 19–23. https://doi.org/10.1116/j.apnu.2017.09.008.
- Bell, C. J., Phillips, C. R., Haase, J. E., & Monahan, P. O. (2007). 24: Relationship of communication to family adaptability and cohesion in adolescents diagnosed with cancer. *Journal of Adolescent Health*, 40(2), S29. https://doi.org/10.1016/j. jadohealth.2006.11.077
- Benzies, K., & Mychasiuk, R. (2002). Fostering family resiliency: A review of the key protective factors. *Child & Family Social Work*, 14, 103–114. https://doi.org/10.1111/j.1365-2206.2008.00586.x
- Bhattarai, M., Maneewat, K., & Sae-Sia, W. (2018). Determinants of resilience among people who sustained spinal cord injury from the 2015 earthquake in Nepal. *Spinal Cord*, *56*, 78–83. https://doi.org/10.1038/sc.2017.93
- Black, R., & Dorstyn, D. (2015). A biopsychosocial model of resilience for multiple sclerosis. *Journal of Health Psychology*, 20(11), 1434–1444. https://doi.org/10.1177/1359105313512879
- Bonanno, G. A. (2004). Loss, trauma, and human resilience: Have we underestimated the human capacity to thrive after extremely aversive events? *American Psychologist*, *59*(1), 20. https://doi.org/10.1037/0003-066X.59.1.20/
- Bonanno, G. A., Galea, S., Bucciarelli, A., & Vlahov, D. (2006). Psychological resilience after disaster: New York City in the aftermath of the September 11th terrorist attack. *Psychological Science*, 17(3), 181–186. https://doi.org/10.1111/j.1467-9280 .2006.01682.x
- Bonanno, G. A., Kennedy, P., Galatzer-Levy, I. R., Lude, P., & Elfström, M. L. (2012). Trajectories of resilience, depression, and anxiety following spinal cord injury. *Rehabilitation Psychology*, 57(3), 236. https://doi.org/10.1037/a0029256
- Boscaglia, N., & Clarke, D. (2007). Sense of coherence as a protective factor for demoralization in women with a recent diagnosis of gynecological cancer. *Psycho-Oncology: Journal of the Psychological, Social and Behavioral Dimensions of Cancer*, 16(3), 189–195.
- Bradshaw, C., Atkinson, S., & Doody, O. (2017). Employing a qualitative description approach in health care research. *Global Qualitative Nursing Research*, *4*, 2333393617742282.
- Breen, S. J., Baravelli, C. M., Schofield, P. E., Jefford, M., Yates, P. M., & Aranda, S. K. (2009) Is symptom burden a predictor of anxiety and depression in patients with cancer about to commence chemotherapy? *The Medical Journal of Australia*, 190(S7), S99–S104.
- Brix, C., Schleussner, C., Füller, J., Roehrig, B., Wendt, T. G., & Strauss, B. (2008). The need for psychosocial support and its

- determinants in a sample of patients undergoing radioecological treatment of cancer. *Journal of Psychosomatic Research*, 65(6), 541–548.
- Brodaty, H., & Donkin, M. (2009). Family caregivers of people with dementia. *Dialogues in Clinical Neuroscience*, 11(2), 217–228. https://doi:10.1111/j.1447-0349.2012.00877.x
- Bromberg, J., Wood, M. E., Black, R. A., Surette, D. A., Zacharoff, K. L., & Chiauzzi, E. J. (2012). A randomized trial of a web-based intervention to improve migraine self-management and coping. *Headache: The Journal of Head and Face Pain*, 52(2), 244–261. http://doi.org/10.1111/j.1526-4610.2011.02031.x
- Brown, B. (2006). Shame resilience theory: A grounded theory study on women and shame. *Families in Society*, 87(1), 43–52. https://doi.org/10.1606/1044-3894.3483
- Brown, J., Sorrell, J. H., McClaren, J., & Creswell, J. W. (2006). Waiting for a liver transplant. *Qualitative Health Research*, 16(1), 119–136. https://doi.org/10.1177/1049732305284011
- Brügger, A., Aubert, J. D., & Piot-Ziegler, C. (2014). Emotions while awaiting lung transplantation: A comprehensive qualitative analysis. *Health Psychology Open*, *1*(1), 2055102914561272. https://doi.org/10.1177/2055102914561272
- Carfi, A., Bernabei, R., & Landi, F. (2020). Persistent symptoms in patients after acute COVID-19. *JAMA*, 324(6), 603–605. https://doi.org/10.1001/jama.2020.12603
- Cartwright, T., Fraser, E., Edmunds, S., Wilkinson, N., & Jacobs, K. (2015). Journeys of adjustment: The experiences of adolescents living with juvenile idiopathic arthritis. *Child: Care, Health and Development*, 41(5), 734–743. https://doi.org/10.1111/cch.12206
- Centers for Disease Control and Prevention. (2018). *National current asthma prevalence*. Retrieved October 17, 2020, from https://www.cdc.gov/asthma/most_recent_national_asthma_data.htm
- Chen, E., Strunk, R. C., Trethewey, A., Schreier, H. M., Maharaj, N., & Miller, G. E. (2011). Resilience in low-socioeconomicstatus children with asthma: adaptations to stress. *Journal of Allergy and Clinical Immunology*, 128(5), 970–976. https://doi.org/10.1016/j.jaci.2011.06.040
- Cohen, D. G. (2014). Cognitive function, mental health, and health-related quality of life after lung transplantation. *Annals of the American Thoracic Society*, 11(4), 522–530. https://doi.org/10.1513/AnnalsATS.201311-388OC
- Coogan, P. F., Wise, L. A., O'Connor, G. T., Brown, T. A., Palmer, J. R., & Rosenberg, L. (2013). Abuse during childhood and adolescence and risk of adult-onset asthma in African American women. *Journal of Allergy and Clinical Immunology*, 131(4), 1058–1063.
- Craig, A., Rodrigues, D., Tran, Y., Guest, R., Bartrop, R., & Middleton, J. (2014). Developing an algorithm capable of discriminating depressed mood in people with spinal cord injury. *Spinal Cord*, *52*, 413–416. https://doi.org/10.1038/sc.2014.25
- de Moor, J. S., de Moor, C. A., Basen-Engquist, K., Kudelka, A., Bevers, M. W., & Cohen, L. (2006). Optimism, distress, health-related quality of life, and change in cancer antigen 125 among patients with ovarian cancer undergoing chemotherapy. *Psychosomatic Medicine*, 68(4), 555–562. https://doi.org/10.1097/01.psy.0000222379.71389.91
- Decker, C., Phillips, C. R., & Haase, J. E. (2004). Information Needs of Adolescents with Cancer. *Journal of Pediatric*

- Oncology Nursing, 21(6), 327–334. https://doi.org/10.1177/1043454204269606
- Deist, M., & Greeff, A. P. (2017). Living with a parent with dementia: A family resilience study. *Dementia*, 16(1), 126–141. https://doi.org/10.1177/1471391215621853
- dos Santos Treichel, C. A., da Rosa Jardim, V. M., Prado Kantorski, L., & Guimarães Lima, M. (2018). Prevalence and factors associated with suicidal ideation among family caregivers of people with mental disorders. *Journal of Clinical Nursing*, 28, 3470–3477. https://doi.org/10.1111/jocn.14938
- Edward, S-L. (2013). Chronic illness and well-being: Using nursing practice to foster resilience as resistance. *British Journal Nursing*, 22, 741–742, 744, 746. https://doi.org/10.12968/bjon.2013.22.13.741
- Emlet, C. A., Shakima, T., & Raveis, V. H. (2011). "I'm not going to die from the AIDS": Resilience in aging with HIV disease. *The Gerontologist*, 51(1), 101–111. https://doi.org/10.1093/geront/gnq060
- Ferrell, E. L., Russin, S. E., & Hardy, R. M. (2019). Informal caregiving experiences in post-traumatic stress disorder: A content analysis of an online community. *Journal of Community Psychology*, 47, 757–771. https://doi.org/10.1002/jcop.22151
- Flemming, J., & Ledogar, R. J. (2008) Resilience, an evolving concept: A review of literature relevant to Aboriginal research. Pimatisiwin, 6(2), 25–46.
- Fletcher, D., & Sarkar, M. (2013). Psychological resilience: A review and critique of definitions, concepts, and theory. *European Psychologist*, 18(1), 12–23. https://doi.org/10.1027/1016-9040/a000124
- Fuggle, P., Shand, P., Gill, L., & Davies, S. (1996). Pain, quality of life, and coping in sickle cell disease. *Archives of Disease in Childhood*, 75(3), 199–203. https://doi.org/10.1348/135910702760213715
- Gardenhire, J., Mullet, N., & Fife, S. (2019). Living with Parkinson's: The process of finding optimism. *Qualitative Health Research*, 29(12), 1781–1793.
- Garmezy, N. (1985). Stress-resistant children: The search for protective factors. In J. E. Stevenson (Ed.), Recent research in developmental psychopathology: Journal of child psychology and psychiatry book supplement (pp. 213–233). Pergamon.
- Garmezy, N. (1993). Children in poverty: Resilience despite risk. Psychiatry, 56(1), 127–136. https://doi.org/10.1080/00332747 .1993.11024627
- Gillespie, B. M., Chaboyer, W., & Wallis, M. (2007). Development of a theoretically derived model of resilience through concept analysis. *Contemporary Nurse*, 25(1–2), 124–135. https://doi.org/10.5172/conu.2007.25.1-2.124
- Greene, R. R. (2002). Holocaust survivors: A study in resilience. *Journal of Gerontological Social Work*, 37(1), 3–18. https://doi.org/10.1300/J083v37n01_02
- Greene, R. R., Galambos, C., & Lee, Y. (2004). Resilience theory: Theoretical and professional conceptualizations. *Journal of Human Behavior in the Social Environment*, 8(4), 75–91. https://doi.org/10.1300/J137v08n04 05
- Greenhalgh, T., Knight, M., A'Court, C., Buxton, M., Husain, L., Steffens, D. C., Willis, R. J., & Wallace, R. B. (2020). Management of post-acute covid-19 in primary care. *BMJ*, 370, m3026. https://doi.org/10.1136/bmj.m3026
- Guest, R., Craig, A., Tran, Y., & Middleton, J. (2015). Factors predicting resilience in people with spinal cord injury during

- transition from inpatient rehabilitation to the community. *Spinal Cord*, 53(9), 682–686. https://doi.org/10.1038/sc.2015.32
- Haase, J. E. (2004). The adolescent resilience model as a guide to interventions. *Journal of Pediatric Oncology Nursing*, 21(5), 289–299. https://doi.org/10.1177/1043454204267922
- Haase, J. E., Heiney, S. P., Ruccione, K. S., & Stutzer, C. (1999). Research triangulation to derive meaning-based quality-of-life theory: Adolescent Resilience Model and instrument development. *International Journal of Cancer*, 83(S12), 125–131. https://doi.org/10.1002/(SICI)1097-0215(1999)83:12+<125:::AID-IJC22>3.0.CO;2-7
- Haase, J. E., Kintner, E. K., Robb, S. L., Stump, T. E., Monahan, P. O., Phillips, C., Stegenga, K. A., & Burns, D. S. (2017). The resilience in illness model part 2: Confirmatory evaluation in adolescents and young adults with cancer. *Cancer Nursing*, 40(6), 454–463. https://doi.org/10.1097/NCC.000000000000000450
- Haase, J. E., & Peterson, S. J. (2015). Resilience. In S. J. Peterson & T. S. Bredow (Eds.), Middle range theories: Application to nursing research and practice (4th ed, pp. 256–284). Walters Kluwer.
- Harrison, J., & Maguire, P. (1994). Predictors of psychiatric morbidity in cancer patients. *British Journal of Psychiatry*, 165(5), 593–598. https://doi.org/https://doi.org/10.1192/bjp.165.593
- Hassani, P., Izadi-Avanji, F., Rakhsan, M., & Majd, H. (2017).
 A phenomenological study on resilience of the elderly suffering from chronic disease: A qualitative study. *Psychology Research and Behavior Management*, 10, 59–67. https://doi.org/10.2147/PRBM.S121336
- Hemington, K., Rogachov, A., Cheng, J., Bosma, R., Kim, J., Osborne, N., Inman, R., & Davis, K. (2018). Patients with chronic pain exhibit a complex relationship triad between pain, resilience, and within- and cross-network functional connectivity of the default mode network. *Pain*, 159(8), 1621–1630. https://doi.org/10.1097/j.pain.0000000000001252
- Herth, K. (1992). Abbreviated instrument to measure hope: Development and psychometric evaluation. *Journal of Advanced Nursing*, *17*(10), 1251–1259. https://doi.org/10.1111/j.13652648.1992.tb01843.x
- Hildon, Z., Smith, G., Netuveli, G., & Blane, D. (2008). Understanding adversity and resilience at older ages. Sociology of Health & Illness, 30(5), 726–740.
- Hudson, P., Morrison, R. S., Schulz, R., Brody, A. A., Dahlin, C., Kelly, K., & Meier, D. E. (2020). Improving support for family caregivers of people with a serious illness in the United States: Strategic agenda and call to action. *Palliative Medicine Reports*, 1(1), 6–17.
- Hunter, A. J., & Chandler, G. E. (1999). Adolescent resilience. *Image: Journal of Nursing Scholarship*, 31, 243–247. https://doi.org/10.1111/j.1547-5069.1999.tb00488.x
- Husain, A. N., Siddiqui, M. T., Holmes, E. W., Chandrasekhar, A. J., McCabe, M., Radvany, R., & Garrity, E. R. Jr. (1999). Analysis of risk factors for the development of bronchiolitis obliterans syndrome. *American Journal of Respiratory and Critical Care Medicine*, 159(3), 829–833. https://doi.org/ 10.1164/ajrccm.159.3.9607099
- Hutchinson, S. A. (1993). People with bipolar disorders quest for equanimity: Doing grounded theory. *National League for Nursing*, 19(2535), 213–236.

- Janssen, B. M., Regenmortel, T. V., & Abma, T. A. (2011). Identifying sources of strength: Resilience from the perspective of older people receiving long-term community care. *European Journal of Ageing*, 8, 145–156. https://doi.org/10.1007/s10433-011-0190-8
- Jones, K.F., Simpson, G., Briggs, L., Dorsett, P., & Anderson, M. (2019). A study of whether individual and dyadic relations between spirituality and resilience contribute to psychological adjustment among individuals with spinal cord injuries and their family members. *Clinical Rehabilitation*, 33(9), 1503–1514. https://doi.org/10.1177/0269215519845034
- Kilic, S., Dorstyn, D., & Guiver, N. (2013). Examining factors that contribute to the process of resilience following spinal cord injury. *Spinal Cord*, 51(7), 553–557. https://doi.org/10.1038/ sc.2013.25
- Kimura, N., Aso, Y., Yabuuchi, K., Ishibashi, M., Hori, D., Sasaki, Y., Nakamichi, A., Uesugi, S., Fujioka, H., Iwao, S., Jikumaru, M., Katayama, T., Sumi, K., Eguchi, A., Nonaka, S., Kakumu, M., & Matsubara, E. (2019). Modifiable lifestyle factors and cognitive function in older people: A Cross-Sectional Observational Study. *Frontiers in Neurology*, 10, 401. https://doi.org/10.3389/fneur.2019.00401
- King, G., Cathers, T., Brown, E., Specht, J., Willoughby, C., Polgar, J., Mackinnon, E., Smith, L., & Havens, L. (2003). Turning points and protective processes in the lives of people with chronic disabilities. *Qualitative Health Research*, 13(2), 184–206. https://doi.org/10.1177/1049732302239598
- Koinis Mitchell, D., Klein Murdock, K., & McQuaid, E. L. (2004). Risk and resilience in urban children with asthma: A conceptual model and exploratory study. *Children's Health Care*, 33(4), 275–297. https://doi.org/10.1207/s15326888 chc3304 3
- Kornhaber, R., Mclean, L., Betihavas, V., & Cleary, M. (2018). Resilience and the rehabilitation of adult spinal cord injury survivors: A qualitative systematic review. *Journal of Advanced Nursing*, 74(1), 23–33. https://doi.org/10.1111/jan.13396
- Kumpfer, K. L. (1999). Factors and processes contributing to resilience: The resilience framework. In M. D. Glantz & J.
 L. Johnson (Eds.), Longitudinal research in the social and behavioral sciences. Resilience and development: Positive life adaptations (pp. 179–224). Kluwer Academic.
- Ladd, R. J., Valrie, C. R., & Walcott, C. M. (2014). Risk and resilience factors for grade retention in youth with sickle cell disease. *Pediatric Blood & Cancer*, 61(7), 1252–1256. https:// doi.org/10.1002/pbc.24974
- Lehrer, P., Feldman, J., Giardino, N., Song, H. S., & Schmaling, K. (2002). Psychological aspects of asthma. *Journal of Consulting and Clinical Psychology*, 70(3), 691–711. https://doi.org/10.1037/0022-006X.70.3.691
- Liu, L., Xu, X., Xu, N., & Wang, L. (2017). Disease activity, resilience and health-related quality of life in Chinese patients with rheumatoid arthritis: a multi-center, cross-sectional study. Health and Quality of Life Outcomes, 15(1), 149. https://doi.org/10.1186/s12955-017-0725-6
- Lo, C., Zimmermann, C., Rydall, A., Walsh, A., Jones, J. M., Moore, M. J., Shepherd, F. A., Gagliese, L., & Rodin, G. (2010). Longitudinal study of depressive symptoms in patients with metastatic gastrointestinal and lung cancer. *Journal of*

- Clinical Oncology, 28(18), 3084–3089. https://doi.org/10.1200/JCO.2009.26.9712
- Machida, M., Irwin, B., & Feltz, D. (2013). Resilience in competitive athletes with spinal cord injury: The role of sport participation. *Qualitative Health Research*, 23(8), 1054–1065. https://doi.org/10.1177/1049732313493673
- Mancini, A. D., & Bonanno, G.A. (2009), Predictors and parameters of resilience to loss: Toward an individual differences model. *Journal of Personality*, 77, 1805–1832. https://doi.org/10.1111/j.1467-6494.2009.00601.x
- Mangelli, L., Gribbin, N., Büchi, S., Allard, S., & Sensky, T. (2002). Psychological well-being in rheumatoid arthritis: Relationship to 'disease' variables and affective disturbance. *Psychotherapy and Psychosomatics*, 71(2), 112–116. https://doi.org/10.1159/000049354
- Markstrom, C. A., Marshall, S. K., & Tryon, R. J. (2001). Resiliency, social support, and coping in rural low-income Appalachian adolescents from two racial groups. *Journal of Adolescence*, 23(6), 693–703. https://doi.org/10.1006/jado.2000.0353
- Masood, A., Masud, Y., & Mazahir, S. (2016). Gender differences in resilience and psychological distress of patients with burns. *Burns*, 42(2), 300–306. https://doi.org/10.1016/j. burns.2015.10.006
- Masten, A. S. (1994). Resilience in individual development: Successful adaptation despite risk and adversity. In M. C. Wang & E. W. Gordon (Eds.), *Educational resilience in inner-city America: Challenges and prospects* (pp. 3–25). Lawrence Erlbaum.
- Mayan, M., Morse, J. M., & Eldershaw, L. P. (2006). Developing the concept of self-reformulation. QHW: *International Journal of Qualitative Studies on Health and Well-being*, *1*(1), 20–26.
- McDonald, S., Pugh, M., & Mickens, M. (2019). Resilience after spinal cord injury: A scoping review. American Journal of Physical Medicine & Rehabilitation. Advance online publication. https://doi.org/10.1097/PHM.000000000001371
- Metting, E., van der Molen, T., & Kocks, J. (2016). Loneliness and lack of social support severely influences patients' quality of life. Secondary findings from our focus group study in asthma and COPD patients. *European Respiratory Journal*, 48 (Suppl 60), PA729. https://doi.org/10.1183/13993003.congress-2016.PA729
- Min, J., Jung, Y., Kim, D., Yim, H., Kim, J., Kim, T., Lee, C., Lee, C., & Chae, J. (2013). Characteristics associated with low resilience in patients with depression and/or anxiety disorders. *Quality of Life Research*, 22, 231–241. https://doi.org/10.1007/ s11136-012-0153-3
- Molina, Y., Yi, J. C., Martinez-Gutierrez, J., Reding, K. W., Yi-Frazier, J. P., & Rosenberg, A. R. (2014). Resilience among patients across the cancer continuum: diverse perspectives. *Clinical Journal of Oncology Nursing*, 18(1), 93–101. https://doi.org/10.1188/14.CJON.93-101
- Monden, K., Trost, Z., Catalano, D., Garner, A. N., Simcox, J., Driver, S., Hamilton, R. G., & Warren, A. M. (2014). Resilience following spinal cord injury: A phenomenological view. *Spinal Cord*, *52*(3), 197–201. https://doi.org/10.1038/sc.2013.159
- Mong, M. D., Noguchi, K., & Ladner, B. (2012). Immediate psychological impact of the deepwater horizon oil spill: symptoms of PTSD and coping skills. *Journal of Aggression, Maltreatment & Trauma*, 21(6), 691–704 https://doi.org/10.1080/10926771. 2012.694402

- Montoya, P., Larbig, W., Braun, C., Preissl, H., & Birbaumer, N. (2004). Influence of social support and emotional context on pain processing and magnetic brain responses in fibromyalgia. *Arthritis & Rheumatism*, 50(12), 4035–4044.
- Morse, J. M. (2010). The Praxis Theory of Suffering. In Philosophies and theories in advanced nursing practice. (Chapter 28). Ed by J.B. Butts & K.L. Rich. Sudbury, MA.: Jones & Bartlett.
- Morse, J. M. (2011). Hearing bad news. *Journal of Medical Humanities*, 32:187–211.
- Morse, J. M. (2018). Theoretical coalescence: A method to develop qualitative concepts and theory. The example of enduring. *Nursing Research*, 67(2), 177–187. https://doi.org/10.1097/ NNR.00000000000000263
- Morse, J. M., & Doberneck, B. M. (1995). Delineating the concept of hope. *Image: Journal of Nursing Scholarship*, 27(4), 277–285.
- Morse, J. M., Pooler, C., van Ward, T., Maddox, L., Olausson, J.M., Roche-Dean, M., Colorafi, K., Madden, C., Rogers, B., & Martz, K. (2014). Awaiting the diagnosis of breast cancer: Strategies of enduring for preserving self. *Oncology Nursing Research*, 41(4), 350–359. https://doi.org/10.1188/14. ONF.350-359
- Murphy, L. B. (1962). The widening world of childhood: Paths toward mystery. New York: Basic Books.
- Musich, S., Wang, S., Slindee, L., Kraemer, S., & Yeh, C. (2019).
 Association of resilience and social networks with pain outcomes among older adults. *Population Health Management*, 22(6), 511–521. https://doi.org/10.1089/pop.2018.0199
- Myaskovsky, L., Dew, M. A., McNulty, M. L., Switzer, G. E.,
 DiMartini, A. F., Kormos, R. L., & McCurry, K. R. (2006).
 Trajectories of change in quality of life in 12-month survivors of lung or heart transplant. *American Journal of Transplantation*, 6(8), 1939–1947.
- Naef, R., & Bournes, D. A. (2009). The lived experience of waiting: A parse method study. *Nursing Science Quarterly*, 22(2), 141–153. http://doi.org/10.1177/0894318409331932
- Nelson, A. E., Haase, J., Kupst, M. J., Clarke-Steffen, L., & Brace-O'Neill, J. (2004). Consensus statements: Interventions to enhance resilience and quality of life in adolescents with cancer. *Journal of Pediatric Oncology Nursing*, 21(5), 305–307.
- Neria, Y., Besser, A., Kiper, D., & Westphal, M. (2010). A longitudinal study of post-traumatic stress disorder, depression, and generalized anxiety disorder in Israeli civilians exposed to war trauma. *Journal of Traumatic Stress*, 23(3), 322–330. https://doi.org/10.1002/jts.20522
- Olsson, C. A., Bond, L., Burns, J. M., Vella-Brodrick, D. A., & Sawyer, S. M. (2003). Adolescent resilience: A concept analysis. *Journal of Adolescence*, 26, 1–11. https://doi.org/10.1016/S0140-1971(02)00118-5
- Plassman, B. L., Langa, K. M., Fisher, G. G., Heeringa, S. G., Weir, D. R., Ofstedal, M. B., Burke, J. R., Hurd, M. D., Potter, G. G., Rodgers, W. L., Steffens, D. C., Willis, J. R., & Wallace, R. B. (2007). Prevalence of dementia in the United States: The aging demographics, and memory study. *Neuroepidemiology*, 29(1–2), 125–132.
- Protudjer, J. L., Kozyrskyj, A. L., Becker, A. B., & Marchessault, G. (2009). Normalization strategies of children with asthma. *Qualitative Health Research*, 19(1), 94–104.

- Resilience. (2020). In Oxford English dictionary. https://www-oed-com.ezproxy.lib.utah.edu/view/Entry/163619
- Rew, L., & Horner, S. D. (2003). Youth resilience framework for reducing health-risk behaviors in adolescents. *Journal of Pediatric Nursing*, 18(6), 379–388. https://doi.org/10.1016/ S0882-5963(03)00162-3
- Richardson, G. E. (2002). The metatheory of resilience and resiliency. *Journal of Clinical Psychology*, 58, 307–321. https://doi.org/10.1002/jclp.10020
- Robinson, C. A. (2016). Trust, health care relationships, and chronic illness: A theoretical coalescence. *Global Qualitative Nursing Research*, 3, 2333393616664823.
- Robinson, M., Hanna, E., Raine, G., & Robertson, S. (2019). Extending the comfort zone: Building resilience in older people with long-term conditions. *Journal of Applied Gerontology*, 38(6), 825–848. https://doi.org/10.1177/0733464817724042
- Rojas, M., Rodriguez, Y., Pacheco, Y., Zapata, El, Monsalve, D., Mantilla, R., Rodriguez Jimenez, M., Ramirez-Santana, C., Molano-Gonzalez, N., & Anaya, J. (2018). Resilience in women with autoimmune rheumatic diseases. *Joint, Bone, Spine*, 85(6), 715–720. https://doi.org/10.1016/j.jbspin.2017.12.012
- Rosenberger, E. M., Dew, M. A., DiMartini, A. F., DeVito Dabbs, A. J., & Yusen, R. D. (2012). Psychosocial issues facing lung transplant candidates, recipients and family caregivers. *Thoracic Surgery Clinics*, 22(4), 517–529. https://doi.org/10 .1016/j.thorsurg.2012.08.001
- Rubin, R. (2020). As their numbers grow, COVID-19 "Long Haulers" stump experts. *JAMA*, *324*(14), 1381–1383. https://doi.org/10.1001/jama.2020.17709\
- Rutter, M. (1979). Fifteen thousand hours: Secondary schools and their effects on children. Harvard University Press.
- Rutter, M. (2012). Resilience as a dynamic concept. *Development and Psychopathology*, 24(2), 335–344. https://doi.org/10.1017/S0954579412000028
- Rutter, M., & Rutter, M. (1993). *Developing minds: Challenge and continuity across the life span*. Basic books.
- Shaw, L. M., Vanderstichele, H., Knapik-Czajka, M., Clark, C. M., Aisen, P. S., Petersen, R. C., Blennow, K., Soares, H., Simon, A., Lewczuk, P., Dean, R., Siemers, E., Potter, W., Lee, V. M., & Trojanowski, J. Q., & Alzheimer's Disease Neuroimaging Initiative (2009). Cerebrospinal fluid biomarker signature in Alzheimer's disease neuroimaging initiative subjects. *Annals of Neurology*, 65(4), 403–413. https://doi.org/10.1002/ana.21610
- Shaw, Y., Bradley, M., Zhang, C., Dominique, A., Michaud, K., McDonald, D., & Simon, T. (2019). The development of resilience among rheumatoid arthritis patients: A qualitative study. *Arthritis Care & Research*, 72, 1257–1265. https://doi. org/10.1002/acr.24024
- Sheerin, C. M., Lind, M. J., Brown, E. A., Gardner, C. O., Kendler, K. S., & Amstadter, A.B. (2017). The impact of resilience and subsequent stressful life events on MDD and GAD. *Depression* & Anxiety, 35(2), 140–147. https://doi.org/10.1002/da.22700
- Shin, J. I., Chae, J. H., Min, J. A., Lee, C. U., Hwang, S. I., Lee, B. S., Han, S. H., Ju, H. I., & Lee, C. Y. (2012). Resilience as a possible predictor for psychological distress in chronic spinal cord injured patients living in the community. *Annals of Rehabilitation Medicine*, 36(6), 815–820. https://doi.org/10.5535/arm.2012.36.6.815

- Simon, K., Barakat, L. P., Patterson, C. A., & Dampier, C. (2009). Symptoms of depression and anxiety in adolescents with sickle cell disease: The role of intrapersonal characteristics and stress processing variables. *Child Psychiatry and Human Development*, 40(2), 317. https://doi.org/10.1007/s10578-009-0129-x
- Singer, J. P., & Singer, L. G. (2013). Quality of life in lung transplantation. *Seminars in Respiratory and Critical Care Medicine*, 34(3), 421–430. https://doi.org/10.1055/s-0033-1348470
- Snyder, C. R., Harris, C., Anderson, J. R., Holleran, S. A., Irving, L. M., Sigmon, S. T., & Harney, P. (1991). The will and the ways: Development and validation of an individual-differences measure of hope. *Journal of Personality and Social Psychology*, 60(4), 570–585. https://doi.org/10.1037/0022-3514.60.4.570
- Southwick, S. M., Bonanno, G. A., Masten, A. S., Panter-Brick, C., & Yehuda, R. (2014). Resilience definitions, theory, and challenges: Interdisciplinary perspectives. *European Journal* of *Psychotraumatology*, 5, 25338. https://doi.org/10.3402/ejpt. v5.25338
- Spratling, R., & Weaver, S. R. (2012). Theoretical perspective: Resilience in medically fragile adolescents. *Research and Theory for Nursing Practice*, 26(1), 54–68. https://doi.org/10.1891/1541-6577.26.1.54
- Srivastava, S., & Sinha, A. (2012). Resilience for well-being: The role of experiential learning. In A. K. Dalel & G. Misra (Eds.), New directions in health psychology (pp. 329–349). SAGE.
- Stewart, D. E., & Yuen, T. (2011). A systematic review of resilience in the physically ill. *Psychosomatics*, 52(3), 199–209. https://doi.org/10.1016/j.psym.2011.01.036
- Taylor, E. J., Petersen, C., Oyedele, O., & Haase, J. (2015). Spirituality and spiritual care of adolescents and young adults with cancer. *Seminars in Oncology Nursing*, 31(3), 227–241. https://doi.org/10.1016/j.soncn.2015.06.002
- Thompson, K., Bulls, H., Sibille, K., Bartley, E., Glover, T., Terry, E., Vaughn, I., Cardoso, J., Sotolongo, A., Staud, R., Hughes, L., Edberg, J., Redden, D., Bradley, L., Goodin, B., & Fillingim, R. (2018b). Optimism and psychological resilience are beneficially associated with measures of clinical and experimental pain in adults with or at risk for knee osteoarthritis. *The Clinical Journal of Pain*, 34(12), 1164–1172. http://doi.org/10.1097/AJP.00000000000000042
- Thompson, N. J., Fiorillo, D., Rothbaum, B. O., Ressler, K. J., & Michopoulos, V. (2018a). Coping strategies as mediators in relation to resilience and post-traumatic stress disorder. *Journal of Affective Disorders*, 225, 153–159. https://doi.org/10.1016/j.jad.2017.08.049
- Tokish, J., Kissenberth, M., Tolan, S., Salim, T., Tadlock, J., Kellam, T., Long, C., Crawford, A., & Shanley, E. (2017.). Resilience correlates with outcomes after total shoulder arthroplasty. *Journal of Shoulder and Elbow Surgery: JSES*, 26(5), 752–756. https://doi.org/10.1016/j.jse.2016.12.070
- Tusaie, K., & Dyer, J. (2004). Resilience: A historical review of the construct. *Holistic Nursing Practice*, *18*, 3–8.
- Ungar, M. (2003). Qualitative contributions to resilience research. Qualitative Social Work, 2(1), 85–102. https://doi.org/10 :1177/1473325003002001123
- Villaggi, B., Provencher, H., Coulombe, S., Meunier, S., Radziszewski, S., Hudon, C., Roberge, P., Provencher, M.D., & Houle, J. (2015). Self-management strategies in recovery

- from mood and anxiety disorders. *Global Qualitative Nursing Research*, 2, 2333393615606092.
- Vinson, J. A. (2002). Children with asthma: Initial development of the Child Resilience Model: Practice applications of research. *Pediatric Nursing*, 28, 149–158.
- Wagnild, G. (2003). Resilience and successful aging: Comparison among low and high income older adults. *Journal of Geron*tological Nursing, 29(12), 42–49. https://doi.org/10.3928 /0098-9134-20031201-09
- Wagnild, G., & Young, H. M. (1990). Resilience among older women. *The Journal of Nursing Scholarship*, 22(4), 252–255. https://doi.org/10.1016/j.gerinurse.2016.02.014
- Weisman, A. D. (1979) A model for psychosocial phasing in cancer. General Hospital.
- Wilks, S. E., Little, K. G., Gough, H. R., & Spurlock, W. J. (2011).
 Alzheimer's aggression: Influences on caregiver coping and resilience. *Journal of Gerontological Social Work*, 54(3), 260–275. https://doi.org/10.1080/01634372.2010.544531
- Williams-Gray, B., & Senreich, E. (2015). Challenges and resilience in the lives of adults with sickle cell disease. *Social Work in Public Health*, 30(1), 88–105. https://doi.org/10.1080/1937 1918.2014.938396
- Xu, N., Zhao, S., Xue, H., Fu, W., Liu, L., Zhang, T., Huang, R., & Zhang, N. (2017). Associations of perceived social support and positive psychological resources with fatigue symptom in patients with rheumatoid arthritis. *PLoS One*, 12(3), e0173293.
- Zarzaur, B., Bell, T. M., & Zanskas, S. A. (2017). Resiliency and quality of life trajectories after injury. *Journal of Trauma and Acute Care Surgery*, 82, 939–945. https://doi.org/10.1097/ TA.0000000000001415
- Ziadni, M. S., Patterson, C. A., Pulgarón, E. R., Robinson, M. R., & Barakat, L. P. (2011). Health-related quality of life and adaptive behaviors of adolescents with sickle cell disease: Stress processing moderators. *Journal of Clinical Psychology in Medical Settings*, 18(4), 335–344.

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