
Engaging Youth in Post-Disaster Research

Lessons learned from a creative methods approach

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Youth Creating Disaster Recovery & Resilience (YCDR²) is a cross-border initiative aimed at learning from and with disaster-affected youth 13 to 22 years of age in Joplin, Missouri, in the United States, and Slave Lake, Calgary and High River, Alberta, in Canada. Each of these communities experienced major disasters and were in the early stages of recovery when they were selected for this study. Working with local partners in each community, YCDR² faculty and students engaged youth in experiential and arts-based workshops to explore their stories of recovery and resilience. The questions framing this research project focused on the people, places, spaces and activities that helped or hindered the recovery process for youth and their peers.

Beyond the practical and theoretical advances of the work, which are described elsewhere (Cox, et al. 2016; Fletcher et al. 2016), the project offers a number of methodological contributions and lessons learned about community and youth engagement and processes that simultaneously highlight the capacities of youth, generate data, and provide novel options for knowledge mobilisation in disaster research and practice. This article, therefore, describes the YCDR² engagement and research process and elaborates on the opportunities and challenges associated with establishing youth-community-academic partnerships in post-disaster contexts.

PARTICIPATORY RESEARCH WITH CHILDREN AND YOUTH

This research was grounded in a participatory orientation, and the flexible research and engagement strategy mirrors some of the concurrent data generation and analysis strategies of grounded theory (Strauss & Corbin 1997). This approach allowed us to be flexible and responsive in the emergent and shifting contexts of diverse post-disaster environments (also see Brown 2009). Furthermore, it supported our ability to adapt each research workshop to suit the unique needs and capacities of each community, the youth with whom we were working and the research team.

Participatory methods have been gaining cross-disciplinary respect and momentum over the past few decades (e.g. Jagosh et al. 2012; Simonds et al. 2013). Since the 1990s, these methods have increasingly been identified as an effective tool for democratically engaging children and youth in the research process – from design to implementation to dissemination of results (Alderson & Morrow 2011; Christensen & James 2008; Hart 1992; James & Prout 1990). The impetus for this shift was inspired, in part, by the 1989 United Nations Convention on the Rights of the Child, which was instrumental in establishing that children have the right to participate in age-appropriate decision-making processes that affect their lives, families, schools and communities (Checkoway 2011). Simultaneously, a paradigm shift was occurring in research such that instead of conducting studies ‘on’ or ‘about’ children, researchers have begun to employ participatory methods in an effort to learn ‘from’ and ‘with’ children and youth (Christensen & James 2008; Gallacher & Gallacher 2008). Checkoway (2011, p. 340) underscores the importance of engaging young people in the research process:

Youth participation is important, because when young people participate, it draws upon their expertise, enables them to exercise their rights as citizens, and contributes to a more democratic society. It also promotes their personal development, and provides them with substantive knowledge and practical skills.

In Hart’s (1992) report for the United Nations Children’s Fund (UNICEF), he adapted Arnstein’s Ladder of Citizen Participation to better fit the potential participation levels of children and youth in research. While widely used and applied, the ladder concept was critiqued for its hierarchical design that places full participation at the top, insinuating that this is necessarily the ‘best’ approach to use when working with all children (Gallacher & Gallacher 2008). To address this concern, other typologies have been developed, such as Shier’s (2001) ‘Pathways to Participation’, Treseder’s (1997) ‘Degrees of Participation’, and Wong, Zimmerman and Parker’s (2010) ‘Typology of Youth Participation and Empowerment Pyramid’. The latter addresses some of the major critiques of participatory methods with children and youth, acknowledging that they ‘cannot be expected to carry the full burden of empowering themselves and their communities’ (Wong et al. 2010, p. 105). Rather, Wong and colleagues call for participatory methods and typologies that recognise the range of developmental needs and evolving capacities of youth and the degree to which youth and adults share power, responsibilities and decision-making in a project.

In keeping with Wong et al’s (2010) typology, the YCDR² project was built on a foundation of *symbolic participation*, where the voices and perspectives of youth are valued and foregrounded in ways that encourage and further their critical thinking, self-efficacy and mastery, and emotional empowerment. During the life

of the project, and at various times in the face-to-face work with youth, our research team and the youth participants also engaged in a more egalitarian and transactional process of sharing the planning and decision-making responsibilities, or what in this typology is described as *pluralistic participation*.

CHILDREN AND YOUTH ENGAGEMENT IN DISASTER MANAGEMENT

Just as the field of research with youth has been evolving to become more participatory, so too has the field of disaster management. The field has a history of creating top-down relief efforts and strategies that are targeted towards adults, with young people often viewed only as passive or vulnerable victims (Mitchell, Tanner & Haynes 2009) or, paradoxically, as hyper-resilient and in need of no outside intervention to assist their recovery (see Fothergill & Peek 2015 for a discussion of these ‘disaster myths’ related to children and youth). The historic hierarchical approach to disaster management, a legacy of its militaristic roots, is increasingly being challenged to engage communities and citizens through participatory approaches to preparedness, response and recovery (Phillips 2009). From this perspective, children and youth have a vital role to play in disaster risk reduction, research activities, policy creation and decision-making (Anderson 2005; Mitchell, Tanner & Haynes 2009; Peek 2008).

Progress has been made over the past decade to identify the disaster-related vulnerabilities specific to children and youth in disasters (Peek 2008) and pediatric-specific needs in emergency response and longer term recovery (Cahill et al. 2010; National Commission on Children and Disasters 2010). This research has identified a range of post-disaster-related psychological and behavioural issues, including the potential for higher rates of stress and/or traumatic stress (Weems et al. 2007; Yelland et al. 2010), increased criminal activity, lower grades and higher rates of high school dropout, increased use of alcohol and other substances, and other behavioural and psychological outcomes (Fothergill & Peek 2015; Masten & Narayan 2012).

Advancements in research include an intersectional analysis of children and youth that explores questions of *which children and/or youth in which contexts* are most vulnerable and have the highest capacity for coping and recovery (Gibbs et al. 2013; Masten & Narayan 2012). This includes identifying how and which dose effects (i.e. levels and types of exposure) intersect with other ascribed and achieved categories, such as age and stage of development of the child or youth; race and ethnic group membership; household and community level income and wealth; physical and mental ability; and other characteristics, to influence risk and resilience for disaster-affected youth.

Additional research is needed to identify the factors that promote resilience and to explore the role that youth play in identifying risks, needs and vulnerabilities, as well as their

potential contributions to the design and implementation of effective risk mitigation and community resilience interventions (Peek 2008). Understanding the social ecology of youth through their own eyes is critical to enhancing resilience (Solomon & Laufter 2005; Ungar 2008). Involving youth directly in risk and resilience education and activities has the potential benefit of increasing their sense of agency and self-efficacy when disasters occur, two psychological factors shown to be associated with resilience (Luthar 2006; Masten & Obradovi 2008; Masten & Osofsky 2010; NCCD 2010; Wolmer, Hamiel & Laor 2011). Although the role of youth in community resilience is only beginning to be explored (Mutch & Gawith 2014; Ronan & Johnson 2005), there is a growing recognition that youth have the capacity to contribute not only to their own wellbeing in disasters, but also to that of their families and communities (Fothergill and Peek 2015; Lahey 2015).

METHODS AND APPROACH

The YCDR² research involved disaster-affected youth from four communities in a series of workshop and arts-based research activities that varied across communities, but shared common elements. This section details the methods used to: 1) choose post-disaster research sites; 2) engage the broader community; 3) establish youth-friendly recruitment methods; 4) facilitate arts-based and experiential (e.g. game) activities to explore research questions; and 5) ensure ethical standards for working with youth. Each workshop process was designed to build the trust and engagement of participating youth, facilitate activities designed to explore the research questions, and create a space for storytelling processes and discussions that would help elaborate and deepen the shared understanding of youth's recovery experiences.

Research Funding and Team

YCDR² was funded by the Social Sciences and Humanities Research Council of Canada in 2012. The project team received additional funding from the Canadian Red Cross in 2014. The project was co-founded and is co-directed by a Canadian-based professor and a US-based professor. The team also included post-doctoral, doctoral, masters and undergraduate student researchers at universities in the US and Canada and local youth partners in the focal communities.

Site Selection

Communities for this study are introduced in Table 1 and described in more depth below. Sites were selected based on the following factors: (1) recent exposure to one or more natural disaster events; (2) impact on youth-oriented institutions and spaces (such as homes, schools, parks and recreation centers); and (3) proximity of the researchers to the community and/or existing connections within the community.

YCDR ² field sites	Estimated population	Recent natural disaster event(s)	Month/year of the disaster event(s)	Timing of initial community engagement	Number of youth participants
Slave Lake, Alberta, Canada	~6,800	Wildfires	May 2011	May 2013	6
Joplin, Missouri, US	~50,000	EF-5 Tornado	May 2011	January 2013	15
High River, Alberta, Canada	~13,000	Flooding	June 2013	December 2013	9
Calgary, Alberta, Canada	~988,000	Flooding	June 2013	December 2013	9

Table 1: YCDR² Field sites and workshop participants

Slave Lake, Alberta. On 15 May, 2011, a wildfire swept into the northern Alberta town of Slave Lake. No deaths were caused by the fire, but it destroyed approximately one-third of the town's buildings and homes, as well as nearby forested areas. The majority of residents were evacuated before the fire reached the town.

Joplin, Missouri. Seven days later, on 22 May 2011, Joplin, Missouri experienced an EF-5 tornado (the highest magnitude on the Fujita scale). More than 160 deaths were reported and 990 people were injured. Approximately one-quarter of the city's buildings, including nine of the 18 public schools, were heavily damaged or destroyed.

Calgary, Alberta. On 20 June 2013, torrential rain in southern Alberta caused seven major tributaries and rivers to overflow, resulting in one of Canada's largest and costliest floods. Over 75,000 residents were evacuated from neighbourhoods throughout Calgary. One death was reported.

High River, Alberta. The same floods of June 2013 also severely affected the nearby town of High River, located approximately 60 km south of Calgary. All residents were forced to evacuate, over 70 per cent of homes were damaged and most of the town's buildings were badly damaged. Three deaths were reported in High River, and one was reported in the neighbouring town of Okotoks.

Initial Post-Disaster Engagement

Once a disaster-affected community was identified that met our selection criteria, we reviewed news articles and websites in order to find potential organisational partners and local leaders. These included elected officials and emergency management officials, school administrators and teachers, hospital administrators and mental health experts, representatives from local chambers of commerce, members of various community- and youth-based organisations, and youth pastors and other religious leaders. This process allowed us to collect information about the consequences of the disaster and the recovery process, and identify potential adult allies who might support the recruitment and sustained engagement of youth within the community.

Prior to scheduling our initial visits to each community, we reached out via email and telephone to these potential

collaborators, most of whom were highly responsive to our requests for interviews or informal meetings. We believe this was due to the length of time that had passed since the disaster, which ranged from 6 to 18 months, depending on the community where we were working. Rather than moving into the field immediately after the event (an approach to collecting perishable data that has a long history in this field (Phillips 2014), but has also been sharply criticised in recent years (Gaillard & Gomez 2015)), we were intentional about waiting as our goal was to understand longer term post-disaster recovery processes.

Upon our arrival in each community, we began with formal and informal interviews with adult contacts and, through these meetings, began identifying potential youth participants. We initially met with youth formally in focus group settings where we audio recorded our exchanges, and more informally in classrooms and community-based settings where we engaged in open conversation to learn about the prospect of collaboratively developing a series of participatory workshop sessions. We had conversations with adults and youth about their desired level of participation in the project, their levels of motivation and vision for the project, and their thoughts on various creative approaches to data collection. The initial adult and youth interviews were invaluable in terms of expanding upon what we had learned about the community and the disaster from secondary sources, and contributing to the promotion of the YCDR² research and our youth-recruitment activities.

The Workshops

In her meta-analysis of empirical studies of youth participation, Frank (2006, p. 366) identified five lessons for approaching youth participation that conceptualise youth as ‘resources for civic action’, ‘learners’ in the process of developing competencies and skills, and ‘collaborators’ with adults who can provide guidance and access to the resources they need. Our flexible approach to the fieldwork and our implementation of the participatory workshops reflect this orientation. The research and workshop activities in each community were tailored to the needs, interests and capacities of our youth participants, shaped by the input of key youth and adult allies and partners, and influenced by the availability of the research team in relationship to funding and logistics. Therefore, although we held constant the focus and goals of the research (i.e. youth capacity-building; contributing to theories of disaster recovery by drawing on youth perspectives), the design of the workshop process in each community remained fluid and responsive.

Workshop Design and Participants

In keeping with the preferences and learning styles of youth (Lomas & Oblinger 2006), the basic design of all our workshop processes centred on creative and expressive research methods. Over the past decade, the range of creative and expressive methods used in research has expanded to include photovoice (e.g. Downey

& Anyaegbunam 2010; Edwards et al. 2012); photo elicitation interviews (Clark-Ibáñez 2004; Meo & Dabenigno 2011); videovoice (Aarsand & Forsberg 2010; Didkowsky, Ungar & Liebenberg 2010); audio diaries (Worth 2009); poetry (Fitzpatrick 2012); drawing (Ortiz Guitart, Prats Ferret & Ferré 2012); art-based internet design (Battles 2010; Driessnack & Furukawa 2012); and participatory or social mapping (Clark 2011; Hart & Rajbhandary 2003). Creative methods involve tools for engaging youth (Checkoway, Pothukuchi & Finn 1995) and fostering social learning and development (Engeström, Miettinen & Punamäki 1999). Such methods can be especially useful for working with young people in the post-disaster context as they provide an outlet for expression, reflection and the generation of new knowledge (Fraser & al Sayah 2011) in response to experiences that may be challenging to put into words. In a group setting, such as the YCDR² workshops, the creative process is social. The creation of drawings, photographs and writings, for example, and the discussion generated by these outputs provide opportunities for shared meaning-making and connection. Group-based creative activities make thought processes explicit and observable through conversation, emotional responses and the development of artistic outputs.

As a team, we had experience and familiarity with many of these methods, but focused primarily on visual methods such as photo-elicitation, photo-voice, video and stop-motion animation and participatory analysis methods such as social mapping. The choice of specific methods varied from workshop to workshop and included methods of expression of specific interest to individual youth (e.g. music and poetry).

The size and duration of each workshop also varied across the communities where we worked, but they typically involved between three to ten participants per workshop with each workshop lasting between two to three days. In total, we worked with 39 youth across the four communities (Table 1). Participants ranged in age from 13 to 22 and included a roughly equal number of girls and boys in each community. The workshops were held in youth-friendly community spaces operated by local youth-serving organisations (e.g. Boys and Girls Clubs, YMCA, community centres).

Ethical Considerations

This project adhered to national and international ethical guidelines for conducting human research (i.e. in Canada, *Tri Council Policy Statement for the Ethical Conduct for Research Involving Humans*; in the United States, Department of Health and Human Services Office for Human Research Protections under the guidance of the university Institutional Review Board). This was crucial for the present study given that participants were youth who had previously experienced an unsettling event (i.e. the disaster), the nature of the activities explored in their disaster recovery, and the information and stories participants contributed to a website that was publicly accessible. In view of this, university approved consent forms were signed by youth participants and parents of

youth under the age of 18. Assent forms were also obtained from youth under the age of 18. Participants signed additional waivers and photo release forms indicating whether or not they consented to being audiotaped, photographed and/or videotaped. The audio recordings of workshops and interviews were transcribed without names to maintain the anonymity of participants' comments.

Because conversations and activities related to disasters and recovery hold the potential to evoke emotion, one of the members of the research team with training in disaster psychosocial response and trauma counselling was present during the workshops. In addition, participants were told that their participation was voluntary and that they could withdraw from any activities or the full workshop if they wished. The one youth who did withdraw was able to discuss her feelings and options for participation with the member of the research team trained in counselling; after deciding to withdraw, she received additional support from one of the local youth-based organisations with which we had partnered. This experience further emphasised the importance of including individuals with counselling expertise on the research team, as well as linking in with local organisations to provide longer term support.

Despite our adherence to typical research ethics considerations, we noted that such ethical guidelines do not often focus on issues that commonly arise in arts-based research, which can be particularly challenging when working with vulnerable populations such as youth (e.g. Lafrenière et al. 2012; Wang 2006). One key consideration is to enable data collection without compromising participants' voices (e.g. Lafrenière et al. 2012; Sandelowski et al. 2006). To respect this, participants were encouraged to explain their own art products in their own words, and provide captions for them when appropriate. Importantly, ethical applications and consent forms ensured and respected artistic licence; participants were given the option to include their names with their products or not. In almost all cases, the youth selected the option that they did, indeed, wish to have their names attached to their respective work.

Workshop Goals

The central goals of each workshop were to invite youth to use creative methods – of our or their own design – to explore disaster recovery from their perspectives, and to consider how they might contribute to the resilience of youth more generally and their community specifically. The following research questions guided our work: (1) How do disasters affect the daily lives of youth? (2) What assets and vulnerabilities contribute to/or hinder recovery? (3) What forms of support do youth need and how are those needs being fulfilled? (4) How do youth actively contribute to their recovery and to the recovery needs of those around them? and (5) How might youth-centred recovery activities incorporate and contribute to longer term resilience of youth, their families and their communities? In an effort to respond to these gaps in

knowledge, we asked youth in each community to respond to a series of questions in interactive group formats. The research questions were translated into specific, focused questions for the youth such as: How have you contributed to recovery in your community? What places were most important to your recovery? Who was most helpful with your recovery process?

Workshop Process

The creative workshop activities were intentionally sequenced in a progressive nature – building from previous activities – to encourage a deep level of trust, engagement, discussion and critical reflection. Drawing on strategies for group development (e.g. Tuckman & Jensen 1977), each of the sessions included activities that would establish trust, build relationships, strengthen group coherence, and offer tools for discussion that would serve as a foundation for the rest of the workshop. Following this, the youth took part in a series of creative activities, as described below, with the intent to generate and deepen discussions about recovery and resilience. The workshop sessions were audio and video recorded and later transcribed by research assistants.

Facilitation

The research team shared facilitation responsibilities and worked to ensure the ratio of adults to youth did not inhibit youth's full participation and engagement. Members of the team not facilitating a specific activity participated equally in the games with the youth participants. The active engagement of adult researchers can disrupt the typical imbalance of power that occurs when adults stand apart from fun and focus only on leading youth in activities.

In the case of the YCDR² workshops, and consistent with the commitment to a pluralistic participatory approach, the space of learning was established as a shared space, in which both adults and youth were willing to take risks in order to learn. With that said, it was often appropriate for our research team to step back from the 'action', such as when the disaster-affected youth were sharing their own stories of recovery. We practised open and active listening skills and often took on other research-related roles such as videotaping or recording audio/notes so the sole facilitator could help guide youth conversations.

Trust and Relationship-Building Activities

Initial workshop activities involved low-risk experiential activities such as 'name games', in which participants – including members of our research team and the youth involved in the workshops – learned one another's names through play. For example, we often played the name game where the participants would stand in a circle and toss a ball to one another until everyone had learned everyone else's name. These activities set an active and fun tone and contributed to engagement through community building and formation of trust.

After these initial warm-up or icebreaker activities, we led participants through a period of ‘shared norm creation’ where the youth were asked to ‘take control’ of the workshop and identify the ‘rules’ that they hoped would be implemented to ensure a successful process. Norms such as ‘have coffee available’, ‘smile’ and ‘only offer supportive comments of others’ were then posted around the workshop space to ensure that we were all reminded of our shared agreements and could refer back to them when needed. We then engaged in activities designed to build teams and deepen trust. ‘Hopes and Fears’, for example, involved youth and the research team anonymously sharing their aspirations and worries associated with the workshop process. These were written on slips of paper that were placed in two separate hats, one for hopes and one for fears. In two rounds, one for each hat, participants pulled out an anonymous slip, read it aloud, and related or empathised with the specific hope or fear expressed on the slip of paper. This activity normalises fear as natural, encourages empathy with that fear (or hope), deepens the sense of trust amongst participants and begins the sharing process in a relatively risk-free manner. For example, one Joplin youth expressed a fear of being misunderstood during the upcoming sessions. In reading that fear aloud, another youth offered this response:

I can understand that. And not with just being misunderstood, but it goes along with being nervous. I remember when I first talked to you guys or the news crew. I was nervous at first and I was like ‘Man, I am gonna say something dumb or stutter or just ramble on’. But, I mean as it went along, things went easier and I was able to process my thoughts (Joplin male youth, 2014).

Facilitated Experiential Games and Activities

We then engaged in other facilitated games and activities, or what Boal (2002) would call ‘physical dialogues’. These kinds of activities allow those participating to become comfortable with each other and with themselves. Moving from verbal to physical engagement through play (e.g. human knot, push not to win; Boal 2002) creates intimacy, interrupts the restrictive norms that tend to limit creativity and expression in many adult-designed workshops, and encourages playfulness. One such activity was the *Magic Carpet Ride* (see Currie & Heykoop 2011), which engaged all participants working together to flip a tarpaulin (i.e. the magic carpet) on which they were standing (i.e. flying) without stepping off the tarp (Figure 1). Similarly, we frequently used an activity called the *Unity Circle* (Currie & Heykoop 2011) (Figure 2) in which participants would hold a rope circle and use their weight and the tension on the rope to stand and sit as one.



Figures 1 and 2: The YCDR2 workshops began with trust and relationship-building activities, and facilitated games, such as the *Magic Carpet Ride* (left) and the *Unity Circle* (right).

Storytelling Processes and Learning about Disaster Recovery

With the groundwork of trust and relationship building firmly intact, we shifted the focus of the workshop to concentrate on a range of expressive activities designed to encourage individual and shared exploration of the research questions. For example, we used *Visual Explorer™*, a pre-existing set of photos, to explore experiences of the community and recovery using visual metaphors (Figure 3), *graphic recording* to develop a more collective story through images, graphics and words (Figure 4), and *photo-elicitation* activities that generated photo-stories (photos with captions or brief paragraphs) of meaningful occurrences in the young people's disaster recovery experiences (Figure 5). In addition to the creative activities and outputs suggested by the research team, youth also shared their experiences through their own forms of creative expression, including music (e.g. an instrumental guitar song) and writing (e.g. poems, journal entries).



Figure 3: The *Visual Explorer™* activity provided an entry point into discussion and storytelling.

Figure 4: Graphic recording creates a visual story of the workshop process.

In Slave Lake, youth sought out photographs of their communities, painted those images onto each other's faces, and superimposed an image of their painted face onto the original image (Figure 6). These photographs served as the basis for story creation and focused discussion on the disaster and its enduring consequences.

Figure 5: Participants took or retrieved photographs and created photo stories in response to questions about their disaster recovery.



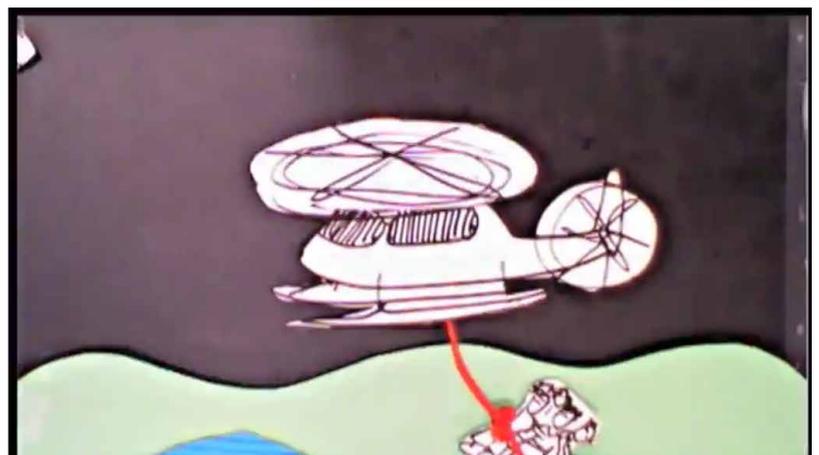
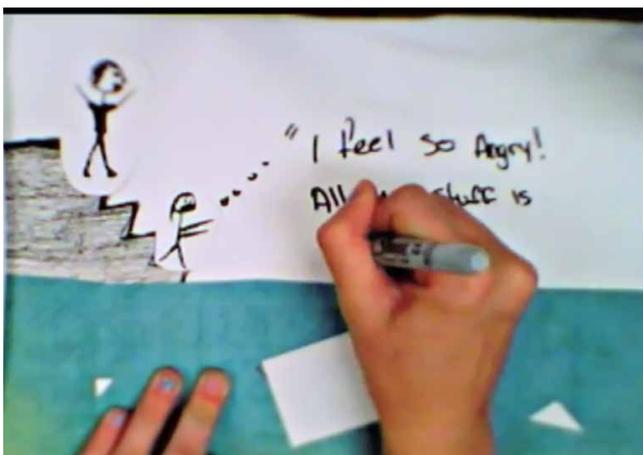
And this is my sister Rosaleigh. I wouldn't be who I am without her. After the tornado, I had to watch her for at least 12 hours a day while my parents were trying to get stuff back together. She was almost two. She brings me so much joy. I can be myself with her and we go crazy! I would just spend my whole day with her and she wouldn't really know what was going on. She would want my mom and dad, but they weren't there. Cause they were gone just trying to get food and towels and everything else we just needed to live.

Figure 6: Slave Lake participants created face-painting photo-art to depict recovery in relation to their changed environment, which led to in-depth discussions about their recovery experiences.



Slave Lake is still home to me.

Figures 7 and 8: Still images from stop-motion animation videos about youth's disaster experiences in Calgary: 'Nightmare of Reality' by Emily and Megan, and 'The Calgary Floods' by Cameron and Tessa.



In Calgary and High River, youth worked with a professional spoken word artist and a local animation company to generate poems and art (graphics, clay figures, words) that they then used to create stop-motion animated videos (Figures 7 and 8).

In each community the workshop processes resulted in different research outputs and stories. However, in each case, the stories stimulated and deepened youth's discussion of their recovery experiences and enriched our understanding of their perspectives on disasters and what aided or undermined their sense of wellbeing as they and their families worked through the recovery process.

For instance, one teenager in Joplin brought in a photograph of her younger sibling and told a moving story about them being so-called 'Twister Sisters' after the tornado. Other youth in the workshop responded with empathy and also were able to relate as she highlighted the importance of mutual care between siblings in the recovery process. During the photo-face-painting activity, a teenager from Slave Lake emphasised the challenges youth face in feeling left out of community recovery efforts, and the importance of youth being there for each other:

Being a youth is difficult because you might feel like you are left out since no one is looking after you or giving you jobs to help with. I think the most important job for youth is to be there for each other ... Even if you aren't dealing with the exact same thing, youth who went through disasters have a way of understanding other youth (Slave Lake female youth, 2014).

The animated videos produced by youth in Calgary and High River described the 'heartbreak' and 'nightmare' of the floods and the loss of memories, homes and irreplaceable items, but they also spoke of hope and the conscious choice to move forward despite the uncertainty of the path ('Life is Like a Narrow Road', High River). Many of these videos also spoke of the importance of community to youth, and how friends and family helped youth 'through the hard times of losing everything' ('A Better Day', Calgary).

LESSONS LEARNED

The YCDR² project offers a number of lessons about the challenges and successes of establishing and maintaining youth-academic research partnerships in general, and working with youth in a post-disaster context in particular. For the most part, these lessons learned relate to the research process, but also include a focus on the research content. They are organised under the following seven themes: Building on Existing Momentum and Sustained Engagement; Participant-Researcher Reciprocity; Youth Engagement in Disaster Recovery; Youth-Relevant Engagement in Research; Degree of Participation; Multiple Uses of Arts-Based Methods; and Data Analysis Challenges.

Building on Existing Momentum and Sustained Engagement

Achieving initial and sustained engagement with youth participants can be challenging, especially when researchers are located outside the community of interest (this is relatively common in disaster research). In this multi-site project we thus faced geographic challenges in establishing contacts and arranging activities from a distance as well as cultural challenges related to obtaining insider knowledge of local customs, community characteristics and networks (also see Minkler 2004). By developing relationships with adult allies and community-based youth-serving organisations in each field site, we were able to link to existing youth-focused programs and draw on their pre-existing

credibility. These allies also helped us understand local politics, contextualise post-disaster conditions, and identify particular neighbourhoods or organisations that might be fruitful in terms of recruiting youth. In turn, we were able to collaborate with local organisations in a number of ways, providing some with financial support, as well as showcasing their work as part of our knowledge mobilisation efforts. The project also generated empirical data (i.e. themes drawn from the analysis of the workshop discussions, workshop outputs and youth evaluation of the workshops) that we aggregated, anonymised and then shared with these organisations to inform their own considerations of how to engage and support disaster-affected young people.

Given the long-term and challenging process of disaster recovery, building these kinds of connections to existing community supports was also an ethical decision. We remained conscious of the limitations of our engagement and tried to address this wherever possible by: (1) employing interested youth as on-the-ground research assistants in order to build capacity; (2) helping to develop and foster relationships amongst youth participants and between adults and youth involved in our project; (3) developing and disseminating project newsletters in the community (and beyond) that highlighted the research activities and youth-generated outputs; and (4) using Facebook, Instagram, and other social media to stay in touch with the youth and encourage space for additional peer-to-peer and peer-to-researcher interaction. These approaches helped, although we acknowledge that having a more continued presence in the communities or empowering a local research team to help carry on the work would have further strengthened the influence and outcomes of the project and sustained youth engagement.

Participant-Researcher Reciprocity

When included in research activities, youth should be invited to participate in relevant and meaningful ways that reflect their evolving capacities and developmental needs. We also believed that the workshops should be fun and interactive. Youth who participated in the workshops received refreshments at all the workshops as well as folders and other creative supplies.

In thinking about other forms of reciprocity, our team was clear that the research not only needed to contribute to knowledge but also to the personal and academic development of the participating youth. We therefore attempted, across the communities, to offer them opportunities for skill-building, connecting with local mentors and integrating into the community in a meaningful way (also see Jacquez, Vaughn & Wagner 2013). We invited several interested youth to work with us as paid research assistants. We also reciprocated by writing reference letters, finding ways of sharing some of our knowledge and skills through guest lectures, and working to co-develop other opportunities and initiatives that would allow youth to continue to have a voice and the space to contribute to disaster recovery. In

Calgary and High River, we leveraged the work we did with YCDR² to access further funding to continue the research and capacity building with youth in those communities (see ResiliencebyDesign Youth Innovation Network on Facebook). These actions represent the importance of the ‘longer cycle of exchange’ that Maiter et al. (2008, p. 322) suggest can build relationships and capacity over time and increase the benefits to youth and their communities of participating in research projects.

Paying attention to reciprocity within research can also contribute to greater reflexivity about the power imbalances that often exist between researchers and the researched (Trainor & Bouchard 2013). Even as the youth themselves responded positively to YCDR², and many of our adult community allies expressed support for and excitement about the project, we were aware that the project and the research goals were largely designed using a top-down approach. We attempted to minimise this by engaging the community and youth from the start of our fieldwork, and working with youth to refine and ‘co-create’ the research activities and questions.

Youth Engagement in Disaster Recovery

Youth in the focal communities repeatedly expressed that they *wanted* to be engaged and to contribute to the ongoing recovery and resilience of their communities. It quickly became obvious to us that they had insights to share and the capacity and interest to actively participate in post-disaster processes. The stories generated during the research also suggest that youth have the potential to inform and inspire those around them through their words, creativity and actions. When we spoke with adult leaders in the research communities, they expressed genuine interest in hearing and learning from youth, and they were visibly moved by the photo-stories, videos, animated shorts and other creative outputs the youth had produced. YCDR² opened up a space for youth to share their personal thoughts with one another and with the broader community and possibly opened up some new thinking among adult leaders about how youth might be encouraged to contribute to disaster recovery and beyond.

Youth-Relevant Engagement in Research

During the YCDR² project, youth level of engagement varied over time, individually and collectively. We learned that sustained engagement looked more like intermittent intensive engagement, or what one of our research team has described as a ‘heartbeat model of engagement’ (Godsoe 2015). Youth-friendly modes of communication (e.g. texting, Facebook, Instagram) were more effective for reaching and having sustained contact with and connecting youth. The specific favoured modes of communication varied between individuals and communities to some degree, reminding us as researchers that we need to be intentional and explicit in asking youth participants whether and how they prefer to communicate across the lifecycle of a research project. Moving

forward, it will be interesting to consider how Institutional Review Board agreements and ethical processes can better reflect the communication needs and realities of youth, rather than relying on paper formats. In research with adults, the appropriate means of communication is typically email or phone calls, whereas with younger populations it is important to use communication strategies that are aligned with their preferences. In order to reduce attrition and ensure participants have all relevant information, we recommend asking each participant about what mode of communication, when, and how often they would like to be contacted.

The unique character of each community and, in particular, of key adults such as parents and teachers in the lives of youth also played a role in youth engagement. Some communities were more supportive of the research and more amenable to youth participating. In other cases, adults acted more as gatekeepers, protecting youth from the potential of harm from reopening wounds. Youth seemed to have fewer concerns and were often adamant that sharing their stories through art was a positive experience. These contrasts highlight the challenge of finding a balance between honouring the independence and autonomy of youth while acknowledging the potential developmental and/or legal limitations on their ability to make informed choices for themselves. This is particularly important when it comes to research following traumatic events, such as disasters; care needs to be taken to avoid re-traumatisation (Ferreria, Buttell & Ferreria 2015), while also ensuring that youth have a voice in decisions related to their participation in research and other activities.

In most cases, we were able to minimise these tensions by working with trusted community partners and proactively providing caregivers and other key adults with clear descriptions of our research goals and approaches, and the steps we had taken to ensure our work with youth was ethical. In one community, despite these steps, key adults remained guarded and youth participation in the project was limited. However, in the year following our primary field work in that community, a sub-group of youth – all of whom had moved on to attend university in a nearby urban centre – expressed interest in further participation and continued to work with a member of our research team who lived in that city. This latter example underscores the need for flexible research designs that can effectively provide opportunities for youth engagement while addressing the diversity of ages and varying levels of autonomy in this transitional developmental stage.

Degree of Participation

The design of the project responded to recent critiques of youth engagement and participatory action research. In particular, we acknowledged that researchers cannot fully place the onus of empowerment on the youth themselves (Wong, Zimmerman & Parker 2010). YCDR² aimed to achieve a balance between adult-supported youth engagement and youth agency. In activating

symbolic participation, our methods and activities allowed youth to construct and disseminate their own stories. This meant that many of the youth were engaged and willing to participate and took ownership of their stories. Part of this success lay in providing a flexible context-specific structure, limiting adult attendance and participation in the workshops, and offering appropriate modes of engagement of relevance to the participants.

This form of *pluralistic participation*, in which youth were given opportunities to take a more active role in shaping the workshop, was somewhat successful, such as when youth developed shared norms and roles to guide parts of the workshop and when they added a research question that they thought was important to the project. However, we observed that there was a greater need to build leadership skills along the way and to develop longer term opportunities for youth to enact their agency. Also, funding structures (and their requirement for fully formed proposals to access funding) and traditional research norms led to a largely developed project prior to youth engagement. Preferably, youth voices would have played a role earlier on in the development of the research project and throughout the lifecycle of the study. Building from this experience, our research lab has subsequently formed a youth advisory and hired several youth research assistants to provide input and ideas earlier on in the research process.

Multiple Uses of Arts-Based Methods

Part of the project's success in engaging youth can be attributed to the use of arts-based methods. Using arts-based research deepens data generation; using the arts-based knowledge it produces can facilitate the dissemination of research findings and increase the potential impact of those findings (Colantonio et al. 2008; Fleming et al. 2009; Gray et al. 2000). The youth-generated creative outputs in YCDR² have provided dissemination opportunities that moved beyond traditional modes (e.g. publications, conferences) and traditional audiences (e.g. academics) to reach a wider audience and amplify the voices of the youth who participated. The animated videos produced in High River, for example, were shared with the mayor and city council, posted on the city's Facebook page and presented in a community movie night event. The creative research outputs from all four communities are also featured on the Youth Creating Disaster Recovery & Resilience website at ycdr.org. The website celebrates the contributions and voices of these youth and responds to the youth's desire not only to contribute to the recovery process in their own communities but to reach out to other disaster affected youth. As one participant from Slave Lake mentioned:

If there was something like a natural disaster in the future, and obviously there will be ... it would be nice to be able to like kinda help them out you know share 'well, this is what I went through and this is how I changed it'.

The website is supporting our continued engagement in Calgary and High River, and was also instrumental in our reaching out to work with an international group of youth who participated in the United Nations World Conference on Disaster Risk Reduction in Sendai, Japan, in 2015. Moreover, the approaches have informed our many other youth-centred research projects, helping us to be creative, even as we also continue to collect data in more traditional forms. The creative processes also helped the youth express themselves in ways that were engaging while simultaneously helping them to build skills related to learning and using new modes of artistic expression. It is probably equally true, however, that the choice to use arts-based methods in the workshops may have reduced the appeal of the project for those youth who had limited or no interest in artistic expression.

Data Analysis Challenges

Using flexible, creative methods of data collection can pose challenges for data analysis and the findings that can be reported. Unlike surveys that ask the same questions of research participants, creative methods and participatory approaches are by design varied and adapted based on *each research context*. The flexible approach of the project resulted in a rich and diverse data set from the different communities. But it also led to the generation of an enormous amount of textual data (we audio recorded each session in full and later transcribed those multi-hour sessions) and visual/creative outputs (songs, poems, photographs, etc.). These many and varied forms of data resulted in a longer and more complex process of analysis.

To overcome these challenges, we adopted an inductive, collaborative and systematic coding process using NVivo qualitative analysis software to organise the data and support the analysis, and engaged in team discussions regarding the findings. This process involved the researchers/authors of this article and undergraduate assistants, some of whom were youth themselves. Further, as important as the visual and other stories were in exploring and conveying youth's experiences and supporting engagement and empowerment, they did not always produce explicit responses to the research questions.

Balancing the needs and goals of the research with the interests and focus of the youth was challenging. As the work has moved forward with youth in Calgary and High River, we have become more intentional about finding ways to engage youth as co-researchers in a staged and more systematic process. By using our research questions as the foundation for building research skills, we are able to generate data of specific interest to us, and then support youth in applying their research skills to explore questions of interest to them.

CONCLUSION

The YCDR² project used flexible, youth-centric, arts-based research workshops to learn from and foster the inclusion of young people

as active and able contributors to disaster recovery and resilience. In line with Frank's (2006) and Wong, Zimmerman and Parker's (2010) principles of youth participation, the project has contributed to the knowledge and practice of research with youth in the post-disaster recovery space. The challenges and tensions that arose were equally as instructive as the successes for methodologically advancing the practice of engaging youth in disaster research. The arts-based methods simultaneously addressed a number of issues, including garnering youth interest, story creation and dissemination, breaking down power differentials, and providing a safe and empowering outlet for expressing experiences. The lessons learned through YCDR² about establishing youth-community-academic partnerships can hopefully inform the work of researchers, policymakers, service providers and others interested in the study of research with youth and the empowerment of youth as citizens and active contributors to their communities.

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