



# Resilience of individuals with chronic illness who reside in low resource communities: a concept analysis

Tara Leigh Moore

Endicott College, Beverly, MA, USA

## ARTICLE INFO

### Keywords:

Concept analysis  
Chronic illness  
Low resource communities  
Poverty  
Resilience

## ABSTRACT

**Background:** Chronic illness diagnosis while living in low resourced communities creates ongoing adversity in the process of adaptation. Resilience is an important phenomenon of study to improve health outcomes. The subject in this particular population has been poorly studied.

**Objective:** To conceptualize resilience of individuals with chronic illness who reside in low resource communities.

**Design:** Concept analysis

**Data sources:** Seminal works and current studies were searched in PubMed (including Medline), Science Direct, the Cumulative Index to Nursing and Allied Health Literature (CINAHL), ProQuest, Google Scholar, OVID, Ebsco, and the Cochrane Database. Qualitative and quantitative studies that investigated individual resilience of adults in the setting of chronic illness who reside in low resource communities were included. Exclusions included children with chronic illness and resilience of communities and populations.

**Methods:** Walker and Avant's method of concept analysis was utilized. The key elements for conceptualizing resilience in the setting of chronic illness who reside in low resource communities included defining attributes, antecedents and consequences of resilience identified from the literature search.

**Results:** Analysis revealed three defining attributes: (1) reflection, contemplation, and the will to live despite adversity through hope; (2) personal transcendence through action; and (3) continuous personal transcendence and maintenance. Antecedents and consequences of resilience in the setting of chronic illness who reside in low resource communities were described and outlined.

**Conclusions:** The conceptualization of resilience in the setting of chronic illness who reside in low resource communities is based on the defining attributes, antecedents, and consequences that resulted in a preliminary conceptual model. The model can be further tested in diverse populations to add to the existing knowledge on the subject, and develop interventions to foster resilience aimed to improve health outcomes and quality of life.

## 1. Introduction

Chronic illness is defined as three or more months of illness, and tends to be on a long term basis derived from physical, genetic, environmental, and or behavioral ailments that include periods of improvement and exacerbations (Kim et al., 2018; World Health Organization (The World Health Organization, 2023)). Chronic illness continues to increase worldwide with heart disease, cancer,

E-mail address: [Tmoor689@mail.endicott.edu](mailto:Tmoor689@mail.endicott.edu).

<https://doi.org/10.1016/j.ijnsa.2024.100215>

Received 7 January 2024; Received in revised form 1 June 2024; Accepted 5 June 2024

Available online 8 June 2024

2666-142X/© 2024 The Author(s). Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

chronic respiratory disease, hypertension, and diabetes as the leading causes of death, disability, and suffering (The World Health Organization, 2023). According to the The World Health Organization, 2023, 41 million people die each year as a result of chronic illness. Of those, 77 percent reside in low to middle income countries. Chronic illness is linked to repeated stress that threatens the health, wellbeing, and future welfare of the individual affected (Kim et al., 2019). Benavidez et al.(2024), estimates that many people suffer from two or more types of chronic illness, and that residents living in less affluent socioeconomic geographical areas are at higher risk for poor health outcomes as a consequence of a variety of factors. A low-resource community has a state of deprivation (Kim et al. 2019). Examples of deprivation include lack of housing, medical care, medication, equipment, supplies, food, and water. In individuals, this may be caused by a lack of the usual or socially acceptable amount of material possession (United States Census Bureau, 2020). Given the statistics, understanding ways to improve health outcomes among low resource communities with chronic illness is imperative. One aspect of research focuses on the process of resilience. Because resilience is so strongly linked to a better illness trajectory preventing poor health outcomes, building resilience in individuals who live in low-resource communities can help to overcome crisis, and work to strengthen endurance and positive adaptation (Kim et al., 2018; Robinson et al., 2019; Sturmberg et al., 2019). However, the meaning of individual resilience remains elusive and requires further study (Morse et al., 2021).

Historical perspectives of resilience research and theoretical ideas have been scattered and non-committal. One known constant is that higher levels of resilience in the setting of chronic illness has been linked to improved quality of life, and wellbeing through a process of personal transcendence enhanced by external support (Garcia Dia et al., 2013; Luo et al., 2020; Morse et al., 2021; Niitsu et al., 2017; Scoloveno, 2016). Extant seminal and recent works on resilience in the setting of chronic illness clarifies the understanding

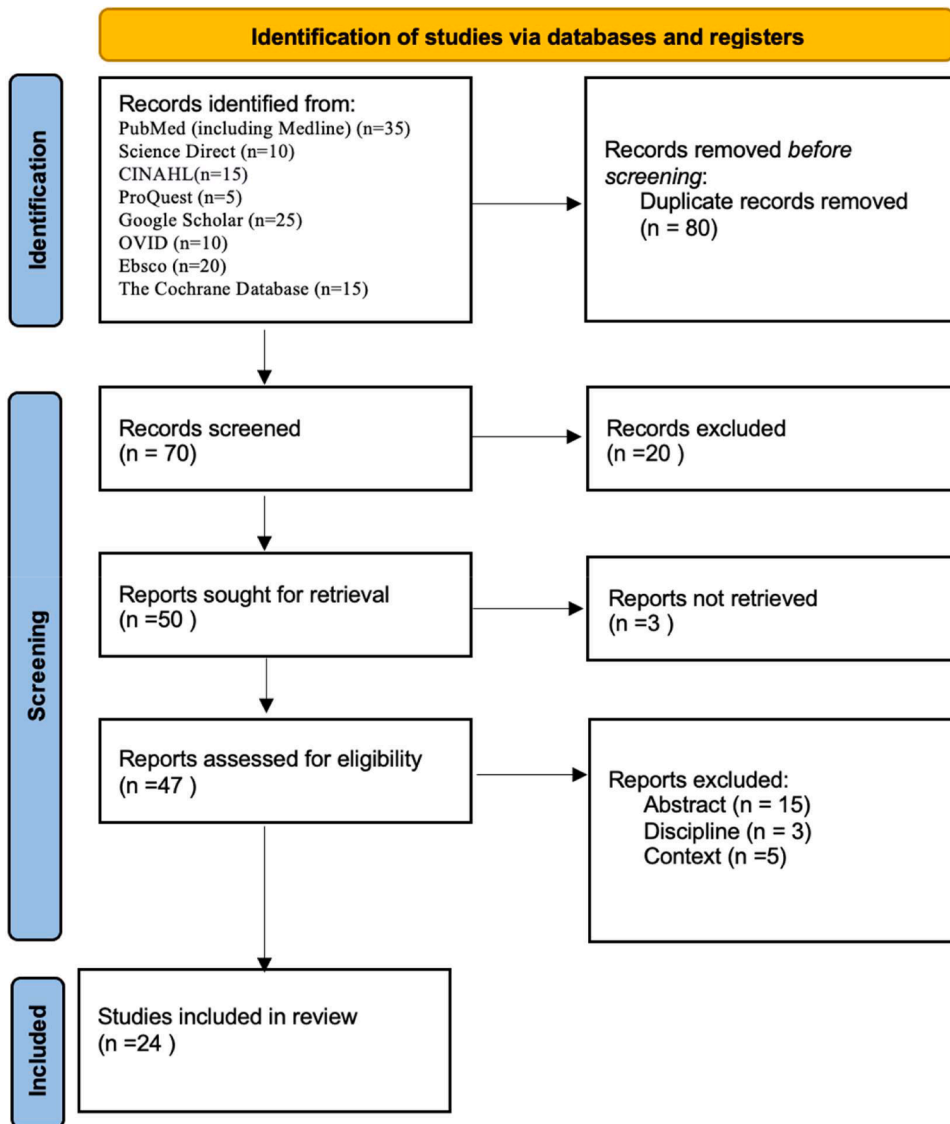


Fig. 1. PRISMA flow diagram.

of the phenomenon of personal transcendence toward higher levels of resilience in a variety of different situations (Bolton et al., 2016; Kim et al., 2018; Luo et al., 2020; Moore, 2023; Morse et al., 2021). The focus of this process is complex, and changes based on individual circumstance. Subsequently, individual resilience including adaptation, perseverance, and endurance continues to be vague. In the midst of resilience of individuals with chronic illness living in low resourced communities, little is known about personal transcendence, adaptation, and the development of protective resilient factors. Understanding conceptual meanings of resilience in this specific context is especially important for vulnerable individuals to elucidate its meaning and application to enhance protective resilience.

## 2. Methods

### 2.1. Research design

This paper draws on a recognized concept analysis method (Walker and Avant, 2005) to conceptualize resilience in adults with chronic illness who reside in low resource communities. The method follows eight steps: (1) select a concept: resilience was selected as the concept for analysis in this paper; (2) determine the purpose of analysis: the aim of this paper was to conceptualize resilience in adults with chronic illness who reside in low resource communities; (3) identify possible uses of the concept: definitions and uses of resilience were scoped from various sources to reduce potential bias in understanding; (4) determine the defining attributes: characteristics that are the most frequently associated with the concept of resilience in adults with chronic illness who reside in low resource communities were identified; (5) construct a model case: an example of resilience that encompasses all the defining attributes was developed to enhance the understanding of resilience attributes; (6) construct additional cases: three additional cases (borderline,

**Table 1**

Final group of journal articles and seminal works of resilience selected for data analysis.

Author	Year	Title
Bandura	1977	Social learning theory
Block & Kremen	1996	IQ and ego-resiliency: Conceptual and empirical connections and separateness
Bolton, K. W., Praetorius, R. T., & Smith-Osborne, A.	2016	Resilience protective factors in an older adult population: A qualitative interpretive meta-synthesis
Bonanno, G.A.	2004	Loss, trauma, and human resilience: have we underestimated the human capacity to thrive after extremely aversive events?
Deci, E. L., & Ryan, R. M.	2012	Self-determination theory
Garcia-Dia, M., DiNapoli, J. M., Garcia-Ona, L., Jakubowski, R., & O'Flaherty, D.	2013	Concept analysis: Resilience
Haase J. E.	2004	The adolescent resilience model as a guide to interventions
Jaiswal, J., Singer, S. N., & Lekas, H. M.	2020	Resilience and beliefs in the effectiveness of current antiretroviral therapies among recently disengaged low-income people of color living with HIV
Kim, G. M., Lim, J.Y., Kim, E.J., & Park, S.	2018	Resilience of patients with chronic diseases: A systematic review
Lazarus, R. S., & Folkman, S.	1984	Stress, appraisal, and coping
Luo, D., Eicher, M., & White, K	2020	Individual resilience in adult cancer care: A concept analysis
McElroy-Heltzel, S. E., Shannonhouse, L. R., Davis, E. B., Lemke, A. W., Mize, M. C., Aten, J., Fullen, M. C., Hook, J. N., Van Tongeren, D. R., Davis, D. E., & Miskis, C.	2022	Resource loss and mental health during COVID-19: Psychosocial protective factors among U.S. older adults and those with chronic disease
Moore T. L.	2023	The lived experience and meaning of resilience in the setting of chronic illness and low- resource communities of African Americans that reside in Tallahatchie County, Mississippi.
Morse, J. M., Kent-Marvick, J., Barry, L. A., Harvey, J., Okang, E. N., Rudd, E. A., Wang, C. Y., & Williams, M. R.	2021	Developing the Resilience Framework for Nursing and Healthcare
Niitsu, K., Houfek, J. F., Barron, C. R., Stoltenberg, K. A., Kupzyk, K. A., & Rice, M. J	2017	A concept analysis of resilience integrating genetics
Polk, L. V.	1997	Toward a middle-range theory of resilience
Qiao, S., Ingram, L., Morgan, D., Xiaoming, L., & Weissman, S. B.	2019	Resilience resources among African American women living with HIV in southern United States
Robinson, M., Hanna, E., Raine, G., & Robertson, S.	2019	Extending the comfort zone: Building resilience in older people with long term conditions
Rutter M	2012	Resilience as a dynamic concept
Scoloveno, R	2016	A concept analysis of the phenomenon of resilience
Shankar, S., Gogosis, E., Palepu, A., Gadermann, A. M., & Hwang, S. W.	2019	"I Haven't Given Up and I'm Not Gonna": A Phenomenographic Exploration of Resilience Among Individuals Experiencing Homelessness
Southwick, S. M., & Charney, D. S	2012	The science of resilience: implications for the prevention and treatment of depression
Sturmborg, J. P., Picard, M., Aron, D. C., Bennett, J. M., Bircher, J., deHaven, M. J., Gijzel, S., Heng, H. H., Marcum, J. A., Martin, C. M., Miles, A., Peterson, C. L., Rohleder, N., Walker, C., Olde Rikkert, M., & Melis, R	2019	Health and disease-emergent states resulting from adaptive social and biological network interactions
Van Wilder, L., Pype, P., Mertens, F., Rammant, E., Clays, E., Devleeschauwer, B., Boeckxstaens, P., & De Smedt, D	2021	Living with a chronic disease: insights from patients with a low socioeconomic status

related and contrary cases) were developed in this paper, aiming to better differentiate similar phenomena or concepts from resilience. A borderline case refers to an instance that contains some of the defining attributes of resilience. A related case is an example of a concept that is related to resilience but does not encompass any defining attributes. A contrary case is an instance of something that is not resilience; (7) identify antecedents and consequences: events that take place prior to the occurrence of resilience and those proving to be outcomes of resilience were determined; (8) define empirical referents: empirical referents, which refers to empirical measures of resilience, were reviewed based on literature at the final stage of this concept analysis. There were no human subjects in the study and ethical approval was not required.

## 2.2. Data collection

A literature review was conducted by searching to identify relevant studies for step three to eight of concept analysis method. For the third step search terms “Resilience”, “chronic disease”, “perseverance”, “disease cost”, “stress”, “illness”, “historical background of resilience”, “lifestyle”, and “theory/models of resilience” were combined using Boolean operator and dictionary terms for definitions of resilience (Fig. 1). Only original peer reviewed qualitative and quantitative research articles published in English were considered for review. Seminal and current up to date works including individual resilience were searched focusing on the specific aspects of the process of resilience in the setting of adults with chronic illness, and studies that included living with chronic illness, and low resourced communities from an individual’s perspective (Table 1). Exclusion criteria included children with chronic illness, and literature that focused on community or population resilience.

For the fourth and seventh step, resources explored conceptual subjective and objective meanings of resilience in the setting of chronic illness by searching concept analysis including the terms “antecedents”, “defining attributes”, and “consequences of resilience”, meta- analysis, systematic reviews and phenomenological studies combined with “low resilience communities”, “poverty”, “homelessness”, and “economically disadvantaged individuals and communities”. The fifth and sixth steps involved development of four types of cases, which were generated from qualitative and phenomenological studies and clinical experience. The case studies are fictional. For the empirical review, search terms including “resilience”, “chronic illness”, “measurements”, “scales” were combined to review measurement methods of resilience in the setting of chronic illness and low resource communities.

## 3. Data analysis

This paper draws on a recognized concept analysis method (Walker and Avant, 2005) to conceptualize resilience in adults with chronic illness who reside in low resource communities. The method follows eight steps: (1) select a concept: resilience was selected as the concept for analysis in this paper; (2) determine the purpose of analysis: the aim of this paper was to conceptualize resilience in adults with chronic illness who reside in low resource communities; (3) identify possible uses of the concept: definitions and uses of resilience were scoped from various sources to reduce potential bias in understanding; (4) determine the defining attributes: characteristics that are the most frequently associated with the concept of resilience in adults with chronic illness who reside in low resource communities were identified; (5) construct a model case: an example of resilience that encompasses all the defining attributes was developed to enhance the understanding of resilience attributes; (6) construct additional cases: three additional cases (borderline, related and contrary cases) were developed in this paper, aiming to better differentiate similar phenomena or concepts from resilience. A borderline case refers to an instance that contains some of the defining attributes of resilience. A related case is an example of a concept that is related to resilience but does not encompass any defining attributes. A contrary case is an instance of something that is not resilience; (7) identify antecedents and consequences: events that take place prior to the occurrence of resilience and those proving to be outcomes of resilience were determined; (8) define empirical referents: empirical referents, which refers to empirical measures of resilience, were reviewed based on literature at the final stage of this concept analysis.

## 4. Findings

### 4.1. Step 3: Uses of the concept: past theoretical and operational definitions of resilience

The term resilience can be broken down into the following areas: biological, psychological, emotional, social, and spiritual (Edward, 2013). Past seminal sociology and psychology scholarly works that describe the processes of resilience by way of personal transcendence are derived from self-efficacy (Bandura, 1977), coping (Lazarus and Folkman, 1984), ego resiliency (Block and Kremen, 1996), neuroplasticity (Southwick and Charney, 2012), self-determination (Deci and Ryan, 2012), and development of protective factors of resilience (Bolton et al., 2016).

Nursing theoretical perspectives include Polk’s Resilience Theory, a middle range theory that focuses on the development of patterns of resilience. Patterns include the areas of dispositional, relational, situational, and philosophical to ultimately form resilience (Polk, 1997). Polk’s theory includes the seminal works of nursing theorists Margaret Newman and Martha Rogers. Polk (1997) defines resilience as the journey an individual takes as a response to illness, and its manifestations by way of energy, rhythms and movement. The outcome of resilience is the synergistic balance between the patterns of an individual’s interactions within their environment.

Haase (2004) developed *The Adolescent Resilience Model (ARM)*. The model is based on the lived experience, and process of resilience of adolescents diagnosed with cancer. This process is subjective to the individual, and follows the individual from the point of diagnosis all throughout the illness. Throughout this process a constant exists that is adversity, which also serves as an antecedent to resilience. Haase (2004) makes an important point relating to chronic illness which posits during times of uncertainty and ambiguity

levels of resilience are low. Predictable scenarios during chronic illness impact an individual's response to the experience. These include emotional and physical sources of adversity often seen in chronic illness that can alter the course of levels of resilience. In contrast, positive aspects existing in one's life can enhance resilience and bolster protective factors. Haase (2004) asserts the outcome of resilience includes personal transcendence of oneself during the cancer experience, and is based on aspects that strengthen the "self" including confidence, esteem and worth, healing, connection to others, and ultimately produces a validation and purpose of one's own existence.

Strengthening the "self" can enhance protective resilience by instilling a positive outlook toward a hopeful future that offsets despair (Edward et al., 2009). According to Edward (2013), resilience is demonstrated by possessing the ability to adjust and resist stress while facing adversity, potentially even thriving in the process. From a nursing perspective, this virtue and capability is important to foster resilience toward improved health outcomes. In 2010, Szanton and Gill developed the *Society-to-Cells Resilience Theory*. The theory posits that every person is unique and differs in their reactions to adversity. The process of resilience depends on the person's level of resistance to a health challenge, recovery, and rebounding process to achieve a higher level of functioning prior to the challenge. According to Szanton & Gill (2010), the process of resilience can be measured as an outcome through a constant process of adaptation. Past nursing concept analysis has focused on specific personal attributes and constructs that influence psychological and biological resilience (Garcia Dia et al., 2013; Niitsu et al., 2017; Scoloveno, 2016).

Recently, Morse et al. (2021) developed *The Resilience Framework for Nursing and Healthcare*, and asserts that different levels of resilience exist as a result of personalized coping strategies that include the areas of protective, compensatory, and specific challenge situations to recover, recalibrate and readjust toward resilience and health attainment (Morse et al., 2021). Enhanced abilities to adjust and recalibrate psychological distress levels, and functioning performance within one's environment is significant in the process of adaptation and personal transcendence in the setting of colorectal cancer (Luo et al., 2020). Luo et al. (2023) *Model of Resilience in Adults with Colorectal Cancer* reveals the ingredients of personal transcendence: motivation, normalcy, ongoing personal adaptation, external connections, and redefinition of the self. To date, there are no studies that have developed a conceptual model of the process of personal transcendence and resilience of individuals with chronic illness living in low resourced communities.

**Table 2**  
Defining attributes of resilience.

Defining Attributes of Resilience
Reflection, contemplation, and the will to live despite adversity through hope
<ul style="list-style-type: none"> <li>The will to survive and live (Jaiswal et al., 2020)</li> <li>Hope for the future, and self-determination (Moore, 2023; Shankar et al., 2019)</li> <li>Self-determination includes the concept of self-worth, self-esteem, self-reliance, and social responsiveness which serve to strengthen endurance and perseverance (Deci and Ryan, 2012; Haase et al., 2004; Luo et al., 2023; Scoloveno, 2016).</li> <li>Motivation as a precursor to self-determination (Moore, 2023)</li> <li>Adjustment of attitudes that strengthen aspects of the self (Moore, 2023)</li> <li>Being hopeful toward the future (Moore, 2023)</li> <li>A sense of empowerment toward future health goals aimed to enjoy aspects of life pleasurable to the individual (Moore, 2023)</li> </ul>
Personal transcendence through attributes and action
<ul style="list-style-type: none"> <li>Foundational coping mechanisms (Bandura, 1977; Block and Kremen, 1996; Bonanno, 2004; Lazarus and Folkman, 1984; Robinson et al., 2019; Rutter, 2012; Sturmberg et al., 2019).</li> <li>Personal strengths and dispositions to cope (McElroy-Heltzel et al., 2022).</li> <li>Acceptance of self and the chronic illness, followed by an early firm knowledge base of the diagnosis, realistic coping appraisal of stress associated with chronic illness, and positive perceptions of the self that include self-reassurance, responsibility towards self-care, self-efficacy, and endurance (Moore, 2023).</li> <li>The use of positive emotions such as being thankful for help and support, a sense of being content or proud of what they had overcome in life, knowing the limits of their body, and being able to decipher what they can and cannot do which gives a sense of empowerment through a process of careful consideration (Van Wilder et al., 2021).</li> <li>Personalized coping strategies (Van Wilder et al., 2021).</li> <li>The ability to positively express feelings and emotions in combination with external social support can enhance personal coping strategies and self-efficacy (Garcia-Dia et al., 2013; Niitsu et al., 2017; Scoloveno, 2016).</li> </ul>
Continual personal transcendence and maintenance
<ul style="list-style-type: none"> <li>Ego resiliency and the brain's ability to adapt to different situations is critical to personal transcendence (Block and Kremen, 1996; Garcia-Dia et al., 2013; Niitsu et al., 2017; Scoloveno, 2016; Southwick and Charney, 2012)</li> <li>Personal transcendence and experience allows the individual to view health circumstances, and put them into perspectives to gain control with a hopeful outlook for the future (Garcia-Dia et al., 2013; Qiao et al., 2019).</li> <li>Elucidation and understanding of the meaning of chronic illness empowers the individual and strengthens aspects of the self (such as self-esteem and confidence) (Moore 2023; Qiao et al. 2019).</li> <li>Aspects that strengthen the self and the ability to see the illness in a new light can also perpetuate new learning opportunities, and a desire to share experiences and new knowledge with others which in turn strengthens external bonds (Moore, 2023).</li> <li>Realistic situational appraisal, and the ability to look ahead to perceive threats to one's health prior to planning positive changes for the future (Moore, 2023).</li> <li>Specific actions taken by an individual can include health care compliance, recognition of, and constant vigilance against potential negative effects on health, and the ability to adjust actions to improve and maintain health and personal circumstances (Moore, 2023).</li> <li>External support is key to maintaining optimal health and ego resilience through strong personal relationships, partnering with healthcare providers, and community bonds (Moore, 2023).</li> </ul>

## 5. Concept description and model

### 5.1. Step 4: defining attributes of resilience

In the setting of chronic illness and low resource communities, defining attributes of resilience can be viewed as a process that includes (a) reflection, contemplation, the will to live despite adversity through hope, (b) personal transcendence through action, and (c) continual personal transcendence and maintenance (Table 2).

### 5.2. Reflection, contemplation, and the will to live despite adversity through hope

Reflection of the past, present, and future is often the beginning stage of resilience, and leads to an action toward a goal that is often times based on the will to survive and live (Jaiswal et al., 2020), hope for the future, and self-determination (Moore, 2023; Shankar et al., 2019). Scholars assert that self-determination is a core component in the ability to assert one's own will, and in the process of making decisions derived from a combination of self-confidence and social interactions (Deci and Ryan, 2012). Self-determination includes the concept of self-worth, self-esteem, self-reliance, and social responsiveness which serve to strengthen endurance and perseverance (Deci and Ryan, 2012; Haase et al., 2004; Luo et al., 2023; Scoloveno, 2016). This process assists the individual to contemplate how to cope with ongoing challenges and adversity.

Resilience was studied by Shankar et al. (2019) who conducted a phenomenological inquiry using qualitative interviews of 22 homeless individuals, and those living in vulnerable housing in Vancouver, Canada to explore the concept, experience, and meaning of resilience from both a positive and negative perspective. Results showed the following theme: staying strong and sustaining positive beliefs. Within this theme were sub-themes: the will to live by determination, and surviving on a day-to-day basis looking forward to another day through hope. Similarly, reflection on one's own circumstance can be powerful in moving forward and not giving up. Jaiswal et al. (2020) assert that a sense of self-determination is key in the process of attaining resilience, and that individuals with the will to survive despite ongoing adversity is strong.

A recent phenomenological study completed by Moore (2023) found that specific aspects significant in the process of self-determination is motivation. Motivation was derived from incentives based on relationships and key aspects of the self. These include a sense of duty to others who are valued by the individual, and wanting to maintain those relationships. Adjustment of attitudes by focusing on good times, and not dwelling on negative thoughts enhanced and strengthened aspects of the self. Being hopeful toward the future was significant in determining thoughts and actions toward coping appraisal, and the development of strategies which in turn enhanced empowerment toward future health goals aimed to enjoy aspects of life pleasurable to the individual (Moore, 2023). Developing awareness of personal coping appraisal and coping mechanisms to counteract emotional and physical distress leads to personal transcendence. Nurses and healthcare providers can offer support to individuals at this stage to encourage reflection, contemplation, realistic appraisal, and nurturing of the self.

### 5.3. Personal transcendence through action

Seminal scholars assert foundational coping mechanisms using cognitive and behavioral methods are based on perceptions and coping appraisal to determine which course of action is required to decrease psychological and social risk factors (Bandura, 1977; Block and Kremen, 1996; Bonanno, 2004; Lazarus and Folkman, 1984; Robinson et al., 2019; Rutter, 2012; Sturmberg et al., 2019). Intrinsic personality traits as a product of internal and external factors play a role in developing resilient outcomes that enhance coping appraisal and coping strategies, which are often based on personal strengths and dispositions to cope (McElroy-Heltzel et al., 2022).

**Table 3**

Antecedents to and Consequences of resilience.

Antecedents and Consequences
Antecedents
<ul style="list-style-type: none"> <li>Adversity that is either psychologically or physically traumatic (Garcia Dia et al., 2013; Haase et al., 2004; Niitsu et al., 2017; Scoloveno, 2016).</li> <li>Emotions such as feelings of being overwhelmed, stressed, difficulty coping, depression, anxiety, being fearful, apprehensive, apathetic or doubtful are also antecedents to resilience and coping appraisal and formulation of coping mechanisms (Moore, 2023)</li> <li>Multiple factors impacting antecedents (Fahlberg et al. 2020; Jaiswal et al., 2020; Szanton et al., 2014).</li> <li>Reflection of the past and elucidation of illness can be a precursor to optimism and hope that focus on future health goals (Moore, 2023).</li> </ul>
Consequences
<ul style="list-style-type: none"> <li>The ability to realistically appraise chronic illness situations, and problem solve resulting in ongoing, effective coping mechanisms during times of adversity (Garcia Dia et al., 2013; Niitsu et al., 2017; Scoloveno, 2016)</li> <li>Redefining oneself by strengthening the self (esteem, worth, and determination), portraying growth and mastery over the illness (Qiao et al. 2019),</li> <li>Viewing the illness as an opportunity and not as a burden, positive meaning of one's own existence and place in the world, and valued meaningful connections with others (Garcia Dia et al., 2013; Haase et al., 2004; Luo et al., 2022; Moore, 2023; Scoloveno, 2016).</li> <li>Maintaining collaborative relationships with others to draw strength and ongoing support, reflection and planning goals toward a hopeful future, achieving self-efficacy, personal growth, endurance, and perseverance throughout the chronic illness experience are others (Moore, 2023).</li> <li>Outcomes of resilience can be measured using psychometrically validated instruments in the areas of level of psychological distress, personal coping abilities, health related quality of life, and mastery (Lim et al., 2022; Luo et al., 2020; Van Wilder, 2021)</li> </ul>

Table 3 depicts antecedents to and consequences of resilience.

These include acceptance of self and the diagnosis of chronic illness, followed by an early firm knowledge base of the diagnosis, realistic coping appraisal of stress associated with chronic illness, and positive perceptions of the self that include self-reassurance, responsibility towards self-care, self-efficacy, and endurance (Moore, 2023). Additional enhancements to strengthen the self-include positive emotions such as being thankful for help and support, a sense of being content or proud of what they had overcome in life, knowing the limits of their body, and being able to decipher what they can and cannot do which gives a sense of empowerment through a process of careful consideration (Van Wilder et al., 2021).

Van Wilder et al. (2021) assert that distractions and simple activities of enjoyment to keep the mind occupied, and talking to others about the illness are helpful coping strategies. Additional coping strategies include perseverance (keep fighting and never losing spirit), reflecting on others who are worse off, and putting their own situation into perspective (Moore, 2023; Van Wilder et al., 2021). Past nursing concept analysis identify the ability to positively express feelings and emotions in combination with external social support can enhance personal coping strategies and self-efficacy (Garcia-Dia et al., 2013; Niitsu et al., 2017; Scoloveno, 2016). This process is important to understanding the mechanisms of personal transcendence and maintenance. Nurses and healthcare providers should be aware of personal individual strengths and coping strategies to assist in the process of self-transcendence toward developing protective resilience with tailored interventions.

#### 5.4. Continual personal transcendence and maintenance

Scholars identify that ego resiliency and the brain's ability to adapt to different situations is critical to personal transcendence (Block and Kremen, 1996; Garcia-Dia et al., 2013; Niitsu et al., 2017; Scoloveno, 2016; Southwick and Charney, 2012). Personal transcendence allows the individual to view health circumstances, and put them into perspectives to gain control with a hopeful outlook for the future (Garcia-Dia et al., 2013; Qiao et al., 2019). Important aspects to consider in this process include elucidation of the meaning of the illness to the individual from the onset of diagnosis, and all throughout the illness. When the individual is able to view the illness in a new positive light it may empower the individual and strengthen aspects of the self (such as self-esteem and confidence) (Moore 2023; Qiao et al. 2019). This new view point can also perpetuate learning opportunities, and a desire to share experiences and new knowledge with others which in turn strengthens external bonds (Moore, 2023). Moore (2023) asserts that ego resiliency is based on realistic situational appraisal, and the ability to look ahead to perceive threats to one's health prior to planning positive changes for the future. Specific actions taken by an individual can include health care compliance, recognition of, and constant vigilance against potential negative effects on health, and the ability to adjust actions to improve and maintain health, and personal circumstances. External support is key to maintaining optimal health and ego resilience through strong personal relationships, partnering with healthcare providers, and community bonds (Moore, 2023). Nurses and healthcare providers can be instrumental in assisting individuals maintain optimal health and protective resilient factors toward improving health outcomes.

Table 2 depicts defining attributes of resilience

#### 5.5. Step 5: cases of resilience

##### 5.5.1. Model case

Daniel is a 25-year-old male who was diagnosed with type 1 diabetes at age 10, and currently resides in a poor section of New York City. He lost his mother early in his life due to a drug overdose. After his mother passed away Daniel went to live with a cousin, and had many odd jobs after graduating from high school. He continued to struggle with his diabetes, and became depressed. This became worse after his cousin lost his apartment due to selling drugs, and a subsequent incarceration in prison. Daniel also struggled with drug addiction himself, and became apathetic to his life circumstances. Daniel had difficulty living on the streets, and ended up in a homeless shelter. While at the homeless shelter, Daniel met a woman named Kim who also had diabetes, and they became friends. Kim shared her experience, and Daniel started reflecting and talking about his past experiences. Daniel stated he was so depressed and discouraged, but that he wanted to live (reflection, contemplation, and the will to live despite adversity). Daniel hoped that his situation would continue to improve, and was thankful he had a safe and warm place to stay. Daniel was also able to receive medical care through the homeless shelter to control his type 1 diabetes, which improved drastically as a result. Daniel continued to be compliant with his healthcare by taking his medications, and following his providers guidance (personal transcendence through action). Daniel and Kim became close, and great supporters of each other. Daniel even got interested in learning how to play the guitar, and got a job at the local grocery store. One day, Daniel was approached to speak to youth struggling with drug addiction about his experience, which he did (personal transcendence through action). As Daniel's health improved, he was able to obtain stable low-income housing which he shared with Kim. Daniel began to see his illness in a new light, and realized how much better he felt (continual personal transcendence and maintenance). This propelled him to become an advocate for youth struggling with addiction, chronic illness, and homelessness. Daniel also started taking classes at a local college. Daniel now views a bright future for himself, and is planning on asking Kim to marry him to build a new life. Daniel continues to be compliant with his medical therapy, and follows regularly with his diabetes specialist (continual personal transcendence and maintenance).

#### 5.6. Step 6: Construct additional cases

##### 5.6.1. Borderline case

Mary is a 65-year-old female with hypertension, and coronary artery disease who resides in rural residential low-income housing. In the past, Mary has been very reluctant to follow with her healthcare providers, and now has been taking her medications

sporadically. One day, Mary started experiencing intermittent, exertional chest pain, and thought it may be related to her stopping her medications. Mary admits to sometimes feeling depressed and indifferent toward her life, but acknowledges the need to be medically compliant because she wants to live (reflection, contemplation, and the will to live despite adversity). Mary decides to call her cardiologist, and make an appointment for the chest pain. Mary is scheduled for a stress test and electrocardiogram, and starts taking her medication regularly (personal transcendence through action).

#### 5.6.2. Related case

Paul is a 39-year-old male who has been diagnosed with type 2 diabetes, hypertension, and obesity. Paul works for his town which is a rural low resourced community. Paul realizes that a poor diet may be contributing to his elevated hemoglobin A1C and blood pressure as he works frequently, and often consumes fast food due to time constraints (reflection, contemplation). Paul has been educated by a healthcare provider about diet, exercise, and medical treatment. However, Paul has difficulty paying for the cost of his medications, and often skips doses as a result. Occasionally, Paul asks for free samples of medications from his healthcare provider, and the local food bank for access to healthier food such as fresh fruit and vegetables (personal transcendence through action), but feels ashamed and often reverts back to his fast-food diet.

#### 5.6.3. Contrary case

Veronica is a 34-year-old female who resides in rural low-income housing by herself. She has a diagnosis of type 1 diabetes (diagnosed age 8), end stage renal disease on dialysis, anxiety, and depression who was involved in a motor vehicle accident at age 18 which left her with severe, chronic lower back pain. Subsequently, Veronica is on high dose pain medications. Recently, Veronica developed shortness of breath and chest pain. Veronica was diagnosed with cardiomyopathy verified by an echocardiogram. It was recommended by her cardiologist that she undergo a cardiac catheterization to assess for coronary artery disease. Veronica had a difficult time accepting this potential additional diagnosis, and attempted suicide by overdose of oxycontin. Veronica was found by a friend and given naran in the field. Veronica was monitored in the hospital, and continues to deny that she has cardiomyopathy. Veronica remains adamant, and constantly asks for additional pain medications despite her recent suicide attempt. Veronica becomes very angry with her providers when she does not get additional pain medication.

### 5.7. Step 7: Identify antecedents and consequences

#### 5.7.1. Antecedents to and consequences of resilience (Table 3)

##### Antecedents

Scholars have identified antecedents to resilience in the setting of chronic illness as adversity that is either psychologically or physically traumatic (Garcia Dia et al., 2013; Haase et al., 2004; Niitsu et al., 2017; Scoloveno, 2016). Emotions such as feelings of being overwhelmed, stressed, difficulty coping, depression, anxiety, being fearful, apprehensive, apathetic or doubtful are also antecedents to resilience (Moore, 2023). Additional factors impacting antecedents in low resourced communities include social determinants of health, rapid urbanization, growing inequality, concentrated and chronic poverty, un(der)-employment, gang and police violence, political crises, terrorist attacks, war, lack of insurance, illness stigma, inadequate or unstable housing, traumatic life events, natural disasters, mental health conditions, and chronic physical health conditions (Fahlberg et al. 2020; Jaiswal et al., 2020; Szanton et al., 2014). In comparison, reflection of the past and elucidation of illness can be a precursor to optimism and hope that focus on future health goals (Moore, 2023).

#### 5.7.2. Consequences

Consequences of resilience result from personal transcendence, and the ability to realistically appraise chronic illness situations, and problem solve resulting in ongoing, effective coping mechanisms during times of adversity (Garcia Dia et al., 2013; Niitsu et al., 2017; Scoloveno, 2016). Additional consequences include: redefining oneself by strengthening the self (esteem, worth, and determination), portraying growth and mastery over the illness (Qiao et al. 2019), viewing the illness as an opportunity and not as a burden, positive meaning of one's own existence and place in the world, and valued meaningful connections with others (Garcia Dia et al., 2013; Haase et al., 2004; Luo et al., 2023; Moore, 2023; Scoloveno, 2016). Moreover, maintaining collaborative relationships with others to draw strength and ongoing support, reflection and planning goals toward a hopeful future, achieving self-efficacy, endurance, and perseverance throughout the chronic illness experience are others (Moore, 2023). Outcomes of resilience can be measured using psychometrically validated instruments (Luo et al., 2020; Terrana and Al-Delaimy, 2023; Van Wilder, 2021; Wagnild, 2009).

### 5.8. Step 8: define empirical referents

#### 5.8.1. Empirical referents

##### Individual psychological resilience

Wagnild and Young (1993) developed and later modified the Resilience Scale 25 (RS 25), which consists of 25 items focusing on aspects of individual resilience. These include purpose and meaning in life, equanimity (balance in one's life), self-reliance, perseverance, independence, and existential aloneness (directing one's own life and acceptance of personal circumstances) (Wagnild, 2009). The Resilience Scale 25 (RS 25) has been used extensively in a variety of ages in diverse populations (Wagnild, 2009).

Konaszewski et al. (2021), developed a polish language version of the Resilience Scale 25 (RS 25). Through a series of 4 studies, Konaszewski et al. (2021) compared the Resilience Scale 25 to specific topics including ego resiliency, risk of depression, coping styles



in response to stress, perceived stress, and life satisfaction. Results revealed that resilience was positively correlated to ego resiliency, personalized task oriented coping styles in response to stress, and life satisfaction (Konaszewski et al., 2021). Resilience was negatively correlated to perceived stress, risk of depression, and emotional oriented coping style (Konaszewski et al., 2021). The Resilience Scale 25 (RS 25) is a useful tool in distinguishing important dimensions of individual resilience.

### 5.8.2. Outcomes and psychological well-being

Diverse examples of measuring resilience exist in the areas of general resilience, protective factors of resilience, trait resilient measures, and functional indicators of resilience (Terrana and Al-Delaimy, 2023). Scales based on cross cultural promotive and protective factors of resilience predict better health outcomes (Patel and Goodman, 2007). Terrana & Al-Delaimy (2023) identified two scales that best portray these variables. The Connor–Davidson Resilience Scale (CD-RISC), and the Child–Youth and Resilience Measure (CYRM) with its adult counterpart, the Adult Resilience Scale (RRC-ARM) (Liebenberg and Moore, 2018). The CD-RISC, developed by Connor and Davison (2003) measures stress coping ability based on personal competence, tolerance, acceptance, ability to trust, relationships, control, and spiritual influences. Liebenberg et al. (2012) studied the CYRM across cultural contexts that focused on access to material resources, positive relationships, personal identity, and personal cultural meaningfulness to the individual. Clark and Jefferies (2023) studied resilience in the context of conflict-related sexual violence. The mixed methods study indicates that areas of interest important to the phenomenon of resilience can be modified using the RRC-ARM, and include the topics of broken and ruptured connectivity's (family and communities), supportive and sustaining connectivity, and new connectivity's (Clark and Jefferies, 2023). The CD-RISC and RRC-ARM can be useful in exploring how strengthening aspects of the self, and external connections can impact psychological well-being and health outcomes.

### 5.9. Conceptualization of individual resilience

The following analysis of defining attributes, antecedents, and consequences of resilience developed the proposed following conceptualization of individual resilience in the setting of chronic illness who live in low resourced communities: *Resilience is a process of personal transcendence through reflection and contemplation that leads to a planned action based on self-determination, strength, and hope aimed toward realistic coping appraisal and strategies often requiring external support. The outcome is a change in perspective and self-advocacy toward empowerment and self-care, positive meaning of one's own existence, and connectedness to others that produces mastery and control over one's own future.*

As seen in the schematic model (Fig. 2), the individual is diagnosed with a chronic illness, and faces adversity from a variety of sources. As the individual faces the adversity, reflection and contemplation occurs. As demonstrated in the model case, the individual faces many antecedents to resilience including the diagnosis of type 1 diabetes at a young age, loss of his mother, loss of stable housing, and drug addiction. Despite these struggles, the individual has the strong will to live through hope for the future. He reflects on, and contemplates his circumstance. An opportunity arises that provides stable housing and medical care, and he meets an individual important to him which gives him the external support to start the process of strengthening "the self". His journey continues toward positive adaptation and personal transcendence by demonstrated medical compliance and recovery (the scales start to tip toward resilience). He views his circumstances in a new light, and this gives him more incentive for continued medical compliance. Through a process of elucidation, he develops a sense of control over his own destiny, and makes plans for a bright future while helping and giving support to others who face similar circumstances to his own. He continues to maintain medical compliance, control over his life, and his destiny.

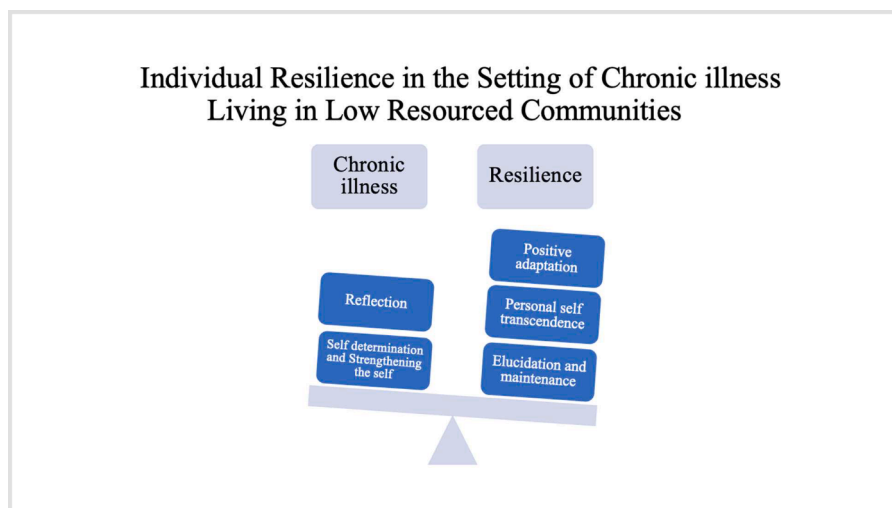


Fig. 2. Conceptualization of individual resilience in the setting of chronic illness living in low resourced communities.

A preliminary conceptual model of individual resilience was established based on this conceptualization (Fig. 2).

Fig. 2. Depicts the conceptualization of individual resilience in the setting of chronic illness living in low resourced communities

## 6. Discussion

This analysis conceptualized individual resilience in adults with chronic illness who live in low resourced communities by identifying antecedents, defining attributes, and consequences employing the Walker and Avant concept analysis method (Walker and Avant, 2005). The process can be appreciated as an ongoing personal journey an individual makes from the onset of chronic illness diagnosis throughout the illness. The process of individual resilience changes over time through the steps outlined in the model. The first step entails having the ability to reflect on one's own life, and see past current suffering with a hopeful outlook toward the future, which helps the individual move forward with personalized coping strategies to adapt.

A critical component of the process is the strong will to overcome the most difficult of circumstances as many challenges exist for this population (Fahlberg et al. 2020; Jaiswal et al., 2020; Szanton et al., 2014). Scholarly works conducted by Jaiswal et al. (2020), Moore (2023), and Shanker (2019), all assert that individuals are able to overcome their current circumstances based on a desire for an improvement in health and life circumstances. Often times, there is a motivation behind these desires which requires the individual to reflect and contemplate on life circumstances prior to making decisions toward the future. In the model, the scales begin to tip toward increased awareness, coping appraisal and strategies to help oneself. This type of process is well documented in past extant seminal works and current studies of resilience (Bandura, 1977; Block and Kremen, 1996; Bonanno, 2004; Lazarus and Folkman, 1984; McElroy-Heltzel et al., 2022; Moore, 2023; Robinson et al., 2019; Rutter, 2012; Sturmberg et al., 2019; Van Wilder et al., 2021). Resilience is subjective and as the model case demonstrates, often times requires external support to enhance. External support has been proven to be critical toward development of protective resilience, and even more critically important to vulnerable individuals and populations (Bolton et al., 2016; Luo et al., 2023). A significant finding is the ability to not view health circumstances as a burden, but see past the negative aspects of illness, and learn how to nurture the self toward empowerment. A sense of mastery over the illness increases resilience of the individual (Qiao et al., 2019). In other words, the key is not to let the illness overwhelm the individual to the point of incapacitation, but to become the master over the illness through a process. The sense of mastery gives the individual a greater sense of purpose, personal growth and meaning, and affirmation of the self. As demonstrated in the contrary case, without this ability the person is not able to function or cope with the illness, and develops a poor level of resilience. This is critical knowledge for nurses and healthcare providers who can assist individuals with chronic illness education and early interventions working toward enhancing protective resilience.

This is the first study synthesizing the antecedents, defining attributes, and consequences into a conceptualization of individual resilience in this unique population. Because resilience can be viewed as a unique existential phenomenon and subjective to the individual, further studies should focus on the process of personal transcendence in diverse cultures. It would be preferable to conduct longitudinal studies within low resourced communities to optimally understand the phenomenon. To further construct an operational definition of resilience, specific areas of interest include the process of personal transcendence: the meaning of chronic illness to the individual, maladaptation leading to increased low levels of resilience, antecedents to resilience, level of diagnosis knowledge, community bonds and level of support to the individual, realistic coping appraisal and strategies, elucidation of the illness toward gaining control, personal growth, and finally mastery. Once an operational definition can be established, specific measures of resilience tailored to an individual can occur. Nursing and healthcare provider interventions can be based on an operational definition aimed toward improving protective levels of resilience, health outcomes, and quality of life.

## 7. Limitations

There are limitations in this analysis. One researcher is conducting the analysis. The researcher resides in an affluent part of the United States, and does not have first-hand experience living in a low resourced community. These factors increase the likelihood of personal bias and a lack of understanding of the phenomenon as a whole. As new research is developed, the meaning and applicability of resilience in adults with chronic illness in the setting of low resourced communities will change over time, increasing the chance of different viewpoints on the subject in the future (Waker and Avant, 2005). Despite the bias and limitations, this concept analysis adds to the current knowledge of general resilience and creates new knowledge specifically to those adults with chronic illness living in low resourced communities.

## 8. Implications for practice

By understanding a deeper meaning of the process of personal transcendence and resilience in this particular context, nurses and healthcare providers can base specific interventions in diverse populations on the preliminary model.

## 9. Conclusion

The concept clarification may enhance health professionals' understanding of the phenomenon of personal transcendence, and the desired outcome of protective factors of resilience, personal growth and mastery. This can be useful to nurses and healthcare providers enhancing positive resilience. Resilience is accomplished by some and not others. Therefore, further studies should be conducted to create a greater understanding of the phenomenon.

## CRediT authorship contribution statement

**Tara Leigh Moore:** Writing – review & editing, Writing – original draft, Methodology, Formal analysis, Conceptualization.

## Declaration of competing interest

The author declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

## Funding

This study did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

## References

- Bandura, A., 1977. *Social Learning Theory*. Prentice Hall.
- Benavidez, G.A., Zahnd, W.E., Hung, P., Eberth, J.M., 2024. Chronic disease prevalence in the US: sociodemographic and geographic variations by zip code tabulation area. *Prev. Chronic Dis.* (230267), 21. <https://doi.org/10.5888/pcd21.230267>.
- Block, J., Kremen, A.M., 1996. IQ and ego-resiliency: conceptual and empirical connections and separateness. *J. Personal. Social Psychol.* 70 (2), 349–361. <https://doi.org/10.1037/0022-3514.70.2.349>.
- Bolton, K.W., Praetorius, R.T., Smith-Osborne, A., 2016. Resilience protective factors in an older adult population: a qualitative interpretive meta-synthesis. *Soc. Work Res.* 40 (3), 171–182. <https://doi.org/10.1093/swr/svw008>.
- Bonanno, G.A., 2004. Loss, trauma, and human resilience: have we underestimated the human capacity to thrive after extremely aversive events? *Am. Psychol.* 59 (1), 20–28. <https://doi.org/10.1037/0003-066X.59.1.20>.
- Clark, J.N., Jefferies, P., 2023. Measuring resilience and the importance of resource connectivities: revising the adult resilience measure (RRC-ARM). *Soc. Sci* 12 (5), 290. <https://doi.org/10.3390/socsci12050290>.
- Connor, K.M., Davidson, J.R., 2003. Development of a new resilience scale: the Connor-Davidson Resilience Scale (CD-RISC). *Depress. Anxiety* 18 (2), 76–82. <https://doi.org/10.1002/da.10113>.
- Deci, E.L., Ryan, R.M., 2012. Self-determination theory. In: Van Lange, P.A.M., Kruglanski, A.W., Higgins, E.T. (Eds.), *Handbook of Theories of Social Psychology*. Sage Publications Ltd, pp. 416–436. <https://doi.org/10.4135/9781446249215.n21>.
- Edward, K.L., 2013. Chronic illness and wellbeing: using nursing practice to foster resilience as resistance. *Br. J. Nurs.* 22 (13), 741–746. <https://doi.org/10.12968/bjon.2013.22.13.741>.
- Edward, K.L., Welch, A., Chater, K., 2009. The phenomenon of resilience as described by adults who have experienced mental illness. *J. Adv. Nurs.* 65 (3), 587–595. <https://doi.org/10.1111/j.1365-2648.2008.04912.x>.
- Fahlberg, A., Vicino, T.J., Fernandes, R., Potiguara, V., 2020. Confronting chronic shocks: social resilience in Rio de Janeiro's poor neighborhoods. *Cities* 99, 102623. <https://doi.org/10.1016/j.cities.2020.102623>.
- Garcia-Dia, M., DiNapoli, J.M., Garcia-Ona, L., Jakubowski, R., O'Flaherty, D., 2013. Concept analysis: resilience. *Arch. Psychiatr. Nurs.* 27 (6), 264–270. <https://doi.org/10.1016/j.apnu.2013.07.003>.
- Haase, J.E., 2004. The adolescent resilience model as a guide to interventions. *J. Pediatric Oncol. Nurs.: Official J. Associat. Pediatric Oncol. Nurses* 21 (5), 289–304. <https://doi.org/10.1177/1043454204267922>.
- Jaiswal, J., Singer, S.N., Lekas, H.M., 2020. Resilience and beliefs in the effectiveness of current antiretroviral therapies among recently disengaged low-income people of color living with HIV. *Behav. Med.* 46 (1), 75–85. <https://doi.org/10.1080/08964289.2019.1570070>.
- Kim, G.M., Lim, J.Y., Kim, E.J., Park, S., 2018. Resilience of patients with chronic diseases: a systematic review. *Health and Social Care in the Community* 27 (4), 797–807. <https://doi.org/10.1111/hsc.12620>.
- Kim, J.H., Lewis, T.T., Topel, M.L., Mubasher, M., Li, C., Vaccarino, V., Mujahid, M.S., Sims, M., Quyyumi, A.A., Taylor, H.A., Baltrus, P.T., 2019. Identification of resilient and at risk neighborhoods for cardiovascular disease among black residents: the Morehouse –Emory Cardiovascular (MECA) Center for Health Equity Study. *Preventing Chronic Disease Public Health Research, Practice, and Policy* 16 (E57), 1–11. <https://doi.org/10.5888/pcd16.180505>.
- Konaszewski, K., Skalski, S., Surzykiewicz, J., 2021. The polish version of the resilience scale 25: adaptation and preliminary psychometric evaluation. *Front Psychol* 12, 668800. <https://doi.org/10.3389/fpsyg.2021.668800>.
- Lazarus, R.S., Folkman, S., 1984. *Stress, appraisal, and Coping*. Springer.
- Liebenberg, L., Moore, J.C., 2018. A social ecological measure of resilience for adults: the RRC-ARM. *Soc. Indic. Res.* 136, 1–19. <https://doi.org/10.1007/s11205-016-1523-y>.
- Liebenberg, L., Ungar, M., Vijver, F.V.D., 2012. Validation of the child and youth resilience measure-28 (CYRM-28) among Canadian youth. *Res Soc Work Pract* 22 (2), 219–226. <https://doi.org/10.1177/1049731511428619>.
- Luo, D., Eicher, M., White, K., 2020. Individual resilience in adult cancer care: a concept analysis. *Int. J. Nurs. Stud.* 102, 103467. <https://doi.org/10.1016/j.ijnurstu.2019.103467>.
- Luo, D., Eicher, M., White, K., 2023. Resilience in adults with colorectal cancer: refining a conceptual model using a descriptive qualitative approach. *J. Adv. Nurs.* 79 (1), 254–268. <https://doi.org/10.1111/jan.15464>.
- McElroy-Heltzel, S.E., Shannnonhouse, L.R., Davis, E.B., Lemke, A.W., Mize, M.C., Aten, J., Fullen, M.C., Hook, J.N., Van Tongeren, D.R., Davis, D.E., Miskis, C., 2022. Resource loss and mental health during COVID-19: psychosocial protective factors among U.S. older adults and those with chronic disease. *Int. J. Psychol.: J. Int. de Psychol.* 57 (1), 127–135. <https://doi.org/10.1002/ijop.12798>.
- Moore, T.L., 2023. The lived experience and meaning of resilience in the setting of chronic illness and low- resource communities of African Americans that reside in Tallahatchie County, Mississippi. *Int. J. Qual. Stud. Health Well-being* 18 (1), 2218221. <https://doi.org/10.1080/17482631.2023.2218221>.
- Morse, J.M., Kent-Marvick, J., Barry, L.A., Harvey, J., Okang, E.N., Rudd, E.A., Wang, C.Y., Williams, M.R., 2021. Developing the resilience framework for nursing and healthcare. *Global Qualitative Nurs. Res.* 8, 1–21. <https://doi.org/10.1177/23333936211005475>, 23333936211005475.
- Niitsu, K., Houfek, J.F., Barron, C.R., Stoltenberg, K.A., Kupzyk, K.A., Rice, M.J., 2017. A concept analysis of resilience integrating genetics. *Issues Ment. Health Nurs.* 38 (11), 896–906. <https://doi.org/10.1080/01612840.2017.1350225>.
- Patel, V., Goodman, A., 2007. Researching protective and promotive factors in mental health. *Int. J. Epidemiol.* 36 (4), 703–707. <https://doi.org/10.1093/ije/dym147>.
- Polk, L.V., 1997. Toward a middle-range theory of resilience. *Adv. Nurs. Sci.* 19 (3), 1–13. <https://doi.org/10.1097/00012272-199703000-00002>.
- Qiao, S., Ingram, L., Morgan, D., Xiaoming, L., Weissman, S.B., 2019. Resilience resources among african american women living with HIV in southern United States. *AIDS* 33 (1), S35–S44. <https://doi.org/10.1097/QAD.0000000000002179>.
- Robinson, M., Hanna, E., Raine, G., Robertson, S., 2019. Extending the comfort zone: building resilience in older people with long term conditions. *Southern Gerontol. Society* 38 (6), 825–848. <https://doi.org/10.1177/0733464817724042>.
- Rutter, M., 2012. Resilience as a dynamic concept. *Dev. Psychopathol.* 24 (2), 335–344. <https://doi.org/10.1017/S0954579412000028>.
- Scoloveno, R., 2016. A concept analysis of the phenomenon of resilience. *J. Nurs. Care* 5 (353), 1–5. <https://doi.org/10.4172/2167-1168.1000353>.

- Shankar, S., Gogosis, E., Palepu, A., Gadermann, A.M., Hwang, S.W., 2019. I haven't given up and I'm Not Gonna": a phenomenographic exploration of resilience among individuals experiencing homelessness. *Qual. Health Res.* 29 (13), 1850–1861. <https://doi.org/10.1177/1049732318798353>.
- Southwick, S.M., Charney, D.S., 2012. The science of resilience: implications for the prevention and treatment of depression. *Science* 338 (6103), 79–82. <https://doi.org/10.1126/science.1222942>.
- Sturmberg, J.P., Picard, M., Aron, D.C., Bennett, J.M., Bircher, J., deHaven, M.J., Gijzel, S., Heng, H.H., Marcum, J.A., Martin, C.M., Miles, A., Peterson, C.L., Rohleder, N., Walker, C., Olde Rikkert, M., Melis, R., 2019. Health and disease-emergent states resulting from adaptive social and biological network interactions. *Front Med (Lausanne)* 6, 59. <https://doi.org/10.3389/fmed.2019.00059>.
- Szanton, S.L., Wolff, J.W., Leff, B., Thorpe, R.J., Tanner, E.K., Boyd, C., Xue, Q., Guralnik, J., Bishai, D., Gitlin, L.N., 2014. CAPABLE trial: a randomized controlled trial of nurse, occupational therapist and handyman to reduce disability among older adults: rationale and design. *Contemp. Clin. Trials*. 38 (1), 102–112. <https://doi.org/10.1016/j.cct.2014.03.005>.
- Szanton, S.L., Gill, J.M., 2010. Facilitating resilience using a society-to-cells framework: a theory of nursing essentials applied to research and practice. *ANS Adv. Nurs. Sci.* 33 (4), 329–343. <https://doi.org/10.1097/ANS.0b013e3181fb2ea2>.
- Terrana, A., Al-Delaimy, W., 2023. A systematic review of cross-cultural measures of resilience and its promotive and protective factors. *Transcult. Psychiatry* 60 (4), 733–750. <https://doi.org/10.1177/13634615231167661>.
- The United States Census Bureau. (2020). *Income and poverty in the United States:2019*. <https://www.census.gov/data/tables/2020/demo/income-poverty/p60-270.html>.
- The World Health Organization, 2023. Non communicable disease. <https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases>.
- Van Wilder, L., Pype, P., Mertens, F., Rammant, E., Clays, E., Devleeschauwer, B., Boeckxstaens, P., De Smedt, D., 2021. Living with a chronic disease: insights from patients with a low socioeconomic status. *BMC Fam. Pract.* 22 (1), 233. <https://doi.org/10.1186/s12875-021-01578-7>.
- Wagnild, G., 2009. A review of the Resilience Scale. *J. Nurs. Meas.* 17 (2), 105–113. <https://doi.org/10.1891/1061-3749.17.2.105>.
- Wagnild, G.M., Young, H.M., 1993. *Development and psychometric evaluation of the Resilience Scale*. *J. Nurs. Meas.* 1 (2), 165–178.
- Walker, L. & Avant, K. (2005) *Strategies for theory construction in nursing*, Upper Saddle River, Cornell University Press, NJ: Pearson Prentice Hall. Ithaca, NY.