

Gendered Care Work and Environmental Injustice: A Feminist Analysis of Educators' Emotional Labor in Disaster Recovery

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ABSTRACT

Although environmental justice researchers have long been interested in the connections between disaster recovery, gender, and home- and community-based care, the consequences of the post-disaster performance of emotional labor by workers in care occupations have largely gone unnoticed. To address this gap in the environmental injustice literature, in this exploratory article we employ a feminist analysis of firsthand accounts of elementary educators' professional and personal experiences caring for their students in the Florida Keys after Hurricane Irma. We find that caring labor was increasingly necessary in the post-disaster context, both inside and outside the classroom. Teachers and other care professionals in feminized occupations may, therefore, perform an emotional double duty, supporting their students' emotional needs while also contending—as working- and middle-class individuals—with the personal consequences of disaster. We suggest that these educators may bear an unrecognized and undercompensated disproportionate burden at the intersection of class and occupational status. Because of this, we introduce an underexplored component to the racialized disaster patriarchy and intersectional disaster research: feminized occupational status. Inspired by environmental justice research legacies developed in the wake of earlier Gulf Coast disasters, we draw attention to the contributions of these absolutely essential recovery workers and how they may experience environmental injustice even as they contribute to others' recovery. Our goals are to promote recognition and fair distribution of burdens, encourage research into the contours of environmental justice and care work, and support the development of more just planning, training, and compensation regimes.

Keywords: natural disaster, gender, care work, emotional labor, intersectionality, occupational status, environmental justice

INTRODUCTION

WHEN HURRICANE IRMA made landfall in September 2017, it resulted in severe damage to the lower Florida Keys' infrastructure and massive disruptions to everyday life, with devastating effects on communities

and housing.^{1,2} Building on the legacy of sociological research on Gulf Coast disasters, we contribute to the environmental justice literature by using educators' post-Irma experiences to analyze a comparatively understudied

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¹Tori Tomiczek, Kiera O'Donnell, Kelsi Furman, Brittany Webbmartin, and Steven Scyphers. "Rapid Damage Assessments of Shorelines and Structures in the Florida Keys after Hurricane Irma." *Natural Hazards Review* 21 (2020): 05019006.

²Siyuan Xian, Kairui Feng, Ning Lin, Reza Marsooli, Daniel Chavas, Jie Chen, and Adam Hatzikyriakou. "Brief Communication: Rapid Assessment of Damaged Residential Buildings in the Florida Keys After Hurricane Irma." *Natural Hazards and Earth System Sciences* 18 (2018): 2041–2045.

phenomenon: the post-disaster performance of gendered caring labor. These educators supported children—emotionally and otherwise—withstanding that they may have suffered the effects of disaster themselves.

We first ask what educators' caring labor looks like in a post-disaster context. We then ask how their professional care obligations intersect with personal and community circumstances to potentially produce environmental injustice in the form of uncompensated labor and psychosocial harm, as well as undue emotional burdens. To address these questions, we bring the sociologies of gender and labor into conversation with feminist, intersectional approaches to environmental justice^{3,4,5} through an exploratory, qualitative analysis of the experiences of primary school professionals after Irma. We use this rich theoretical arc to highlight the potential for environmental injustice in terms of both distribution of environmental harm and lack of meaningful recognition of this essential yet hidden role in disaster recovery.

That care work is gendered is not necessarily a reflection of the gender of those undertaking it, but a consequence of the feminized social construction of care.⁶ Unfortunately, because caring labor is gendered and feminized, it is often devalued or rendered invisible due to structural and socio-cultural biases.⁷ Education professions are often feminized and educators are often care workers, meaning that they are expected to perform emotional labor and maintain professional dispositions by regulating their own emotions while caring for students.^{8,9,10,11} Hardly a benign working condition, the performance of emotional labor can have significant adverse effects on teachers, including burnout and

mental health impacts.^{12,13,14,15} Even social workers, who are trained to provide emotional support, can experience posttraumatic stress disorder due to "listening to the emotional aftereffects of traumatic events."¹⁶ An analysis of teacher affect after the 2011 New Zealand earthquake reinforces these findings within the disaster context, offering that "the personal impacts of a natural disaster...in a teacher's hometown are compounded by supporting students' psychosocial recovery."¹⁷ Disaster-related trauma may be further compounded by institutional failures in disaster relief¹⁸ that may also contribute to educators taking on additional responsibilities.

Our claim is simple yet substantial: After a disaster, care workers, much like other essential workers during crises,¹⁹ are by virtue of their professional roles asked to perform undervalued and uncompensated emotional labor, risking their emotional health and well-being. Educators may fulfill these caring duties without substantial increases in compensation, resources, or training about trauma-centered care.²⁰ We suggest that lack of resources for educators in these contexts may stem not only from tight local budgets, but also because caring labor and its coordinate social benefit are taken for granted.²¹ Especially because primary school teaching is a feminized occupation in which care work is systematically undervalued,²² the emotional labor required to manage children's disaster trauma may remain an

³Kimberle W. Crenshaw. "Mapping the Margins: Intersectionality, Identity Politics, and Violence Against Women of Color." *Stanford Law Review* 43 (1991): 1241–1299.

⁴David N. Pellow. "Environmental Inequality Formation." *American Behavioral Scientist* 43 (2000): 581–601.

⁵David N. Pellow. *What Is Critical Environmental Justice?* (Polity Press, Cambridge, MA, 2018).

⁶Pamela Cotterill and Ruth L. Waterhouse. "Women in Higher Education: The Gap Between Corporate Rhetoric and the Reality of Experience." In: Danusia Malina and Sian Maslin-Prothero (eds). *Surviving the Academy: Feminist Perspectives*. (London: Falmer Press, 1998).

⁷Paula England. "Emerging Theories of Care Work." *Annual Review of Sociology* 31 (2005): 381–399.

⁸Elizabeth Boyle. "The Feminization of Teaching in America." (Louis Kampf Writing Prize Essay, Massachusetts Institute of Technology, 2004).

⁹Yanling Liu. Research on teacher's emotion work in elementary and middle school. (Ph.D. diss., Southwest University, Chongqing, 2012).

¹⁰Rosemary E. Sutton and Elaine Harper. "Teachers' Emotion Regulation." In: Lawrence Saha, and Anthony Gary Dworkin (eds). *International Handbook of Research on Teachers and Teaching* (New York: Springer, 2009), 389–401.

¹¹Ken Winograd. "The Functions of Teacher Emotions: The Good, the Bad, and the Ugly." *Teachers College Record* 105 (2003): 1641–1673.

¹²Mei-Lin Chang. "An appraisal perspective of teacher burnout: Examining the emotional work of teachers." *Educational Psychology Review* 21 (2009): 193–218.

¹³Andy Hargreaves. "Mixed Emotions: Teachers' Perceptions of Their Interactions with Students." *Teaching and Teacher Education* 16 (2000): 811–826.

¹⁴Noraini M. Noor and Masyitah Zainuddin. "Emotional Labor and Burnout Among Female Teachers: Work-Family Conflict as Mediator." *Asian Journal of Social Psychology* 14 (2011): 283–293.

¹⁵Kürşad Yılmaz, Yahya Altinkurt, Mustafa Guner, and Bilal Sen. "The Relationship between Teachers' Emotional Labor and Burnout Level." *Eurasian Journal of Educational Research* 75 (2015): 75–90.

¹⁶M. Laurie Leitch, Jan Vanslyke, and Marisa Allen. "Somatic experiencing treatment with social service workers following Hurricanes Katrina and Rita." *Social Work* 54 (2009): 9–18, 9.

¹⁷Veronica M. O'Toole. "'Running on Fumes': Emotional Exhaustion and Burnout of Teachers Following a Natural Disaster." *Social Psychology of Education* 21 (2018): 1081–1112, 1082.

¹⁸Ron Eyerman. *Is this America? Katrina as Cultural Trauma* (University of Texas Press, Austin TX, 2015).

¹⁹Lola Loustaunau, Larissa Petrucci, Ellen Scott, and Lina Stepick. "Low-Wage Service Workers Are Facing New Emotional Hazards in the Workplace During COVID-19." *The Conversation* (2020) <<https://theconversation.com/low-wage-service-workers-are-facing-new-emotional-hazards-in-the-workplace-during-covid-19-140619>> (Last accessed on August 12, 2020).

²⁰In fact, the Department of Education's "Tips for Students Recovering from Traumatic Events" (2005) has not been edited since 2012. <https://www2.ed.gov/parents/academic/help/recovering/part_pg5.html#p5> (Last accessed on August 25, 2020).

²¹For the sake of clarity, we make no claim that the specific teacher participants felt that their work was unappreciated or invisible, or that administrators and local communities failed to appreciate their efforts.

²²Mignon Duffy, Amy Armenia, and Clare L. Stacey. *Caring on the Clock: The Complexities and Contradictions of Paid Care Work* (Rutgers University Press, New Brunswick NJ, 2015).

invisible aspect of teachers' working conditions, limiting the resources available for student- and self-care.

Importantly, teachers tasked with professional emotional management and care while also working toward their own recovery perform double duty for themselves, their students, their families, their students' families, and their broader communities. In turn, this may subject them to a unique form of cumulative environmental burden with little coordinate benefit, in a context where effective participation in environmental decision making may be limited by lack of popular recognition of their role. In other words, as communities receive little economic and structural support for their working- and middle-class populations due to neoliberal disaster and relief efforts,²³ primary-school educators, who are disproportionately women, will continue to be on the front lines and may suffer the burdens of essential care work while also contending with the disadvantages of being middle- or working-class disaster survivors themselves.²⁴

Our goals are to provide recognition for the potentially invisible labor of gendered disaster care work, to encourage the deployment of additional resources, and to advance the long-term process of unwinding the broader structural inequalities that contribute to this form of environmental injustice. An additional goal is to advance intersectional disaster research by examining some effects of recovery at the confluence of class and occupational status, including intracategorical analysis specific to workers in essential, feminized care occupations.

BACKGROUND: DISASTER AND CARE WORK AT THE INTERSECTION

For decades, issues of the relative distribution of environmental harms and benefits across race and class lines have been central to environmental justice, as have questions of recognition of environmental justice communities and issues.^{25,26} Racialized, classed, and gendered elements of disasters include their financial and material burdens, coping and health strategies, and participation in preparedness activities

and activism.^{27,28,29,30,31} Recently, environmental justice research on disasters has embraced intersectional approaches: the interlocking combinations of identity and social location that influence the physical, emotional, and material impacts of disaster.³² Developed initially by Black feminist scholars to explain the inadequacy of perspectives that focus only on race or gender and to comprehend the multiplicative combinations of race, gender, and other axes of oppression,^{33,34} intersectionality can operate as an "organizing principle" to "incorporate critical, nuanced, approaches to EJ issues" into a variety of disaster research areas.^{35,36,37}

Intersectional approaches connect previous research on social location, structure, and stratification as drivers of disaster vulnerability with environmental justice's insistence on distributive and procedural equity, as well as recognition.^{38,39} These innovations invite us to look beyond race and class to a wide variety of intersections, including those involving gender and occupational status.^{40,41,42,43} Like other forms of disaster-related inequality, injustice developed at the intersection of gender and labor may be the result of racialized disaster patriarchy: the "political, institutional, organizational, and cultural

²⁷Kathleen J. Tierney. "From the Margins to the Mainstream? Disaster Research at the Crossroads." *Annual Review of Sociology* 33 (2007): 503–525.

²⁸J. Steven Picou and Kenneth Hudson. "Hurricane Katrina and Mental Health: A Research Note on Mississippi Gulf Coast Residents." *Sociological Inquiry* 80 (2010): 513–524.

²⁹Francis O. Adeola and J. Steven Picou. "Race, Social Capital, and the Health Impacts of Katrina: Evidence from the Louisiana and Mississippi Gulf Coast." *Human Ecology Review* (2012): 10–24.

³⁰Joane Nagel. "Intersecting Identities and Global Climate Change." *Identities* 19 (2012): 467–476.

³¹Emmanuel David. *Women of the Storm: Civic Activism after Hurricane Katrina*. (Champaign, IL: University of Illinois Press, 2017).

³²Stacia S. Ryder. "A Bridge to Challenging Environmental Inequality: Intersectionality, Environmental Justice, and Disaster Vulnerability." *Social Thought and Research* 34 (2017): 85–115.

³³*Ibid.* Crenshaw (1993).

³⁴Patricia Hill Collins. "Black Feminist Thought in the Matrix of Domination." In: C. Lemert (ed). *Social Theory: The Multicultural and Classic Readings*. (Boulder, CO: Westview Press, 1993), 615–625.

³⁵*Ibid.* Ryder (2017), 92.

³⁶*Ibid.* Malin and Ryder (2018).

³⁷Anja Nygren and Gutu Wayessa. "At the Intersections of Multiple Marginalisations: Displacements and Environmental Justice in Mexico and Ethiopia." *Environmental Sociology* 4 (2018): 148–161.

³⁸*Ibid.* Ryder (2017).

³⁹*Ibid.* Malin and Ryder (2018).

⁴⁰*Ibid.* Ryder (2017).

⁴¹*Ibid.* Malin and Ryder (2018).

⁴²Erin Goodling. "Intersecting Hazards, Intersectional Identities: A Baseline Critical Environmental Justice analysis of US homelessness." *Environment and Planning E: Nature and Space* 3 (2020): 833–856.

⁴³David Naguib Pellow. *Garbage Wars: The Struggle for Environmental Justice in Chicago*. (Cambridge, MA: MIT Press, 2004).

²³Kathleen Tierney. "Resilience and the Neoliberal Project: Discourses, Critiques, Practices—and Katrina." *American Behavioral Scientist* 59 (2015): 1327–1342.

²⁴Women made up 74.8% of workers employed in elementary and secondary schools in 2018. U.S. Department of Labor, Bureau of Labor Statistics. (2019). "Women in the Labor Force: A Databook."

²⁵Dorceta E. Taylor. "The Rise of the Environmental Justice Paradigm: Injustice Framing and the Social Construction of Environmental Discourses" *American Behavioral Scientist* 43 (2000): 508–580.

²⁶Stephanie A. Malin and Stacia S. Ryder. "Developing Deeply Intersectional Environmental Justice Scholarship." *Environmental Sociology* 4 (2018): 1–7.

practices that converge before, during, and after disaster.”⁴⁴ Racialized disaster patriarchy, therefore, can focus our attention on axes of oppression—including gendered institutional practices—that may foster injustice across structural and institutional contexts.

A further innovation has been the exploration of intracategorical difference in intersectional disaster work.^{45,46,47} For example, the disaster experiences of unhoused people are not influenced solely by their unhoused status, but also by intra-community variation based on “individual level characteristics, including gender...and intersecting social processes.”^{48,49} Similarly, it may be necessary to look within status categories such as “worker” to understand the specific effects of gendered occupations. This is especially so among workers whose essential role in recovery may suffer from a lack of recognition of their contributions (and burdens experienced) due to the feminized construction of care occupations. Although environmental justice researchers have introduced gendered elements of disaster in general^{50,51} and have investigated the experiences of children in schools,^{52,53,54,55,56} home-based recovery,^{57,58,59} and men-

tal health concerns,^{60,61} we extend these inquiries to explore how educators serve as essential care workers who simultaneously support their students through trauma while coping with their own trauma.

Teaching as care work during environmental disaster

School-aged children are vulnerable to substantial disaster impacts that affect enrollment, emotional well-being, and school performance.^{62,63} Support systems in the home and community often provide “a crucial coping tool for disaster survivors.”⁶⁴ Although environmental justice scholarship centered on Gulf Coast hurricanes tends to focus on home- and family-based support,⁶⁵ the agents of emotional support for children after disaster are often teachers, social workers, and other care work professionals in feminized occupations.^{66,67}

As Weber and Messias observe, “the personal and collective health burdens borne by...front-line recovery workers—predominantly women and people of color—exemplify the ways in which the social relations of power and control contribute to health and social inequities.”⁶⁸ Our intersectional approach to disaster care work suggests that this should be extended to the full range of professionals working on the front lines, including care workers such as teachers who might not be classified as first responders but who are, nonetheless, critical for long-term recovery. This is because the caring labor performed by teachers in the wake of disaster—the “emotions, action and reflections that result from a desire to motivate, help or inspire their students”—often exceeds popular expectation and may have adverse consequences.⁶⁹ For example, many teachers who provide support to students experiencing

⁴⁴Rachel E. Luft “Racialized Disaster Patriarchy: An Intersectional Model for Understanding Disaster Ten Years After Hurricane Katrina.” *Feminist Formations* 28 (2016): 1–26, 3.

⁴⁵Jamie Vickery. “Using an Intersectional Approach to Advance Understanding of Homeless Persons’ Vulnerability to Disaster.” *Environmental Sociology* 4 (2018): 136–147. [Goodling 2020.]

⁴⁶Ibid. Goodling (2020).

⁴⁷Ibid. Malin and Ryder (2018).

⁴⁸Ibid. Vickery (2018), 145.

⁴⁹See also Ibid. Goodling (2020).

⁵⁰Ibid. Tierney (2007).

⁵¹Ibid. Nagel (2012).

⁵²Alice Fothergill and Lori Peek. “Surviving catastrophe: A study of children in Hurricane Katrina.” In: *Learning from catastrophe: Quick response research in the wake of Hurricane Katrina* (Boulder, CO: Natural Hazards Research and Applications Information Center, University of Colorado, 2006), 97–129.

⁵³Paula A. Madrid, Roy Grant, Michael J. Reilly, and Neil B. Redlener. “Challenges in Meeting Immediate Emotional Needs: Short-Term Impact of a Major Disaster on Children’s Mental Health: Building Resiliency in the Aftermath of Hurricane Katrina.” *Pediatrics* 117 (2006): S448–S453.

⁵⁴J. Steven Picou and Brent K. Marshall. “Social Impacts of Hurricane Katrina on Displaced K–12 Students and Educational Institutions in Coastal Alabama Counties: Some Preliminary Observations.” *Sociological Spectrum* 27 (2007): 767–780.

⁵⁵Luis Mirón. “The Urban School Crisis in New Orleans: Pre- and Post-Katrina Perspectives.” *Journal of Education for Students Placed at Risk* 13 (2008): 238–258.

⁵⁶Lori Peek. “Children and Disasters: Understanding Vulnerability, Developing Capacities, and Promoting Resilience—An Introduction.” *Children Youth and Environments* 18 (2008): 1–29.

⁵⁷Lori Peek, Bridget Morrissey, and Holly Marlatt. “Disaster Hits Home: A Model of Displaced Family Adjustment After Hurricane Katrina.” *Journal of Family Issues* 32 (2011): 1371–1396.

⁵⁸Lori Peek and Alice Fothergill. “Displacement, Gender, and the Challenges of Parenting After Hurricane Katrina.” *NWSA Journal* 20 (2008): 69–105.

⁵⁹Lori Peek and Alice Fothergill. “Parenting in the Wake of Disaster: Mothers and Fathers Respond to Hurricane Katrina.” *Women, Gender and Disaster: Global Issues and Initiatives* (2009): 112–130.

⁶⁰Francis O. Adeola “Mental Health & Psychosocial Distress Sequelae of Katrina: An Empirical Study of Survivors.” *Human Ecology Review* (2009): 195–210.

⁶¹Ibid. Adeola and Picou (2012).

⁶²Thomas A. DeVaney, Sonya C. Carr, and Diane D. Allen. “Impact of Hurricane Katrina on the Educational System in Southeast Louisiana: One-Year Follow-Up.” *Research in the Schools* 16 (2009): 32–44.

⁶³Fran H. Norris, Krzysztof Kaniasty, M. Lori Conrad, Gregory L. Inman, and Arthur D. Murphy. “Placing Age Differences in Cultural Context: A Comparison of the Effects of Age on PTSD After Disasters in the United States, Mexico, and Poland.” *Journal of Clinical Geropsychology* 8 (2002): 153–173.

⁶⁴Edith J. Barrett, Carrie Y. Barron Ausbrooks, and Maria Martinez-Cosio. “The School as a Source of Support for Katrina-Evacuated Youth.” *Children Youth and Environments* 18 (2008): 202–235, 204.

⁶⁵Kai Erickson and Lori Peek. *Hurricane Katrina Research Bibliography*. (Brooklyn, NY: Social Science Research Council Task Force on Katrina and Rebuilding the Gulf Coast, 2011).

⁶⁶Ibid. Leitch, Vanslyke, and Allen (2009).

⁶⁷Ibid. O’Toole (2018).

⁶⁸Lynn Weber and DeAnne K. Hilfinger Messias. “Mississippi Front-Line Recovery Work After Hurricane Katrina: An Analysis of the Intersections of Gender, Race, and Class in Advocacy, Power Relations, and Health.” *Social Science & Medicine* 74 (2012): 1833–1841, 1833.

⁶⁹Kate Eliza O’Connor “‘You Choose to Care’: Teachers, Emotions and Professional Identity.” *Teaching and Teacher Education* 21 (2008): 117–126, 117.

natural disasters “tak[e] on the role of the counselor”⁷⁰ at the risk of their own emotional well-being.⁷¹

Notwithstanding this potential for harm, teachers’ caring labor may be undervalued socially as a result of the feminization of primary-school teaching, difficulties measuring care work, and intrinsic motivations to perform caring labor that appear as individual choices rather than occupational requirements.^{72,73,74} Importantly, when describing an occupation or industry as feminized, its gender balance is less important than its practices, policies, and organization of resources.⁷⁵ In other words, because emotional labor is constructed as a feminized trait, primary school teaching that requires performance of emotional labor is often considered feminized. Consequently, it may be popularly taken for granted, leading to lower compensation and reward^{76,77,78} notwithstanding the additional toll taken by (and services provided in) disaster recovery.

Further, an intersectional lens and institutional approach suggested by the racialized disaster patriarchy framework stress that care work likely interacts with other classed and racialized post-disaster circumstances—including home-based care obligations,⁷⁹ housing precarity,^{80,81} and residential instability.^{82,83} We develop these connections to overcome the tendency to ignore care work and to advocate for appropriate intersectional, post-disaster consideration of educators, as well as other underappreciated yet absolutely essential care workers, within environmental justice and policy circles.

METHODS: THE DEVELOPMENT OF A NEW RESEARCH FOCUS

This study is based on eight interviews with education professionals. They were drawn from a larger study that

⁷⁰Ibid. Devaney, Carr, and Allen (2009), 39.

⁷¹Ibid. Chang (2009).

⁷²Panikkos Constanti and Paul Gibbs. “Higher Education Teachers and Emotional Labour.” *International Journal of Educational Management* 18 (2004): 243–249.

⁷³Ibid. England (2005).

⁷⁴Ibid. O’Conner (2006).

⁷⁵Dana Britton. “The Epistemology of the Gendered Organization.” *Gender & Society* 14 (2000): 418–434.

⁷⁶Sandra Acker. *Gendered Education: Sociological Reflections on Women, Teaching and Feminism*. (Philadelphia: Open University Press, 1994).

⁷⁷Paula England. “Wages of Virtue: The Relative Pay of Care Work.” *Social Problems* 49 (2002): 455–473.

⁷⁸Myra H. Strober and Audri Gordon Lanford. “The Feminization of Public-School Teaching: Cross-Sectional Analysis, 1850–1880.” *Signs: Journal of Women in Culture and Society* 11 (1986): 212–235.

⁷⁹Ibid. Peek and Fothergill (2009).

⁸⁰Megan Reid. “Gender and Race in the History of Housing Policy and Research: From Industrialization to Hurricane Katrina.” *Sociology Compass* 4 (2010): 180–192.

⁸¹Ibid. O’Toole (2018).

⁸²James R. Elliott. “Natural Hazards and Residential Mobility: General Patterns and Racially Unequal Outcomes in the United States.” *Social Forces* 93 (2015): 1723–1747.

⁸³James R. Elliott and Junia Howell. “Beyond Disasters: A Longitudinal Analysis of Natural Hazards’ Unequal Impacts on Residential Instability.” *Social Forces* 95 (2017): 1181–1207.

included in-depth interviews with 22 residents of the Florida Keys conducted over the 2 years after Hurricane Irma that focused on understanding housing and displacement dynamics among middle- and working-class families. This research was approved by University of Oregon Research Compliance Services, Protocol 04232018.040. It became clear through early interviews that educators had especially meaningful insight across dimensions of recovery due to their close, continuous contact with many families. Purposive oversampling of educational professionals was initially pursued to gain a deeper understanding of post-Irma housing precarity and migration from the educators’ vantage point. With the help of a local guide, one author attended a teachers’ meeting to recruit participants. This was the only public, non-charter, elementary school near many of Irma’s most severe impacts, which were felt by students and faculty alike. Mapping the demographics of the profession and the local area, the interviewed educators were majority white and women.

Open-ended interviews took place in-person or over the phone, typically lasting about 90 minutes. They included questions about what participants’ experiences were like before, during, and after Irma and their observations about changes in their community through the recovery process. The open-ended format encouraged the development of research topics beyond the initial focus on displacement.⁸⁴ Interviews were transcribed and coded by an author, resulting in a variety of conceptual and thematic categories germane to recovery as well as one specific to the intersection between educators’ professional roles and their recovery experiences.

Despite the low numbers resulting from the limited sampling pool (elementary educators in a small community) and strictures about ethical post-disaster recruitment⁸⁵ that counseled against repeatedly approaching those initially hesitant, this emergent, unexpected theme was remarkably consistent. This indicates the likelihood of thematic saturation and provides a sound basis for an exploratory case study of recovery from one of the strongest hurricanes to hit the United States in recent memory.^{86,87}

This theme involved educators’ multiple, essential roles that extend beyond teaching their assigned curriculum. They suggested that when children do not have adequate housing, food, or psychological services in the aftermath of natural disaster, teachers’ performance of

⁸⁴Kathy Charmaz. *Constructing Grounded Theory: A Practical Guide Through Qualitative Analysis*. (Thousand Oaks, CA: Sage, 2006).

⁸⁵J.C. Gaillard and Lori Peek. “Disaster-zone research needs a code of conduct.” *Nature* 575 (2019):440–442.

⁸⁶Glenn A. Bowen. “Naturalistic Inquiry and the Saturation Concept: A Research Note.” *Qualitative Research* 8 (2008): 137–152.

⁸⁷Benjamin Saunders, Julius Sim, Tom Kingstone, Shula Baker, Jackie Waterfield, Bernadette Bartlam, Heather Burroughs, and Clare Jinks. “Saturation in Qualitative Research: Exploring Its Conceptualization and Operationalization.” *Quality & Quantity* 52 (2018): 1893–1907.

caring labor expands situationally. Because accounts of disaster sometimes involve myth and misconception,⁸⁸ analysis of how educators' roles change during recovery is necessary. This prompted the addition of questions focused on the educators themselves. These accounts resonated with existing research into disasters, gender, and care work yet suggested the unexplored nexus of class and occupational status, prompting the development of the present focus.⁸⁹

RESULTS AND DISCUSSION: CARING FOR CHILDREN AFTER IRMA

New teaching duties within and beyond the classroom

Educator participants overwhelmingly reported that their duties had expanded to include heightened emotional care and support for students and their families, including advocacy and support outside the classroom, while also coping with personal trauma. This represented a shift from traditional curriculum delivery. One teacher explained how class time refocused on students' well-being: "We kind of eased up and backed off on the kids. It wasn't a matter of coming to school at eight o'clock and leaving at three...It was 'did you have breakfast this morning? Do you have clean clothes to wear? Do you have soap? Do you have food?' It was more of a nurturing thing for the first few months with the kids."

Nurturing became a key job duty in the context of natural disaster, a form of labor typically associated with unpaid caring labor performed by mothers. Another teacher who was likewise concerned with providing necessities for students explicitly stated that she had assumed a more maternal role: "You kind of switch roles from teacher to maybe the role of the mom or an aunt."

In other cases, educators strove to present a sense of normalcy in abnormal circumstances. Yet even if they wanted to continue with curriculum delivery to give students "a sense of normalcy, business as usual, let's do our best teaching and let's have school," the fact that these students "just went through a ton of trauma" meant that teachers needed to shift their expectations of post-disaster education. One teacher expressed fear of the repetition of trauma that had been a residual effect of earlier hurricanes, stating that during heavy rainfall students who experienced past hurricanes would get nervous and he would spend class time reassuring them. Another teacher explained that the school had opened a "shopping plaza," which included supplies such as shampoo and toothbrushes. Teachers helped distribute goods to students, while also trying to, as another teacher put it, "get back to normal."

These experiences reveal that after disaster, educators should be conceptualized as frontline trauma recovery

workers delivering essential care work. Moreover, the experiences of care work in this feminized occupation represent especially gendered disaster burdens, as teachers undergo stress as they balance the sometimes-conflicting goals of formal education and provision of additional emotional care. The fact that care work is disproportionately demanded in feminized occupations, therefore, appears to contribute to racialized disaster patriarchy, in which workers in feminized occupations take on undue burdens of care within institutional and occupational contexts.

In addition to their class preparation and their performance of care work within the classroom, teachers reported spending extra time outside of the classroom, further blurring the lines between working and non-working time. One teacher explained that the week school reopened they "called every one of our students to check upon them. You know, is everything okay? Is there anything we can do for you? It took me a whole day, obviously, to call and talk to every single family." Teachers also spent time outside of the classroom working with local organizations on Christmas donations. One teacher noted, "these organizations made it happen just to give [the students] the most sense of normalcy that I possibly could. And that wasn't just me...every teacher doing that for all our kids."

Teachers also took on an advocacy role for both children and families. One participant shared a story about a science fair that was scheduled to take place shortly after the school reopened. Science fair projects often involve considerable parental involvement, so teachers suggested cancelling it because many families were unhoused or otherwise experiencing crisis. Teachers also appealed to the district asking for state testing to be cancelled or pushed back, as students had missed too much school to be successful.

Teachers' emotions and cumulative stress as environmental justice issues

The post-disaster context was both gratifying and distressing on personal and professional levels, with participants describing not only their own stress but also pride at serving student needs. In some early elaborations,⁹⁰ emotional labor implied a deleterious effect on educators. The relational approach preferred by some later scholars, however, observes that in some contexts such as education "paid care work can both be personally fulfilling and also make workers vulnerable to burnout, emotional fatigue, or wage exploitation."⁹¹ These scholars have noted that this fatigue can combine with home care work obligations, including instances of work-family conflict due to long or irregular hours, or dual obligations with overlapping stress. Moreover, "inequalities related to race, class,

⁸⁸Kathleen Tierney, Christine Bevc, and Erica Kuligowski. "Metaphors Matter: Disaster Myths, Media Frames, and Their Consequences in Hurricane Katrina." *The Annals of the American Academy of Political and Social Science* 604 (2006): 57–81.

⁸⁹Ibid. Charmaz (2006).

⁹⁰For example, Arlie Russell Hochschild. *The Managed Heart: Commercialization of Human Feeling*. (Berkeley, CA: University of California Press, 1983).

⁹¹Ibid. Duffy, Armenia, and Stacey (2015), 9.

gender, and citizenship status shape the hazards of paid care work,” as do poor psychosocial environments.^{92,93}

Providing support is particularly important for educator participants who were working as essential frontline emotional care workers—providing care for students while still having to manage their own experiences of class-mediated disaster trauma. An intersectional approach that elevates intracategorical analysis of professional and personal contexts and highlights their environmental justice consequences is, therefore, necessary to adequately recognize this essential role and mitigate consequent injustice.⁹⁴

Interviewed educators reported distress that resulted from the cumulative pressures of care at home and work. This emphasizes the importance of external stresses (i.e., home damage) as part of this dual complex of fulfillment and fatigue. For example, there was a broad sense of empathy and a feeling of empowerment at being in a position so consequential within disaster recovery. However, many were openly concerned about both the emotional strain from increased work obligations and the personal impacts of disaster, demonstrating the importance of broader psychosocial contexts. One education professional characterized the effects of months of home cleanup and repair in the south Florida heat as creating overwhelmed “Irma zombies, you’re an Irma zombie because you just don’t know what to do...we couldn’t do it all.” Yet another recounted that despite these common hardships “most of our staff, they stayed pretty strong. And we do what we have to, you know. I’d say 98% of the staff came back the first day.”

The dual hardships faced at home and work were outlined by another, who admitted “[the Keys are] not somewhere I want to live the rest of my life after everything we went through with Irma.”

“I’ve got tears in my eyes but it’s part of it, I mean, what we went through and not just me, so many other people, it’s hard. You know, here you are a grown adult. And you both have jobs and you know, you’re homeless and you have to tell your kids that no we can’t go back to the house and you don’t want [them] to see it and...as a parent that’s really hard. And then you have to pull yourself together and be there for your students. And then you know...there’s depression and, you know, I’m just gonna get diagnosed with depression.”

This account, and others that coupled stories of maintaining a brave face for students while also coping with the stress of attempting to rebuild or relocate while working, illustrates the importance of intersectional analysis of the distribution of the emotional burdens post-disaster. Coupled with expectations drawn from the literature, we believe

that these accounts evidence the cumulative creation of disproportionate environmental burdens through the combination of personal recovery and professional obligations to assist others. This is particularly important because of difficulties in disaster recovery specific to working- and middle-class families, including loss of affordable housing through disaster opportunism⁹⁵ and neoliberal recovery programs that may be less accessible for those working full-time due to onerous time and paperwork requirements.⁹⁶ In this way, for this cohort of educators Irma’s impacts are best understood at the intersection of class and occupational status, rather than either taken alone.

Further, since collective trauma often arises in the recovery phase of disaster,⁹⁷ we should recognize and support the crucial role played by teachers and other care workers in community healing. Although the size and composition of the participant pool cautions against drawing any conclusions about race, it is likely given the weight of environmental justice⁹⁸ and disaster^{99,100} literature that race also intersects with disaster care work to form a component of racialized disaster patriarchy.¹⁰¹ This would likely be a fruitful avenue for future research. Importantly, since climate-related disasters are increasingly viewed as regular occurrences and not anomalies,^{102,103} education professions should work to address their embedded emotional care responsibilities.

CONCLUSION

Our exploratory results highlight the potential importance of post-disaster gendered care work, as well as how these professional obligations may join with personal tragedy to create a double, and unequal, burden. Literature analyzing educators’ care work confirms that “the caring nature of the teaching role is largely neglected in educational policy and teacher standards.”¹⁰⁴ Moreover, sociocultural expectations to provide emotional labor may contribute to the “prisoner of love” phenomenon, where “the genuine care that motivates some care workers” leads to the “cruel irony that these intrinsic motives may make it easier for employers to get away with paying workers less.”¹⁰⁵

⁹⁵Naomi Klein. *The Battle for Paradise: Puerto Rico Takes on the Disaster Capitalists*. (Chicago: Haymarket Books, 2018).

⁹⁶Ibid. Tierney (2015).

⁹⁷Ibid. Eyerman (2015).

⁹⁸Dorceta Taylor. *Toxic Communities: Environmental Racism, Industrial Pollution, and Residential Mobility*. (New York: NYU Press, 2014).

⁹⁹Ibid. Elliott and Pais (2006).

¹⁰⁰Darwin BondGraham. “The New Orleans That Race Built: Racism, Disaster, and Urban Spatial Relationships.” *Souls* 9 (2007): 4–18.

¹⁰¹Ibid. Luft (2016).

¹⁰²James R. Elliott and Matthew Thomas Clement. “Natural Hazards and Local Development: The Successive Nature of Landscape Transformation in the United States.” *Social Forces* 96 (2017): 851–876.

¹⁰³Junia Howell and James R. Elliott. “Damages Done: The Longitudinal Impacts of Natural Hazards on Wealth Inequality in the United States.” *Social Problems* 66 (2019): 448–467.

¹⁰⁴Ibid. O’Conner (2006), 117.

¹⁰⁵Ibid. England (2005), 395.

⁹²Ibid. Duffy, Armenia, and Stacey (2015), 80.

⁹³Alicia Kurowski, Jon Boyer, and Laura Punnett. “The Hazards of Health Care: Physical and Psychosocial Stressors in Paid Care Work.” Chapter 7. In: Mignon Duffy, Amy Armenia, and Clare L. Stacey. *Caring on the Clock: The Complexities and Contradictions of Paid Care Work*. (New Brunswick, NJ: Rutgers University Press, 2015).

⁹⁴Ibid. Nygren and Wayessa (2018).

Moreover, given the intensified caring labor that teachers perform in the post-disaster context, the lack of environmental justice analysis of educator's care work provides *prima facie* evidence for its hidden nature, corresponding with decades of feminist research into emotional labor in feminized occupations. Although efforts in other fields¹⁰⁶ provide a foundation for the shift toward greater recognition, continued study of this essential role will further develop the legacy of post-Katrina environmental justice research, including intersectional approaches to crisis and disaster.

Accordingly, we recommend sustained analysis of disaster care work obligations and their mental health and material consequences. We do so to encourage research into the intersectional disadvantage arising from the combination of feminized care obligations and well-documented class-based environmental injustice, along with racial and other modes of injustice. Although we recognize that our results may not apply to all circumstances, we believe that these accounts support additional inquiry into care work and environmental justice. By acknowledging the likelihood that post-disaster care work is important, hidden, and potentially traumatic, our results suggest that disaster preparedness initiatives should incorporate training, participation in disaster planning, and additional compensation, as well as mental health services to students and educators alike through affordable health care and targeted, school-based interventions. They also suggest the need for additional research, highlighting the engagement of professionals who may not identify as environmental activists in movements and activities that support environmental harm reduction, as well as the environmental justice consequences of these efforts.^{107, 108, 109}

Clearly, these suggestions do not address the structurally gendered nature of caring labor that is performed within feminized teaching. By examining of the experiences of educators and organizing around adequate compensation and professional support, we can begin to provide relief in terms of increased recognition and mitigation of disproportionate burdens. That said, broader structural and institutional changes are necessary to relieve the fundamental sources of pressure. These include efforts to alleviate the causes of student trauma, such as adequate funding of post-disaster relief, health services, and housing programs. They also include broader structural shifts toward eliminating the gendering of occupations, the sanctions on those working in feminized occupations, and the disparate effects of disaster across the milieu of intersecting social positions. By so doing, we can work toward dismantling racialized

disaster patriarchy on multiple fronts in institutional contexts such as schools where pre- and post-disaster practices can be adapted and make an impression on students and educators alike. This could provide an alternative to symptomatic intervention, helping students to unlearn the broader gendering of care, in both occupational and non-occupational contexts. Similarly to how COVID-19 demonstrated the essential nature of many hidden or undervalued occupations, this may unlock insight into the roles and treatment of a variety of care workers in both disasters and pandemics, including those contending with the pandemic and the residue of disasters such as recent hurricanes and wildfires. This includes educators across institutional contexts who may find their student pandemic support roles expanding situationally while they also contend with the pandemic's emotional effects in their daily life.

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¹⁰⁶For example, Ibid. O'Toole (2018).

¹⁰⁷Ibid. Taylor (2014).

¹⁰⁸Julie Sze. *Noxious New York: The Racial Politics of Urban Health and Environmental Justice*. (Boston: MIT Press, 2006).

¹⁰⁹Luke W. Cole and Sheila R. Foster. *From the Ground Up: Environmental Racism and the Rise of the Environmental Justice Movement* (New York: NYU Press, 2001).