

Sculpting stories: methods to unsettle knowledge production in disasters

Emily Ragus

Department of Anthropology, University of Amsterdam, Amsterdam, Netherlands

Catherine Sutherland

*School of Built Environment and Development Studies, University of KwaZulu-Natal,
Durban, South Africa*

Lenore Manderson

*School of Public Health, University of the Witwatersrand,
Johannesburg, South Africa, and*

Eileen Moyer

Department of Anthropology, University of Amsterdam, Amsterdam, Netherlands

Received 31 January 2024
Revised 2 August 2024
19 September 2024
14 October 2024
Accepted 21 October 2024

Abstract

Purpose – This study examines the application of arts-based research (ABR) methods in producing knowledge about the lived experiences of disasters, particularly focusing on the effects of flooding in an informal settlement in South Africa. It emphasizes the use of playdough sculpting as a tool for storytelling, aiming to address and reduce power imbalances between local participants and external researchers.

Design/methodology/approach – The study employed a qualitative approach, using playdough sculpting workshops conducted in the Quarry Road West informal settlement in Durban. These workshops were designed to capture the personal stories of individuals affected by the 2022 Durban floods. Data were collected through participant observation, photography and interviews, and were analyzed using a thematic framework to identify recurring patterns in the participants' disaster experiences.

Findings – The research demonstrates that ABR methods, particularly playdough sculpting, effectively foster participatory engagement in disaster research. This method provided a platform for participants to describe their embodied experiences of the floods, addressing uneven epistemological power dynamics. It also highlighted the potential of ABR in facilitating the decolonization of disaster research by centering local narratives.

Originality/value – This study offers insights into the potential of ABR as a creative methodology in disaster research. It highlights how ABR can complement traditional research approaches by incorporating local perspectives and fostering more inclusive knowledge production in the context of disasters. The study also presents a ten-step guideline for applying playdough sculpting across various disciplines.

Keywords Arts-based research, Disasters, Decolonizing knowledge, Floods, South Africa

Paper type Research paper

© Emily Ragus, Catherine Sutherland, Lenore Manderson and Eileen Moyer. Published by Emerald Publishing Limited. This article is published under the Creative Commons Attribution (CC BY 4.0) licence. Anyone may reproduce, distribute, translate and create derivative works of this article (for both commercial and non-commercial purposes), subject to full attribution to the original publication and authors. The full terms of this licence may be seen at <http://creativecommons.org/licences/by/4.0/legalcode>

The authors express their deep appreciation to the University of KwaZulu Natal, with particular recognition for the invaluable contributions made by Bashintshile Buthelezi and Duduzile Khumalo (Mah Dudu). The guidance provided by them played a crucial role in facilitating Emily's introduction and collaboration with the residents of Quarry Road West informal settlement. Special thanks to the continuous openness and willingness of the artists from Quarry Road West informal settlement, who actively took part in this research and for whom this project would not have been possible. Additionally, Emily extends her thanks to Alexandra Rose Howland for her artistic influence and technical guidance throughout this process. Emily was funded by the Sir John Monash Foundation, Australia. This study was conducted in association with the project "Ecological Community Engagements: Imagining Sustainability and the Water-Energy-Food Nexus in Urban South African Environments (Eco-Imagining)" (PIs: Lenore Manderson and Eileen Moyer), funded by the Merian – National Research Foundation (South Africa) and NWO – Dutch Research Council (Netherlands).



Introduction

In disaster studies, the concept of vulnerability is used to explain why a natural/physical or human-induced hazard might result in disaster (Barrios, 2017; Hoffman and Barrios, 2019, p. 2). In South Africa, hazards such as droughts, floods, storms and fires impact significantly on people living with high levels of socioeconomic vulnerability (Culwick *et al.*, 2019; Knight, 2019; Mazeka *et al.*, 2019; Mulugeta *et al.*, 2007; Niekerk and Nemakonde, 2017). Shaped by physical, economic, political and social factors, vulnerability influences how individuals and communities can “anticipate, cope with, resist, and recover” from disasters (Wisner, 2016). Persistent and extreme conditions of environmental risk undermine people’s capabilities, disproportionately affecting specific populations and individuals (Chmutina and Von Meding, 2019).

In this article, we focus on the experiences of the urban poor affected by a flood in Durban, South Africa. We argue that arts-based research (ABR) methods provide a new perspective for understanding and decolonizing the ways knowledge is produced. ABR is a participatory process, enabling participants to shape the research and promoting respectful and reciprocal relationships among co-researchers (Manifesto/accord, accessed 2024). Developed by the first author, Emily Ragus, the playdough sculpting method allows participants to express their experiences of disasters in ways that might be overlooked by traditional methods such as interviews or surveys. It supports an open-ended inquiry and aligns with calls to decolonize disaster studies by asking, “whose worldviews and senses inform the work?” (Cadag, 2022).

In this study, ABR provided a collective space for communication, made possible by the pre-existing relationships of some of the researchers (including the second author, Catherine Sutherland) with the participants. The method was initially introduced as an “ice-breaker” in a workshop on basic health education and first aid, conducted in 2023 to provide skills to participants. Disaster scholars emphasize the importance of diverse knowledge systems to understand and address the impacts of disasters (Kelman, 2020). In this study, playdough sculpting facilitated participants expressing their stories through their sculptures and enabled them to discuss difficult events while it fostered communication and insight. The process created tangible representations of trauma, revealing the physical and psychological effects of floods.

Arts-based research in disasters in South Africa

The United Nations Office for Disaster Risk Reduction (UNDRR) defines a disaster as “a serious disruption of the functioning of a community or society due to hazardous events interacting with exposure, vulnerability, and capacity, leading to human, material, economic, and environmental losses and impacts” (UNDRR, 2019, p. 9). South Africa is recognized as a leader in disaster governance due to its progressive preventative and inclusive legislation and policies (Culwick *et al.*, 2019; Pelling and Holloway, 2006; van Niekerk, 2014). However, challenges in implementing these policies exacerbate the impacts of disasters. Colonial and apartheid-era inequalities further perpetuate environmental vulnerabilities, with race, class and gender significantly shaping the outcomes of natural/physical hazards, as observed in the informal settlement where this research was conducted.

Calls for the decolonization of knowledge represent a political movement against western hegemony in framing knowledge (Cadag, 2022). To achieve this, there is a need to rethink how disasters are researched, emphasizing diverse voices and knowledge systems (Sang Yum and Baars, 2023; Takach and Cook, 2024). The RADIX Disaster Manifesto, for example, calls for equitable relationships between researchers from different global contexts, advocating for inclusive and representative practices (Gaillard and Raju, 2022; Manifesto/accord, accessed 2024). Traditional research approaches like structured interviews can perpetuate these inequalities, reinforcing colonial power dynamics and global knowledge asymmetries (Farrales *et al.*, 2022; Sang Yum and Baars, 2023). In contrast, ABR approaches, such as the one we describe, offer a decolonizing methodology that challenges knowledge production dominated by the global north (Musariri *et al.*, 2024).

In April 2022, catastrophic floods, resulting in deaths, infrastructural damage and economic loss, occurred in Durban. In the study we report here, we used ABR methods to invite those most impacted by the floods to narrate their stories in their own voices. Visual and oral methodologies are increasingly recognized as essential tools for decolonization, allowing for expression beyond traditional modes of knowledge production (Pink, 2004, 2011; Cartwright and Crowder, 2017; Visse *et al.*, 2019). ABR offers novel ways to address power imbalances between researchers and participants by fostering active engagement and reciprocal understanding, and so supports decolonizing knowledge production by recentering what counts as knowledge. It challenges the dominance of scientific approaches that reduce experience to quantitative evaluation or that view disasters solely through narrow, analytical frames. By reclaiming power through storytelling, this approach creates transformative spaces. The methods align with Rudolf *Arnheim's* (1980) perspective that direct sensory experiences are crucial for authentic knowledge acquisition and address limitations of language in addressing power and oppression.

Art has been used to frame trauma, retrieve and process traumatic memories and help communities reclaim control over their lives (Huss *et al.*, 2016). The approach, we argue, enhances the research process through art-making, oral storytelling, photovoice and other communicative forms that allow participants to craft their own narratives (Bennett and Dearden, 2013; Gant *et al.*, 2009; Huss and Cwikel, 2005; Sim *et al.*, 2019; Wang and Burris, 1997). Creative methodologies are continually evolving through the use, for example, of graphic novels to teach children about earthquakes, body-mapping to depict lived experiences and engaging youth as citizen scientists in post-disaster research (Sharpe and Izadkhah, 2014; Green, 2021; Peek and Guikema, 2021). These methods also have the potential to facilitate healing and build resilience in disaster-affected communities (Van Loon *et al.*, 2020; Huss *et al.*, 2016; Kuriansky, 2019).

Quarry Road West informal settlement and the 2022 Durban floods

Durban is the largest city in the province of KwaZulu-Natal (KZN), South Africa. The contrast between its middle-class suburbs and informal settlements such as Quarry Road West, located in Durban's urban core, captures the city's stark disparities. In Quarry Road West, social, economic and environmental inequalities converge. The settlement, established in 1984, straddles the Palmiet River and is bordered by a highway and an arterial road. It is characterized by precarious living conditions. Informal houses, built with basic materials of wooden poles, tin, chipboard and cardboard sheeting. About 1,100 households are located in the settlement (Mazeka *et al.*, 2019), with around 4,500 people living in the settlement, as they claim their right to the city and access to urban opportunities. The majority of residents speak *isiZulu* and *isiXhosa* and originate from the provinces of KZN and the Eastern Cape.

Over the past five years, Durban has faced a series of overlapping crises, including the social and economic fallout from COVID-19, fires, civil unrest and recurrent floods. This includes the flood of April 2022, considered to be one of the worst on record in Durban and in KZN, in terms of lives lost and overall economic impact (Grab and Nash, 2023). It resulted in close to 500 fatalities, displaced 40,000 individuals, destroyed over 12,000 homes and resulted in significant damage to infrastructure, including 34 clinics, 23 hospitals, office buildings and bridges, roads, power lines, telecommunication towers and water and sanitation pipes (Mudefi, 2023). The floods caused major sewerage infrastructure damage, leading to ongoing sewage leaks that continue to impact the city's waterways. The overall economic impact of the floods was estimated at 17 bn rand (Mudefi, 2023).

During the floods, residents of Quarry Road West informal settlement received regular updates from the community-based early warning system that had been established in the settlement since 2016, while relying also on their own knowledge of the river (Sutherland, 2024). When the river changed course, people had to evacuate the settlement under extremely difficult conditions, as this took place at night during a period of national load shedding. In the

aftermath, they graphically described the changes in terms of sensory perception. The slow and engulfing mud rose around them, altering the smells, shapes, colors and sounds of a space with which they were intimately familiar: “There was nothing left when I came home, the mud had stained all that wasn’t washed away; the only color (other than the mud) that I saw was the yellow of a flower that somehow survived” (Sipho). The water from these floods reshaped the space, washing away all the informal houses and leaving behind stretches of uninhabitable soil, further reducing the already limited available land.

Data collection methods

During a six-month period of ethnographic inquiry, Emily conducted a multiphase data collection process. These included two introductory workshops, which involved two arts-based processes – playdough modeling and body mapping. The next phase involved 28 one-on-one life narrative interviews, each lasting between three and six hours. These interviews were conducted in English, except for one in isiXhosa, with a translator assisting the interviewer (Emily). All interviews were recorded, transcribed line by line and digitally stored.

In the following, we describe playdough modeling as an ABR method, drawing on data from two ABR workshops that were intended to center on injury and first aid. We discuss how playdough helped to shift power dynamics (research findings will be reported in other articles). Playdough was introduced to allow participants to convey their personal experiences of the floods and to portray the lived reality of disasters through a sculptured model of the self. Throughout the workshops, detailed notes were taken to document participant engagement, reactions and communication. Images were regularly produced and later reviewed as part of the analysis process. As we describe below, the technique emerged as valuable in lessening power disparities between researchers and participants, granting the latter autonomy to shape their stories and decide on the extent of their sharing. As discussed, the method introduced a creative, human-centered approach to disaster studies.

The first workshop, initially intended to share first aid skills and to introduce the study, was conducted in the secure environment of a local community hall; this allowed us to engage with those who had been most impacted by the floods and to establish relationships and rapport with residents. Following the advice of local researchers, a second workshop was then held in the local tavern (Plate 1, shebeen).

The research aim of the larger project was to explore the embodied experience of flooding events and consider how these events changed people’s perception of themselves and their environment. Prior to commencing her Ph.D., Emily had worked in clinical emergency nursing and as an aid worker in several humanitarian crises. In the workshops in Quarry Road West informal settlement, she offered basic first aid and practical lifesaving knowledge as a way to offer something to the community where she planned to do research. To facilitate these workshops, Emily worked with other researchers, including Catherine from the University of KwaZulu Natal (UKZN), whose team had already engaged in community-based research and the co-production of knowledge for 10 years in the informal settlement. Members of the UKZN team introduced her to community leaders and enabled all workshops to be conducted in a mix of isiZulu and English, ensuring communication and co-production across different languages.

The workshop

Initially, data collection was planned through interviews and observational ethnography conducted by Emily. According to community leaders, the 2022 floods reshaped the spatial landscape of the Quarry Road West informal settlement. The floodwaters eroded large areas of land and blocked the space under the bridge, which had previously provided a private area for drug use. This shift created new spaces for drug-related activities and contributed to a rise in



Source(s): Photography by Alexandra Rose Howland

Plate 1. First author teaching first aid training in Themba's Tavern

drug-related violence. For this reason, community leaders advised the researchers to approach the space cautiously and prioritize the safety of both the researchers and local collaborators. As a result, the project's methods were modified to address evolving security challenges, beginning with a series of injury and healing workshops which began approximately 10 months after the 2022 floods. The workshops not only taught basic life-saving skills but also, as noted above, served as a way for Emily to be introduced to and begin to gain the trust of the community. To promote these workshops, posters were created in isiZulu and English, and community leaders were asked to place them on the community ablution blocks, the only sanitation facilities available to approximately 4,500 residents but also one of the only public spaces available. This recruitment strategy aimed to ensure that those interested in learning new skills and participating in the research could do so voluntarily, without imposing additional pressure on people who were already contributing to research with UKZN. This approach also broadened the range of participants beyond the community leaders who usually worked with UKZN. The workshops attracted a diverse group of men and women approximately 18–60 years old.

The turnout for the first workshop exceeded expectations, as it had originally been designed to accommodate approximately 15 participants. On the day of the workshop, as announced on the posters, a taxi bus to transport the participants was organized by Emily. Over 70 people arrived, but with space for only 47 on the bus, some volunteered to return for a follow-up workshop to be scheduled in the coming weeks.

The workshop was intended to follow a structured agenda based on Emily's previous experience: a short icebreaker, two hours of first aid training, a lunch break, a community-based map activity and another two hours of training. To maintain a strong community focus, we enlisted the expertise of a local caterer from the settlement to prepare sandwiches for both workshops. The first aid training was hands-on, using props found around the community to ensure participants could apply their knowledge in a local context. Emily also partnered with an art consultant, Alexandra Howland, to adapt a graphic educational cartoon ([Figure 1](#)), based on material provided by the International Committee of the Red Cross (ICRC), to communicate basic first aid protocols for residents. This included essential instructions on applying bandages and tourniquets to stop bleeding, basic burn care, strategies for managing



Figure 1. Excerpt from the injury and healing first aid workshop graphic cartoon; this is a modified version of education material courtesy of the International Committee of the Red Cross

heatstroke and rehydration, the recovery position, handling electrocution and addressing common injuries and bites. The cartoon was translated into isiZulu, and each participant received a copy as a handout.

Many younger participants preferred communicating in English, while older participants communicated in a mix of isiXhosa or isiZulu. Education levels among participants varied, with the highest level being the completion of tertiary education; most participants worked casually, in the informal sector or were unemployed. All participants except for one had lived in Quarry Road West informal settlement during the 2022 floods; some had resided there for as long as 25 years.

Each workshop participant was given a small portion of playdough (plasticene or children’s modeling clay), enough to fit into the palm of their hand, and was invited to craft a three-dimensional representation of themselves. Participants were shown an example of how to sculpt the playdough, and Emily created her own version of self. She clarified that, given their unfamiliarity with each other, the playdough self-representations would help establish connections among each other.

Participants were divided into smaller groups to foster open dialogue, with seating arrangements that we hoped would encourage trust and confidence. Although participants were initially assigned a single block color, many negotiated color exchanges and incorporated alternate materials to add texture and abstract elements to their model, using ink to draw directly onto the malleable dough or incorporating metal objects to create texture. Several artists used shredded paper to symbolize aspects such as fragility or resilience, enhancing their visual narratives of self.

Within 15 min, the playdough exercise had evolved into something far more significant than “ice-breaking.” As participants engaged with the tactile experience of sculpting, the room filled with noise and excitement. People eagerly compared their models, laughing as they interacted with one another. Their wish to continue beyond the scheduled time, showing more interest in creating art than in the first aid training, led to greater flexibility, allowing participants to continue to mold the images and consequently, encouraging more horizontal and democratic research practices (Seppälä *et al.*, 2021).

After approximately 40 min, Emily encouraged members of each group to present their 3D models. Most chose to speak in isiZulu, with their words recorded and later transcribed. Participants stood at the front of the room to share their models and the personal stories behind them. As the session continued, participants transitioned from being “participants” to becoming “artists,” each contributing to the collective storytelling of their embodied experiences of the floods. The first to speak was Siphso, who, having worked closely with the UKZN team over the past decade, felt comfortable expressing her thoughts and ideas of her art (Plate 2). Catherine had suggested Siphso go first, as she knew her power and ability to engage others and to give them the confidence to speak openly and from the heart. She stood up and began:

This is me. You can see that I have different colors on my body to show injuries. Some are at the back and are not easy to identify. This doll represents myself and shows that you can only see me on the outside, but you will never see my inner spirit or things which are in my heart. Which means I have two lives: the outer life, which is easy for people to see, and my inner life, which is not easy to see. There is a life which the public can see, and a secret life which only I know (Siphso).

Siphso used white playdough on top of her dark blue figure to represent her external injuries, drawing a contrast between her visible, outward appearance and the hidden inner world known only to herself. After Siphso, each artist was invited to stand and explain their model. For over an hour, each person stood up and explained their model to others. The models allowed for and reflected a wide range of self-representations, as each artist used the playdough sculpting to express their unique experiences. During this time, there was a subtle shift in the power dynamics of the workshop. Participants took control of the time to share their stories, moving away from the workshop’s initial didactic focus. Using playdough models facilitated



Source(s): Photography by Alexandra Rose Howland

Plate 2. The middle 3D sculpture is Siphso’s “injured” doll

interaction and provided insights into local knowledge of injury and survival, revealing nuanced connections between people and their environment. By working toward a safe environment and through the process of art-making, people opened up about their connections with and understanding of the environment around them. This was exemplified when Funani (pseudonym) spoke about the fragility of his life:

This (playdough) is a butterfly; these butterflies used to appear during the festive season in December. They typically vanish when the festive season concludes. I chose to depict this butterfly to express myself. Perhaps, in a few years, I may no longer exist or may not be spiritually present. The butterflies arrive during December and then vanish.

The element of play, associated with the pliability of clay and the slow process of moving their hands, seemed to allow participants the freedom to reflect on their experiences. This ensured that they had time to tell the story that they wanted to share. As this storytelling unfolded, the artists took control of the process and time. The consequent power shifts suggest the transformative potential of art as a means of questioning and reshaping power structures inherent in research endeavors. After each artist explained their model, the workshop continued, but significant portions of the first aid curriculum had to be removed due to time constraints.

ABR consequently expanded the scope of disaster research by giving participants the space to narrate their experiences and define their boundaries in doing so. Playdough modeling captured the deeply personal and communal dimensions of disasters, revealing the subtle and ongoing impacts of these events. The social consequences were vividly expressed by individuals, who shared their reactions to each other in the aftermath of the disasters. Linda (Plate 3) explained the complexity of these interactions:

This is me, and I am wearing a skirt. I am not a person who wants to expose the secrets of others (who live around me). This skirt is a symbol to cover people's stories (from within Quarry Road West informal settlement). These hands are wide open to show that I am welcoming everyone. I am not a person who loves conflict and seeks peace wherever I am.

Within the realm of disasters, ABR allows participants to express their thoughts and emotions tangibly, facilitating a deeper exploration of lived trauma (Green, 2021; Gullion and Schäfer, 2018; Knowles and Cole, 2007). Bafana taught us how violence in his community became an



Source(s): Photography by Alexandra Rose Howland

Plate 3. The first doll wears a skirt, a symbol for covering stories

embodied part of his self-perception (Plate 4). By demonstrating that such violence is not just witnessed but also internalized, he showed us how ABR methods can be both reflexive and critical in disaster research, offering a distinctive means to uncover and explore these complexities.

Discussion

We provide an analysis of the data in a later article; here, we focus on the method. Throughout this ongoing research, opportunities emerged to reflect on how ABR methods could include a diverse range of participants. The data collected through ABR also influenced subsequent research, highlighting the importance of incorporating sensory data to better understand lived experiences. A thematic inductive analysis of the stories that emerged from the playdough models was conducted, categorizing the images based on physical attributes, social and economic symbolism, the impact of the environment on self-perception and themes such as self-representation, gender and hope.

In examining the impact of disasters, it is essential to foreground the personal reflections and lived experiences of those most affected. One participant, Buhle (pseudonym), metaphorically compared life's challenges to storms:

There are storms in life but they don't kill you—they just leave a wound and a mark. The environment teaches us how to behave in different situations. This (playdough) doll is motivated to start afresh even in the situations that are so bad. All of us, we deserve the best life. Life brings thorns, but we have to continue with it and hope one day to come out free.

Buhle's story taught us how the impact of floods extended beyond economic and physical devastation, creating deep social and psychological scars. Regardless of their background, external disaster researchers have limited insight into how specific bodies and experiences are situated within the wider historical and structural context that shapes them. Disaster studies must employ local knowledge to understand how individuals are directly affected by disasters. This involves acknowledging the trauma of these events and actively involving those who have experienced them. By empowering marginalized voices and embracing nontraditional forms of expression, ABR creates space for more inclusive and contextually relevant



Source(s): Photography by Alexandra Rose Howland

Plate 4. Bafana (pseudonym) described his embodied violence through his sculpture

understandings of disaster experiences. This approach redefines the role of the researcher and reshapes the process of knowledge creation, aligning it more closely with the lived realities of those most affected by crises. Our aim in using ABR was to challenge dominant ideas that marginalize alternative ways of understanding and knowing. The active participation of community members was essential, ensuring that they felt respected and comfortable throughout the process. This approach validated their perspectives and, as discussed above, led to a second workshop in a shebeen, a social space usually dominated by men; this deepened engagement with the community on their terms. Given the positionality of the research team (Emily is both white and an outsider to South Africa), it was crucial to navigate the ethical complexities of race, gender, class and belonging. Recognizing these dynamics, ABR became a vital tool for fostering an inclusive and culturally safe environment.

Researchers must also consider ethical questions, such as who decides the need for research, whose research it is, and who benefits from it ([Manifesto/accord, accessed 2023](#)). Researchers also need to be mindful of the extent to which participants are comfortable sharing personal information and experiences, and, as suggested by others, art has been employed as a reflective, culturally safe approach to avoid replicating existing power imbalances ([Coholic et al., 2009](#); [Lenette et al., 2022](#); [Ugurlu et al., 2016](#)). In our study, playdough sculpting enabled participants to create a space of safety to express their experiences of floods at their own pace. The emphasis was on the process rather than the result, valuing authenticity of expression over aesthetic merit. This method allowed participants to set their own boundaries regarding what they felt comfortable sharing.

By acknowledging the power dynamics between local and external researchers, this method facilitates the creation of a collective visual narrative grounded in situated knowledge. Through the process of sculpting, participants are able to articulate their personal experiences of flooding in a tangible and expressive way. For instance, Mpumelelo, one of the artists, used this method to speak about love in the aftermath of the floods, revealing vulnerability: “This is a bucket of love and this doll shows the love to all the people in the community. Love is free on earth; some members of the community still have that love. We need to spread love where we stay so that we will have a good community” ([Plate 5](#)). Mpumelelo highlighted to the researchers the emotional strength present in the community after the disaster.

Crucial in ethnographic studies, reflexivity in research involves questioning one’s assumptions. This method strives to bridge the gap between researchers and participants, creating a supportive and creative environment. Although power differentials cannot be completely eradicated, acknowledging and addressing them is essential for fostering a sense of co-production ([Muhammad et al., 2015](#)). Engaging deeply in participatory information exchange is necessary to understand how disasters reshape social spaces and how people adapt to these changes ([Dahlberg et al., 2015](#), p. 67). In our workshops, dynamic dialogue unfolded through artistic storytelling, revealing deep insights into the traumatic experiences of individuals coping with disasters.

The success of the workshops and subsequent research depended on maintaining a continuous feedback loop involving community leaders, researchers from UKZN, the art consultant Alexandra Rose Howland and Emily, all working together to create a safe and welcoming space. This process highlighted the necessity of a well-structured, flexible framework for applying these methods, particularly in settings where strong pre-existing relationships are absent or where participants may not feel at ease using playdough sculpting for visual storytelling.

To address this need, the “Sculpting Stories Ten-Step Guide,” set out in [Appendix](#), was developed. The aim is to provide a comprehensive approach for implementing playdough sculpting as a versatile tool across diverse research fields and contexts. Developed through experiential learning and refined with feedback from artists and participants, the guide emphasizes creating a safe environment, incorporating ethical considerations and ensuring ongoing consent processes. This may be particularly important in disaster studies, where creative methods can inadvertently trigger trauma related to disasters as well as in other



Source(s): Photography by Alexandra Rose Howland

Plate 5. The first doll on the left has enlarged lips, symbolizing the artist's love for hearing her neighbors' stories, while another doll, placed over a photo of a baby, features a large heart, representing a mother's love for those around her

research settings where participants may reflect on distressing or potentially traumatic experiences. The guide is based on the steps undertaken during the workshops, with additional considerations not initially included, such as the use of varied colors of playdough, which participants can select to represent different emotions and ideas and best reflect their self-perception. The use of color in artistic expression can uncover significant information, as color is closely linked to memory and emotional experience (Dzulkifli and Mustafar, 2013; Pink, 2011).

Conclusion

What began as a simple icebreaker transformed into a key component of the workshop and subsequently the methodology. Playdough sculpting proved to be an invaluable visual and tactile method, providing a platform for self-expression and highlighting the vulnerabilities of affected communities. This hands-on approach ensured that the voices of vulnerable populations, often overlooked in traditional methods, were brought to the forefront (Johnson *et al.*, 2022).

While methods that generate quantitative data or written observations can miss the nuances of experiences shaped by societal values and norms, integrating approaches like narrative interviews with ABR can enhance understanding. ABR allows participants to shape their narratives, control the extent of trauma disclosure and avoid the marginalization of essential

perspectives in academic discourse. By fostering an inclusive and empathetic exploration of experiences, playdough sculpting transcends conventional research boundaries.

Beyond being an art activity, playdough modeling becomes a powerful tool for exploring the deep-seated trauma linked to disasters. It enables survivors to use abstraction and self-representation to convey their unique challenges and emotions. Combining artistic expression with data collection sheds light on the complex situations faced at the intersection of disasters and societal inequalities. The workshops aimed to decolonize disaster knowledge by tackling the power imbalances between researchers and participants. Through the arts-based activities, the artists from the Quarry Road West informal settlement provided key insights into the challenges of qualitative research.

References

- Arnheim, R. (1980), "A plea for visual thinking", *Critical Inquiry*, Vol. 6 No. 3, pp. 489-497, doi: [10.1086/448061](https://doi.org/10.1086/448061).
- Barrios, R.E. (2017), "What does a catastrophe reveal for whom? The anthropology of crises and disaster at the onset of the Anthropocene", *Annual Review of Anthropology*, Vol. 46 No. 1, pp. 151-166, doi: [10.1146/annurev-anthro-102116-041635](https://doi.org/10.1146/annurev-anthro-102116-041635).
- Bennett, N.J. and Dearden, P. (2013), "A picture of change: using Photovoice to explore social and environmental change in coastal communities on the Andaman coast of Thailand", *Local Environment*, Vol. 18 No. 9, pp. 983-1001, doi: [10.1080/13549839.2012.748733](https://doi.org/10.1080/13549839.2012.748733).
- Cadag, J.R. (2022), "Decolonising disasters", *Disasters*, Vol. 46 No. 4, pp. 1121-1126, doi: [10.1111/disa.12550](https://doi.org/10.1111/disa.12550).
- Cartwright, E. and Crowder, J.W. (2017), "Dissecting images: multimodal medical anthropology", *Medical Anthropology*, Vol. 36 No. 6, pp. 515-518, doi: [10.1080/01459740.2017.1334058](https://doi.org/10.1080/01459740.2017.1334058).
- Chmutina, K. and Von Meding, J. (2019), "A dilemma of language: 'Natural disasters' in academic literature", *International Journal of Disaster Risk Science*, Vol. 10 No. 3, pp. 283-292, doi: [10.1007/s13753-019-00232-2](https://doi.org/10.1007/s13753-019-00232-2).
- Coholic, D., Loughheed, S. and Cadell, S. (2009), "Exploring the helpfulness of arts-based methods with children living in foster care", *Traumatology*, Vol. 15 No. 3, pp. 64-71, doi: [10.1177/1534765609341590](https://doi.org/10.1177/1534765609341590).
- Culwick, C., Washbourne, C.-L., Anderson, P.M.L., Cartwright, A., Patel, Z. and Smit, W. (2019), "CityLab reflections and evolutions: nurturing knowledge and learning for urban sustainability through co-production experimentation", *Current Opinion in Environmental Sustainability*, Vol. 39, pp. 9-16, doi: [10.1016/j.cosust.2019.05.008](https://doi.org/10.1016/j.cosust.2019.05.008).
- Dahlberg, R., Rubin, O. and Vendelø, M.T. (2015), *Disaster Research: Multidisciplinary and International Perspectives*, Routledge, London.
- Dzulkifli, M.A. and Mustafar, M.F. (2013), "The influence of colour on memory performance: a review", *Malaysian Journal of Medical Sciences*, Vol. 20 No. 2, pp. 3-9.
- Farralles, M., Hoogveen, D., Sloan Morgan, O., De Leeuw, S. and Parkes, M. (2022), "Framing futures in Photovoice, health, and environment: how power is reproduced and challenged in arts-based methods", *GeoHumanities*, Vol. 8 No. 2, pp. 415-434, doi: [10.1080/2373566X.2022.2080095](https://doi.org/10.1080/2373566X.2022.2080095).
- Gaillard, J.C. and Raju, E. (2022), "Editorial: on priorities, values and relationships in practice: a new road for disaster scholarly publishing", *Disaster Prevention and Management: An International Journal*, Vol. 31 No. 4, pp. 333-334, doi: [10.1108/DPM-08-2022-419](https://doi.org/10.1108/DPM-08-2022-419).
- Gant, L.M., Shimshock, K., Allen-Meares, P., Smith, L., Miller, P., Hollingsworth, L.A. and Shanks, T. (2009), "Effects of Photovoice: civic engagement among older youth in urban communities", *Journal of Community Practice*, Vol. 17 No. 4, pp. 358-376, doi: [10.1080/10705420903300074](https://doi.org/10.1080/10705420903300074).
- Grab, S.W. and Nash, D.J. (2023), "A new flood chronology for KwaZulu-Natal (1836-2022): the April 2022 Durban floods in historical context", *South African Geographical Journal*, Vol. 106 No. 4, pp. 1-22, doi: [10.1080/03736245.2023.2193758](https://doi.org/10.1080/03736245.2023.2193758).

- Green, D. (2021), "Enduring liminality: creative arts therapy when nature disrupts", *Creative Arts in Education and Therapy (CAET)*, Vol. 7 No. 1, pp. 71-91, doi: [10.15212/caet/2021/7/7](https://doi.org/10.15212/caet/2021/7/7).
- Gullion, J.S. and Schäfer, L. (2018), "An overview of arts-based research in sociology, anthropology, and psychology", in *Handbook of Arts-Based Research*, The Guilford Press, pp. 511-525.
- Hoffman, S. and Barrios, R.E. (2019), *Disaster upon Disaster: Exploring the Gap between Knowledge, Policy and Practice*, Berghahn Books, doi: [10.1515/9781789203462](https://doi.org/10.1515/9781789203462).
- Huss, E. and Cwikel, J. (2005), "Researching creations: applying arts-based research to Bedouin women's drawings", *International Journal of Qualitative Methods*, Vol. 4 No. 4, pp. 44-62, doi: [10.1177/160940690500400404](https://doi.org/10.1177/160940690500400404).
- Huss, E., Kaufman, R., Avgar, A. and Shuker, E. (2016), "Arts as a vehicle for community building and post-disaster development", *Disasters*, Vol. 40 No. 2, pp. 284-303, doi: [10.1111/disa.12143](https://doi.org/10.1111/disa.12143).
- Johnson, C., Osuteye, E., Ndezi, T. and Makoba, F. (2022), "Co-producing knowledge to address disaster risks in informal settlements in Dar es Salaam, Tanzania: pathways toward urban equality?", *Environment and Urbanization*, Vol. 34 No. 2, pp. 349-371, doi: [10.1177/09562478221112256](https://doi.org/10.1177/09562478221112256).
- Kelman, I. (2020), *Disaster by Choice: How Our Actions Turn Natural Hazards into Catastrophes*, Oxford University Press, Oxford.
- Knight, J. (2019), "Water resources in South Africa", in Knight, J. and Rogerson, C.M. (Eds), *The Geography of South Africa: Contemporary Changes and New Directions*, Springer International Publishing, pp. 91-101, doi: [10.1007/978-3-319-94974-1_10](https://doi.org/10.1007/978-3-319-94974-1_10).
- Knowles, J.G. and Cole, A.L. (2007), *Handbook of the Arts in Qualitative Research: Perspectives, Methodologies, Examples, and Issues*, Sage, Thousand Oaks, CA.
- Kuriansky, J. (2019), "Expressive arts for helping children heal in crisis and disaster", in *Integrated Health Care for the Traumatized: A Whole Person Approach*, Rowman and Littlefield, pp. 39-58.
- Lenette, C., Vaughan, P. and Boydell, K. (2022), "How can story completion be used in culturally safe ways?", *International Journal of Qualitative Methods*, Vol. 21, pp. 1-11, doi: [10.1177/16094069221077764](https://doi.org/10.1177/16094069221077764).
- Manifesto/Accord (2023), "RADIX: radical interpretations of disasters", available at: <https://www.radixonline.org/manifesto-accord>
- Mazeka, B., Sutherland, C., Buthelezi, S. and Khumalo, D. (2019), "Community-based mapping methodology for climate change adaptation: a case study of Quarry Road West informal settlement, Durban, South Africa", in Cobbinah, P.B. and Addaney, M. (Eds), *The Geography of Climate Change Adaptation in Urban Africa*, Springer International Publishing, pp. 57-88, doi: [10.1007/978-3-030-04873-0_3](https://doi.org/10.1007/978-3-030-04873-0_3).
- Mudefi, E. (2023), "Disaster management 'deeds' in the context of April 2022 KwaZulu-Natal floods: a scoping review", *International Journal of Disaster Risk Reduction*, Vol. 98, 104122, doi: [10.1016/j.ijdrr.2023.104122](https://doi.org/10.1016/j.ijdrr.2023.104122).
- Muhammad, M., Wallerstein, N., Sussman, A.L., Avila, M., Belone, L. and Duran, B. (2015), "Reflections on researcher identity and power: the impact of positionality on community-based participatory research (CBPR) processes and outcomes", *Critical Sociology*, Vol. 41 Nos 7-8, pp. 1045-1063, doi: [10.1177/0896920513516025](https://doi.org/10.1177/0896920513516025).
- Mulugeta, G., Ayonghe, S., Daby, D., Dube, O.P., Gudyanga, F., Lucio, F. and Durrheim, R. (2007), *Natural and Human-Induced Hazards and Disasters in Sub-Saharan Africa*, International Council for Science (ICS) Regional Office for Africa, Victoria.
- Musariri, L., Ruzibiza, Y., Shio, J., Amoabeng, D. and Bakuri, A. (2024), "A call to rethink African scholars beyond 'local experts': mobility, race, and gender in Europe", *Ethnic and Racial Studies*, Vol. 47 No. 1, pp. 4-23, doi: [10.1080/01419870.2023.2206464](https://doi.org/10.1080/01419870.2023.2206464).
- Niekerk, D.van and Nema-konde, L.D. (2017), "Natural hazards and their governance in Sub-Saharan Africa", in *Oxford Research Encyclopedia of Natural Hazard Science*, doi: [10.1093/acrefore/9780199389407.013.230](https://doi.org/10.1093/acrefore/9780199389407.013.230).

- Peek, L. and Guikema, S. (2021), "Interdisciplinary theory, methods, and approaches for hazards and disaster research: an introduction to the special issue", *Risk Analysis*, Vol. 41 No. 7, pp. 1047-1058, doi: [10.1111/risa.13777](https://doi.org/10.1111/risa.13777).
- Pelling, M. and Holloway, A.J. (2006), *Legislation for Mainstreaming Disaster Risk Eeduction*, Tearfund, Teddington.
- Pink, S. (2004), "Visual methods", in Seale, C., Gobo, G., Gubrium, J.F. and Silverman, D. (Eds), *Qualitative Research Practice*, Sage, pp. 391-406.
- Pink, S. (2011), "Images, senses and applications: engaging visual anthropology", *Visual Anthropology*, Vol. 24 No. 5, pp. 437-454, doi: [10.1080/08949468.2011.604611](https://doi.org/10.1080/08949468.2011.604611).
- Sang Yum, M.K. and Baars, R.C. (2023), "Pacific methodologies in critical disaster studies", *Disaster Prevention and Management: An International Journal*, Vol. 33 No. 3, pp. 270-285, doi: [10.1108/DPM-05-2023-0124](https://doi.org/10.1108/DPM-05-2023-0124).
- Seppälä, T., Sarantou, M. and Miettinen, S. (2021), *Arts-based Methods for Decolonising Participatory Research*, 1st ed., Routledge, doi: [10.4324/9781003053408](https://doi.org/10.4324/9781003053408).
- Sharpe, J. and Izadkhah, Y.O. (2014), "Use of comic strips in teaching earthquakes to kindergarten children", *Disaster Prevention and Management*, Vol. 23 No. 2, pp. 138-156, doi: [10.1108/DPM-05-2013-0083](https://doi.org/10.1108/DPM-05-2013-0083).
- Sim, V., McCarthy, A., Sutherland, C., Buthelezi, S. and Khumalo, D. (2019), *Narratives of Home and Neighborhood: Quarry Road West*, Urban Futures Centre, Durban University of Technology, Durban.
- Sutherland, C. (2024), "Centre for Environmental Rights: the direct and indirect climate change impacts, loss and damages in selected at-risk communities in Durban as a result of the April 2022 floods", available at: <http://cer.org.za>
- Takach, G. and Cook, K. (2024), "Decolonizing environmentalism: addressing ecological and Indigenous colonization through arts-based communication", *Environmental Values*, Vol. 10 No. 5, doi: [10.1177/09632719231224115](https://doi.org/10.1177/09632719231224115).
- Ugurlu, N., Akca, L. and Acarturk, C. (2016), "An art therapy intervention for symptoms of post-traumatic stress, depression and anxiety among Syrian refugee children", *Vulnerable Children and Youth Studies*, Vol. 11 No. 2, pp. 89-102, doi: [10.1080/17450128.2016.1181288](https://doi.org/10.1080/17450128.2016.1181288).
- United Nations Office for Disaster Risk Reduction (2019), "2018 annual report", available at: <https://www.undrr.org/publication/united-nations-office-disaster-risk-reduction-2018-annual-report>
- Van Loon, A.F., Lester-Moseley, I., Rohse, M., Jones, P. and Day, R. (2020), "Creative practice as a tool to build resilience to natural hazards in the Global South", *Geoscience Communication*, Vol. 3 No. 2, pp. 453-474, doi: [10.5194/gc-3-453-2020](https://doi.org/10.5194/gc-3-453-2020).
- van Niekerk, D. (2014), "A critical analysis of the South African disaster management act and policy framework", *Disasters*, Vol. 38 No. 4, pp. 858-877, doi: [10.1111/disa.12081](https://doi.org/10.1111/disa.12081).
- Visse, M., Hansen, F. and Leget, C. (2019), "The unsayable in arts-based research: on the praxis of life itself", *International Journal of Qualitative Methods*, Vol. 18, doi: [10.1177/1609406919851392](https://doi.org/10.1177/1609406919851392).
- Wang, C. and Burris, M.A. (1997), "Photovoice: concept, methodology, and use for participatory needs assessment", *Health Education and Behavior*, Vol. 24 No. 3, pp. 369-387, doi: [10.1177/109019819702400309](https://doi.org/10.1177/109019819702400309).
- Wisner, B. (2016), "Vulnerability as concept, model, metric, and tool", in *Oxford Research Encyclopedia of Natural Hazard Science*, Oxford University Press, doi: [10.1093/acrefore/9780199389407.013](https://doi.org/10.1093/acrefore/9780199389407.013).

Further reading

- Chilton, G. (2013), "Altered inquiry: discovering arts-based research through an altered book", *International Journal of Qualitative Methods*, Vol. 12 No. 1, pp. 457-477, doi: [10.1177/160940691301200123](https://doi.org/10.1177/160940691301200123).

- Crowder, J.W. and Marion, J.S. (2023), *Visual Research: A Concise Introduction to Thinking Visually*, Taylor & Francis, London.
- Fothergill, A. and Peek, L. (2015), *Children of Katrina*, University of Texas Press, Austin, TX, doi: [10.7560/303894](https://doi.org/10.7560/303894).
- Francis, D. and Webster, E. (2019), "Poverty and inequality in South Africa: critical reflections", *Development Southern Africa*, Vol. 36 No. 6, pp. 788-802, doi: [10.1080/0376835x.2019.1666703](https://doi.org/10.1080/0376835x.2019.1666703).
- Pink, S., Pauwels, L. and Margolis, E. (2020), "A multisensory approach to visual methods", in Pauwels, L. and Mannay, D. (Eds), *The SAGE Handbook of Visual Research Methods*, Sage, pp. 523-533.
- Saarinén, J., Fitchett, J. and Hoogendoorn, G. (2022), *Climate Change and Tourism in Southern Africa*, Routledge, London.
- Smith, L.T. (2021), *Decolonizing Methodologies: Research and Indigenous Peoples*, Bloomsbury Publishing, London.

Appendix

Table A1. Scupltling stories ten-step guide

1. Create a safe and supportive environment: Set the tone for the workshop by creating a safe and non-judgmental space where participants feel comfortable expressing themselves. Encourage open communication and assure participants that their creations will be respected
2. Have a variety of playdough colors: Explain that each color may represent different meanings for each participant. This is to ensure each participant considers why they are choosing their colors when creating their 3D abstract model
3. Introduce the purpose: Start by explaining the purpose of the workshop and how playdough can be a powerful medium for self-expression. Highlight that there are no right or wrong ways to create with playdough and that the goal is for participants to explore their emotions and thoughts freely
4. Provide basic playdough techniques: If some participants are unfamiliar with working with playdough, begin by providing a brief overview of basic playdough techniques. Show them how to handle the playdough, shape it and use simple tools to create textures or patterns. This includes making your own playdough model as an example of your own self-representation
5. Set a theme or topic: You can give participants a specific theme or topic to focus on if you want to guide the self-expression process. Themes could be emotions, memories, lived experiences or anything that relates to the workshop's purpose
6. Give time for reflection: Before diving into the playdough work, allow some time for participants to reflect on their emotions or thoughts related to the chosen theme. They can jot down notes or draw sketches to help them visualize their ideas before working with playdough
7. Begin the playdough expression: Start the playdough expression session, where participants begin creating their pieces based on their reflections. Remind them that the process is about personal expression, not artistic perfection
8. Encourage storytelling: As participants work on their playdough creations, encourage them to tell stories about their pieces if they feel comfortable doing so. Sharing their thoughts aloud can further enhance the self-expression process and promote group bonding
9. Support and assistance: Throughout the workshop, be available to answer questions, provide guidance and offer assistance with playdough techniques if needed. Remember to encourage participants in their creative journey
10. Reflection and group discussion: After the playdough work is completed, start to facilitate a group discussion. Encourage participants to share their experiences, what they learned about themselves during the process and any insights gained from their creations

Source(s): [Appendix](#) by authors

Corresponding author

Emily Ragus can be contacted at: e.g.ragus@uva.nl