TEACHING INTERSECTIONALITY: CONCEPTUALIZING LAYERED VULNERABILITY TO ADVANCE SOCIAL EQUITY AND RESILIENCE

CWIAK, CAROL, L., North Dakota State University carol.cwiak@ndsu.edu

ABSTRACT

Intersectionality presents a nuanced way to view vulnerability to advance social equity and resilience. The intersectionality construct has been used for many years in a variety of disciplines to examine the intersection between well-established social categories (i.e., race, sex, ethnicity, gender, disability, class) and how discrimination in each of these categories creates layers of inequality, inequity, and marginalization in established systems and structures. While social vulnerability has long been a central focus of emergency management practice, those efforts have rarely taken an intersectional focus. More recent literature by hazard and disaster researchers on intersectionality (i.e., circa 2017 to date) suggests using the concept in emergency management practice to reduce vulnerability, marginalization, and inequities. This article addresses the importance of intersectionality in effective emergency management practice and shares an approach used to teach intersectionality to students at the undergraduate level. The approach utilizes extensive student engagement and discussion to bring the importance of the concept to the forefront of students' minds. The author's overarching goal in teaching and sharing the concept here is to change fundamentally how next-generation emergency management professionals view vulnerability.

Keywords: intersectionality, social vulnerability, vulnerable populations, emergency management, marginalization, power, privilege

INTRODUCTION

Intersectionality, coined by American civil rights advocate Kimberle Crenshaw (1989), is "a metaphor for understanding the ways that multiple forms of inequality or disadvantage sometimes compound themselves and create obstacles that often are not understood among conventional ways of thinking." (p. 149) Crenshaw's initial article on intersectionality focused on the demarginalization of race and sex. Researchers across many disciplines have since used the intersectionality construct to examine the intersection between well-established social categories (race, sex, ethnicity, gender, disability, class) and how discrimination in each of these categories creates layers of inequality, inequity, and marginalization in established systems and structures (Bauer et al., 2021; Carbado et al., 2013; Collins & Bilge, 2020; Crenshaw, 2017; Knepper et al., 2023). Intersectionality presents vulnerability as a dynamic phenomenon that is not easily siloed and not always readily apparent (Kuran et al., 2020).

The implications of social vulnerability on individuals' hazard event outcomes and on their ability to be resilient have long been studied by hazard and disaster researchers (Benevolenza &

DeRigne, 2019; Berke et al., 2010; Blaikie et al., 2014; Bolin & Kurtz, 2018; Flanagan et al., 2011; Fothergill et al., 1999; Jerolleman, 2019; Thomas et al., 2009; Urby & McEntire, 2015). Social vulnerability has been a central focus of emergency management practice for decades (Flanagan et al., 2011). In recent years, there has been an increased focus by hazard and disaster researchers on intersectionality and the more nuanced insights this lens provides regarding vulnerability, marginalization, resilience, and inequities (Arora, 2022; Borowski & Stathopoulos, 2020; Kadetz & Mock, 2018; Knepper et al., 2023; Kuran et al., 2020; Lotfata & Munenzon, 2022; McKinzie, 2017; Prohaska, 2020; Siller & Aydin, 2022; Vickery, 2018; Jean et al., 2023; Walker et al., 2019; Whetstone & Demiroz, 2023). Intersectionality provides emergency management professionals a dynamic way to view vulnerability; as such, it will dramatically change emergency management practice expectations related to preparing for, mitigating against, responding to, and recovering from hazard events and their impacts.

Emergency management professionals are expected to meet the standards of conduct for professional practice (FEMA Higher Education Ethics Special Interest Group, 2023), which requires learning about and understanding the constituencies they serve to reduce vulnerability and inequities that negatively affect hazard event outcomes. Intersectionality changes the cookie-cutter, one-size-fits-all approach broadly used in emergency management in past years due to a lack of staffing and specific emergency management knowledge. There are an increasing number of effective practice examples involving proactive emergency management professionals—particularly at the local level—taking the lead and using approaches that evidence an understanding of layered vulnerabilities (even if they have never been introduced to the concept of intersectionality). This example makes sense as emergency management professionals have a service orientation and want to keep their constituents out of harm's way. This whole community orientation is why teaching intersectionality as a mindset that serves effective emergency practice is vital.

The purpose of this article is to share an approach used to teach intersectionality to emergency management students at the undergraduate level. The method shared below is not intended to be prescriptive to the reader but rather an example of how intersectionality can be introduced and brought to life through engagement and self-identification with the concept. This approach is purposeful—the overarching goal is to fundamentally change how next-generation emergency management professionals view vulnerability (thus changing practice). The intersectionality literature is clear—utilizing an intersectional mindset is critical to emergency management practice that advances social equity and resilience.

ANDRAGOGICAL APPROACH AND LEARNING OBJECTIVES

The Higher Learning Commission accredits North Dakota State University (NDSU). The emergency management program holds no additional accreditation. The program serves approximately 50 undergraduate students and utilizes adult learning principles (Chan, 2010; Collins, 2004; Knowles, 1980; Mews, 2020). These principles undergird the following classroom tenets:

- A. The integration of learners' experiences and knowledge enhances the collective learning opportunities and problem-solving capabilities in the classroom;
- B. Active engagement in an informal learning environment improves learning outcomes;
- C. All learners are not the same, and varied engagement approaches with course material provide more opportunities to connect with concepts;
- D. Learners are motivated to learn based on their presence in the classroom and
- E. Lessons in the course have practical implications relevant to advancing efforts in effective emergency management.

Intersectionality is covered in disaster preparedness as an expansion of the discussion of social vulnerability. Students are introduced to social vulnerability in the 101 course, which functions as a survey course. Students also have the opportunity to take an upper-division emergency management elective course dedicated to vulnerable populations. The Disaster Preparedness course is at the mid-point of this learning arc.

Students in the Disaster Preparedness course are at a developing level regarding key emergency management topics. All phase courses (i.e., preparedness, mitigation, response, and recovery) are delivered in NDSU's program at the developmental level. As such, in the *Disaster Preparedness* course, the overarching goal is to layer in additional topical depth while advancing students' ability to understand, apply, analyze, and evaluate the material being delivered in the course. The assessment of student learning in the course focuses on students' ability to accurately apply and synthesize concepts across various relevant emergency management contexts.

The intersectionality lesson block taught in the *Disaster Preparedness* course has seven instructional learning objectives. They focus on self-awareness, empathy, and advancing effective emergency management practices. The self-awareness and empathy elements of the lesson are important to developing emotional intelligence and help enhance cultural competency learning (Golman, 1998; Knox & Haupt, 2015). The relationship-based nature of emergency management practice, coupled with the importance of the work, necessitates the integration of objectives focused on expanding students' ability to understand and engage effectively with others. The learning objectives are:

- 1. Students will be able to discuss how intersectionality enhances or detracts from power and privilege.
- 2. Students will be able to discuss how intersectionality improves awareness about social and cultural competencies.
- 3. Students will be able to apply the dynamics of intersectionality to themselves and others.
- 4. Students will be able to describe and explain the challenges and emotions associated with marginalization.
- 5. Students will be able to assess the differences between traditional approaches to social vulnerability and an intersectional approach.
- 6. Students will be able to demonstrate how to develop a network of community partners that intersect with the dynamic dimensions of the intersectional community.
- 7. Students will be able to determine areas of emergency management practice that will be improved by the utilization of an intersectional mindset.

TEACHING INTERSECTIONALITY

The intersectionality lesson block, as described below, requires three 75-minute class periods. This lecture/discussion/activity block has four distinct subsections—priming, introducing, engaging, and applying. The subsections do not require an equal distribution of time. The lesson block pairs priming and introducing in the first class period delivery with a requisite pre-class material review. The second class has a pre-class reading assignment and is an entire period of activity in which students engage with intersectionality. The third class focuses on operationalizing the intersectionality mindset in emergency management practice.

Priming and Introducing

In the priming section, a basic refresher on the history of emergency management and our knowledge of and approach to social vulnerability allows students to see the progression of emergency management's growth as a discipline and field. This prepares students to understand intersectionality as a mindset that will advance research and practice. It is valuable to remind students at this juncture that the power of their emergency management education is the ability to utilize their mastery of the growing body of knowledge once they graduate and join the practice. The importance of the work—to protect lives, livelihoods, and quality of life—requires a firm grasp of the core competency expectations for next-generation emergency management professionals (Feldmann-Jensen et al., 2019) and an appreciation that they are expected to be change agents (Drabek, 2014; Springer, 2009; Urby & McEntire, 2015). They will lead the efforts to move emergency management practice toward social equity. Emphasizing at the outset that intersectionality has yet to be consistently operationalized in emergency management practice elevates the significance of the lesson block. It primes the expectation for student engagement in the classroom.

To illustrate how social vulnerability data is currently aggregated and used, students must engage with the Social Indices Chart on the National Alliance for Public Safety GIS (NAPSG) Foundation (2023) webpage before class. On this site, the NAPSG has aggregated a collection of relevant social indices: Centers for Disease Control and Prevention (CDC) – CDC Social Vulnerability Index; University of South Carolina Hazards & Vulnerability Research Institute – Social Vulnerability Index for the United States (SoVI) and Baseline Resilience Indicators for Communities (BRIC); FEMA National Integration Center (NIC) and Argonne National Laboratory – FEMA Community Resilience and Challenges Index (FEMA CRCI); and Federal Emergency Management Agency (FEMA) – National Risk Index (NRI). The NRI is the only one of the indices that includes hazards in its analysis. The NRI incorporated the SoVI and BRIC indices and expected annual loss to determine overall risk percentages (Federal Emergency Management Agency [FEMA], 2023).

The indices cover nine variable areas in varying depth: demographics, economics, household composition, employment, transportation, community, health, government, and environmental. The data is represented at the county level. The NAPSG Foundation website suggests that federal, state, and local emergency management professionals can utilize the collected indices to

inform risk assessment, hazard mitigation planning, resilience planning, emergency operations planning, exercise development, and response development (2023). Examining these indices and variables helps students understand how they can be used in practice. This examination also sets the stage for discussing what is not collected and how the data lacks dimension.

Following the discussion of the indices, a short video by Crenshaw (National Association of Independent Schools, 2018) is shared to introduce the students to the intersectionality construct. Crenshaw's presentation is a softer introduction than a journal article on intersectionality assigned as a pre-read for the second segment. This approach ensures that students can discuss the categories illustrated in the sensitizing visual in Figure 1 with the information they already have from their exposure to other coursework, their lives, and their understanding of the world.



Figure 1: Sensitizing Visual: Social Categories (McPhetridge, n.d.)

The purpose of the visual is to prime discussion about the expansiveness of these categories. Not all categories can be covered in the time allotted. Students are put in small groups and assigned two or three categories where they can generate a manageable list. Each group must list all the options they can think of that would be a possible response to the categories assigned. For example, what are the possible list of responses a person might give if asked about their sexual orientation? Categories such as location, hobbies, personality, culture, and occupation are not assigned at the outset due to the sheer size of the list that would be generated.

After generating lists for the assigned categories, the groups are asked to number their lists based on the power and privilege they believe each possible response has in society (with one being the highest power and each successive number having less power). Once the lists are numbered, a representative from each group writes the numbered list on the whiteboard to be shared with the class. Producing the list and numbering it based on power and privilege is designed to push students (gently) into thinking about the realities of societal differences. As a collective, the numbered lists on the board are sobering. The whiteboard visual represents students' interpretation of the stratification of power and privilege and, conversely, marginalization and

vulnerability. The visual can be unsettling. It tells a tale of inequality that is very apparent in this format. Students' discomfort with the whiteboard's illustration is essential to their absorption of the material. They can see themselves in these lists, which allows them to see themselves as part of the intersectional population.

After the board content has been discussed, students are asked to consider what it means if an individual's varying characteristics are consistently below one. For instance, if the totality of a person's characteristics is two or below, is there a multiplier effect that starts to reduce their power and privilege dramatically? How many lists can you have reduced power before you are seemingly powerless? This discussion digs deeper into compounded marginalization and vulnerability, which can quickly become a heavy conversation. This point is where the topic is left for the day. Students are encouraged to continue reflecting on the class discussion as they go about the rest of their day.

Engaging

Students must pre-read an article that calls for intersectionality to be the "guiding principle" for addressing and understanding vulnerability (Kuran et al., 2020). The article examines vulnerability and vulnerable groups in Estonia, Finland, Norway, and Sweden. The pre-read intends to ground students' early understanding of intersectionality and how it expands thinking about addressing vulnerability.

At the start of class, students are provided a blank cardstock person and are instructed to think of an intersectional person who might live in a jurisdiction they serve (not themselves). They are to use the Wheel of Intersectionality (as referred to in the author's class—see Figure 2 to identify characteristics for the six blue sections of the inner wheel and at least eight outer wheel sections. When this task is completed, they have a person similar to those in Figure 3.

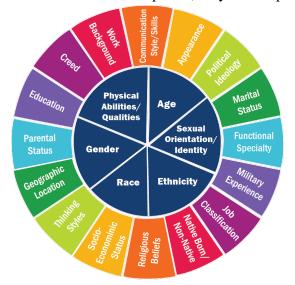


Figure 2: Wheel of Intersectionality (Johns Hopkins Diversity Leadership Council, n.d.)

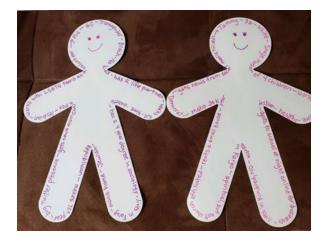


Figure 3: Intersectional People

Once the students have completed their intersectional people exercise, they gather in a circle on the perimeter of the classroom with the desks pushed out of the middle. Each blue section is first addressed in a series of options (similar to the whiteboard lists). Students are asked to gather in different areas based upon what they selected (e.g., age [must be at least 12]: 12–18, 19–25, 26–40, 41–60, over 60). Once all the students are in each grouping of a completed blue section, they are asked to look around and take in the other distributions in the classroom. This process is completed for all the blue sections. After the blue sections are completed, several examples from the sections on the outer wheel are likewise covered to illustrate the diversity of characteristics within their intersectional people. This exercise is important because it helps students to escape the silo mentality of relative sameness regarding the people they will work with within a community. It also helps them think critically about how these layered characteristics affect more than power, privilege, marginalization, and vulnerability—they necessarily change how emergency management professionals must practice.

The next step in the exercise involves students introducing their intersectional person to their classmates. This exercise is valuable for students as it introduces them to various layered characteristics and potential challenges their intersectional person may face. It also helps students start thinking about emergency management's challenges as they seek to serve an intersectional community. It is pretty eye-opening for students to appreciate the multitude of considerations that come into play when there is more difference than similarity in their constituency.

The final activity of this class period is based on students' assessment of their intersectional people and themselves. For this activity, the Wheel of Power/Privilege (see Figure 4), which Sylvia Duckworth (n.d.) created based on Crenshaw's work, illustrates the layered effects of marginalization and vulnerability. This wheel has 12 elements to consider. Students are asked to assess their intersectional person's score by doing the following regarding each element: If the person aligns with the innermost circle, assign one point (+1). No point is assigned if the person aligns with the middle ring (0). If the person aligns with the outer ring, subtract one point (-1). This creates the potential for a score range of -12 to 12.

After completing the assessment, the countdown from 12 begins with students holding up their intersectional person when their score is called. This is an interesting opportunity for students to see where their intersectional person lands compared to others' intersectional people. On the whole, intersectional people tend to have lower scores than the students' scores that follow. However, the student version of the countdown has always been more impactful. In the student countdown, students stand up when their score is called. It is interesting to watch the students' notion of college student homogeneity disappear when they see their classmates sitting through numbers that they thought unlikely. It clarifies to students that marginalization may not be readily apparent.

Skin colour Cartina and City and City

Figure 4: Wheel of Power/Privilege (Duckworth, n.d.)

Applying

In the final class period of the lesson block, the focus shifts to how an intersectionality mindset can be operationalized in emergency management practice.

Using their intersectional person, each student must identify six or more different community organizations or institutions that their person intersects with regularly (at least once a month). This aims to identify key community partners for emergency management professionals. The students put their list of community partners on the whiteboard. Once all the community partners are listed, students observe similarities, differences, and overlaps.

This activity is designed to illustrate a long-understood premise in effective emergency management practice—it is a community effort built on collaborations and partnerships across cultural, social, and other existing networks (which have closer relationships with the constituencies emergency management serves) that create the connection that is required to reach people, understand their needs, and prepare, mitigate, respond, and recover appropriately (FEMA, 2019).

The final engagement of the lesson block is completed in small groups. The groups are tasked with addressing which emergency management activities would benefit from an intersectionality mindset, which partners should be engaged (and at which point) to accomplish that benefit, and how to measure that benefit. The group discussion is then shared with the rest of the class and opened for questions and comments. This engagement is valuable as it brings about recognition of the following things when debriefed:

- 1. Incorporation of an intersectionality mindset will require considerably more effort for emergency management practitioners on the front end.
- 2. Measuring the outcomes of this type of effort is similar to the measurement of mitigation—a projected (but soft) estimate on the front end regarding impact reduction and improved outcomes.
- 3. Post-event, the effort could result in dramatic returns, such as a reduction in loss of life and property, reduced need for resources in response and recovery, and enhanced risk ownership and risk reduction (a.k.a. resilience) once the community recognizes the effectiveness of the approach they collectively used.

To wrap up the lesson block, students are reminded of where the discussion started, with the variable comparison table on the NASPG Foundation webpage. It is noted that, while these data sets have value, students should resist using approaches in practice that are too heavily based on siloed aggregated data. A foundational truth in every emergency management course at NDSU is reiterated—that there is no debate in the emergency management literature about the need for a whole community approach based on recognizing diversity or the potential for drastically differential impacts based on marginalization that exacerbates vulnerability.

Students are reminded again of the importance of their role as change agents. They will have the power to assemble and deconstruct necessary systems to further their important work. The time they spend today thinking about how social equity can be advanced and implemented will help them reduce negative hazard impacts.

These final statements to the class sound like a call to action. The author believes that the ability to convey to students the potential magnitude of their efforts (or lack thereof) to impact others' lives is a critically important part of being an emergency management educator. This is not simple work; students must know where their efforts can create substantively different outcomes that advance accurate movement toward resilience.

SUMMARY

Intersectionality offers emergency management professionals a better understanding of the diversity in their communities and how diversity can create marginalization and exacerbate vulnerability. There is no existing national data set that can fully capture and accurately portray the vulnerability in individuals from an intersectionality perspective. Intersectionality requires emergency management professionals to create robust connections that reach the intersectional community and improve the effectiveness of service and practice.

Students must understand how intersectionality can be used in daily practice and why it is important. Exposure to the concept of, and the literature on, intersectionality is an essential component of emergency management in higher education. The next generation of emergency management professionals must be provided exposure to an intersectionality mindset to ensure that they view vulnerability as a dynamic system that defies siloing and that they embrace the opportunity to engage with the community to start the important work that is needed to further resilience.

REFERENCES

- Arora, S. (2022). Intersectional vulnerability in post-disaster contexts: Lived experiences of Dalit women after the Nepal earthquake, 2015. *Disasters*, 46(2), 329–347.
- Bauer, G. R., Churchill, S. M., Mahendran, M., Walwyn, C., Lizotte, D., & Villa-Rueda, A. A. (2021). Intersectionality in quantitative research: A systematic review of its emergence and applications of theory and methods. *SSM Population Health*, *14*, 100798. https://doi.org/10.1016/j.ssmph.2021.100798h
- Benevolenza, M. A., & DeRigne, L. (2019). The impact of climate change and natural disasters on vulnerable populations: A systematic review of literature. *Journal of Human Behavior in the Social Environment*, 29(2), 266–281.
- Berke, P., Cooper, J., Salvesen, D., Spurlock, D., & Rausch, C. (2010). Disaster plans: Challenges and choices to build the resiliency of vulnerable populations. *International Journal of Mass Emergencies & Disasters*, 28(3), 368–394.
- Blaikie, P., Cannon, T., Davis, I., & Wisner, B. (2014). *At risk: natural hazards, people's vulnerability and disasters*. Routledge.
- Bolin, B., & Kurtz, L. C. (2018). Race, class, ethnicity, and disaster vulnerability. *Handbook of disaster research*, 181–203.
- Borowski, E., & Stathopoulos, A. (2020). On-demand ridesourcing for urban emergency evacuation events: An exploration of message content, emotionality, and intersectionality. *International Journal of Disaster Risk Reduction*, 44, 101406.
- Carbado, D. W., Crenshaw, K. W., Mays, V. M., & Tomlinson, B. (2013). Intersectionality: Mapping the movements of a theory. *Du Bois review: Social science research on race*, 10(2), 303–312.
- Chan, S. (2010). Applications of andragogy in multi-disciplined teaching and learning. *Journal of Adult Education*, 39(2), 25–35.
- Collins, J. (2004). Education techniques for lifelong learning: principles of adult learning. *Radiographics*, 24(5), 1483–1489.
- Collins, P. H., & Bilge, S. (2020). *Intersectionality*. John Wiley & Sons.
- Crenshaw, K. W. (1989). Demarginalizing the intersection of race and sex: A black feminist critique of anti- discrimination doctrine, feminist theory and anti- racist politics. *University of Chicago Legal Forum 1989*:139–67.
- Crenshaw, K. W. (2017). On intersectionality: Essential writings. The New Press.
- Drabek, T. E. (2014). Emergency managers as community change agents: an expanded vision of the profession. *Journal of Emergency Management (Weston, Mass.)*, 12(1), 9–20.

- Duckworth, S. (n.d.). *Wheel of power/privilege and marginalization*. ResearchGate. https://www.researchgate.net/figure/Wheel-of-Power-Privilege-and-Marginalization-by-Sylvia-Duckworth-Used-by-permission fig1 364109273.
- Feldmann-Jensen, S., Jensen, S. J., Smith, S. M., & Vigneaux, G. (2019). The next generation core competencies for emergency management. *Journal of Emergency Management*, 17(1), 17–25.
- Federal Emergency Management Agency. (2019). Building cultures of preparedness: A report for the emergency management higher education community.

 https://www.preventionweb.net/publication/building-cultures-preparedness-report-emergency-management-higher-education-community
- Federal Emergency Management Agency. (2023). *National risk index: Social vulnerability*. https://hazards.fema.gov/nri/social-vulnerability.
- Federal Emergency Management Agency, Higher Education Ethics Special InterestGroup. (2023). Code of ethics and professional standards of conduct for emergency management professionals. https://www.ndsu.edu/fileadmin/emgt/Code_of_Ethics_and_Professional_Standards_of_Conduct_for_Emergency_Management_Professionals_2023_final.pdf
- Flanagan, B. E., Gregory, E. W., Hallisey, E. J., Heitgerd, J. L., & Lewis, B. (2011). A social vulnerability index for disaster management. *Journal of Homeland Security and Emergency Management*, 8(1), doi: 0000102202154773551792
- Fothergill, A., Maestas, E. G., & Darlington, J. D. (1999). Race, ethnicity and disasters in the United States: A review of the literature. *Disasters*, 23(2), 156–173.
- Goleman, D. (1998). Working with emotional intelligence. Bantam.
- Jean, C., Hall, C., & Vickery, J. (2023, March 22). Intersectionality as a forward-thinking approach in disaster research. *Oxford Research Encyclopedia of Natural Hazard Science*. https://doi.org/10.1093/acrefore/9780199389407.013.425
- Jerolleman, A. (2019). Disaster recovery through the lens of justice. Springer.
- Johns Hopkins Diversity Leadership Council (n.d.). *Wheel of diversity*. https://culcanushiablog.wordpress.com/2016/07/24/theme-2-the-challenge-of-managing-diverse-teams/.
- Kadetz, P., & Mock, N. B. (2018). Problematizing vulnerability: Unpacking gender, intersectionality, and the normative disaster paradigm. In M. Zakour, N. B. Mock, & P. Kadetz (Eds.), *Creating Katrina, rebuilding resilience* (pp. 215–230). Butterworth-Heinemann.
- Knepper, H. J., Evans, M. D., & Henley, T. J. (Eds.). (2023). *Intersectionality and crisis management: A path to social equity*. Taylor & Francis.

- Knowles, M. S. (1980). *The modern practice of adult education: From pedagogy to andragogy* Cambridge Adult Education.
- Knox, C. C., & Haupt, B. (2015). Incorporating cultural competency skills in emergency management education. *Disaster Prevention and Management*, 24(5), 619–634.
- Kuran, C. H. A., Morsut, C., Kruke, B. I., Krüger, M., Segnestam, L., Orru, K., ... & Torpan, S. (2020). Vulnerability and vulnerable groups from an intersectionality perspective. *International Journal of Disaster Risk Reduction*, 50, 101826.
- Lotfata, A., & Munenzon, D. (2022). The interplay of intersectionality and vulnerability towards equitable resilience: Learning from climate adaptation practices. In R. C. Brears (ed.), *The Palgrave encyclopedia of urban and regional futures* (pp. 1–16). Cham: Springer International Publishing.
- McKinzie, A. E. (2017). A tale of two cities: Variations in perceptions of disaster recovery and the importance of intersectionality. *Sociology of Race and Ethnicity*, *3*(4), 522–537.
- McPhetridge, M. (n.d.). *Intersectionality*. International City/County Management Association. https://icma.org/articles/pm-magazine/intersectionality-lgbtqia-community
- Mews, J. (2020). Leading through andragogy. College and University, 95(1), 65-68.
- National Alliance for Public Safety GIS (NAPSG) Foundation. (2023). *Variables comparison chart*. https://experience.arcgis.com/experience/376770c1113943b6b5f6b58ff1c2fb5c/page/Variables-Compare/
- National Association of Independent Schools (2018). *What is intersectionality?* [Video]. https://ecampusontario.pressbooks.pub/universaldesign/chapter/positionality-intersectionality/
- Prohaska, A. (2020). Still struggling: Intersectionality, vulnerability, and long-term recovery after the Tuscaloosa, Alabama USA tornado. *Critical Policy Studies*, *14*(4), 466–487.
- Siller, H., & Aydin, N. (2022). Using an intersectional lens on vulnerability and resilience in minority and/or marginalized groups during the COVID-19 pandemic: A narrative review. *Frontiers in Psychology, 13*, 894103.
- Springer, C. G. (2009). *Emergency managers as change agents*. https://digitalscholarship.unlv.edu/sea_fac_articles/346/
- Thomas, D. S., Phillips, B. D., Fothergill, A., & Blinn-Pike, L. (2009). *Social vulnerability to disasters*. CRC press.
- Urby, H., & McEntire, D. A. (2015). Emergency managers as change agents: recognizing the value of management, leadership, and strategic management in the disaster profession. *Journal of Emergency Management*, 13(1), 37–51.

- Vickery, J. (2018). Using an intersectional approach to advance understanding of homeless persons' vulnerability to disaster. *Environmental Sociology*, 4(1), 136–147.
- Walker, H. M., Culham, A., Fletcher, A. J., & Reed, M. G. (2019). Social dimensions of climate hazards in rural communities of the global North: An intersectionality framework. *Journal of Rural Studies*, 72, 1–10.
- Whetstone, C., & Demiroz, F. (2023). Understanding intersectionality and vulnerable populations: A missing part in building disaster resilient communities? In H. J. Knepper, M. D. Evans, & T. J. Henley (Eds.), *Intersectionality and Crisis Management* (pp. 18–37). Routledge.