

## Living in a wildfire: The relationship between crisis management and community resilience in a tourism-based destination

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### ABSTRACT

This study contributes to the understanding of the relationship between crisis management procedures and local resilience responses. Utilizing the context of the 416 wildfire in southwest Colorado during the summer of 2018, this study proposes that community resilience is a process that is impacted by the decision-making surrounding the reduction of the disaster impact. The results of this study argue that interpreting the community response to crisis management from the lens of resilience will allow decision-makers to more thoroughly understand the impact on the community and the related tourism industry. This research proposes a path of integration between crisis management and community response to be used for navigating the challenges that occur during uncontrolled natural disasters impacting community sustainability.

### 1. Introduction

The increasing impacts of climate change are being witnessed through extreme weather events (Kaplan & Fritz, 2018) which are likely to result in natural disasters (Schmude, Zavareh, Schwaiger, & Karl, 2018). These powerful changes in weather have the potential for greater devastation, such as more structural damage, personal injury or death, and/or economic costs (Shapiro, 2018). The “frequency and fury of crises have flourished over the past decade” (Pennington-Gray, 2018, p. 136) having directly impacted tourism as the increased access to information about these events has resulted in “the intensification of crises that affect the tourism industry” (Schroeder, Pennington-Gray, Donohoe, & Kiouis, 2013, p. 127). Tourist destinations are particularly susceptible to the consequences of climate change (Becken & Hay, 2007) as they face an increasing number of uncontrollable events (Basurto-Cedaño & Pennington-Gray, 2018). Destination image becomes a dominant concern during and after a disaster. “As disasters hit a destination, the image may be adversely affected. Tourism organizations need to give special attention to protecting their destination/organization image” (Pennington-Gray & Pizam, 2011, p. 317). A crisis can influence a traveler's destination images as well as their travel destination choices (Pennington-Gray, Thapa, Kaplanidou, Cahyanto, & McLaughlin, 2011). Further, “once the image is tarnished through the media coverage in the event of a crisis, it may need a long time to return to normality” and similar destinations may capitalize on these vulnerabilities during an extended period of recovery (Pennington-Gray & Pizam, 2011, p. 317).

The way individuals react to disaster events magnifies the complex system of human and natural interactions (Walker et al., 2006) and impacts the sustainability of the destination, defined as the triple bottom line of economic, social, and environmental factors (Elkington, 2013). A community's response during the disaster event is impacted by the decisions that are made (Hall, Prayag, & Amore, 2018) and the crisis management procedures that follow (Beattie, 1992). The social impacts that are connected to a disaster often impact the local community on a large scale (Pennington-Gray & Pizam, 2011). After a crisis, sustainable long-term regeneration depends on incorporating social, environmental, and local economic considerations into the recovery strategy (Amore & Hall, 2016b). Further, communication (Hystad & Keller, 2008) and tourism leadership (Pennington-Gray & Pizam, 2011) become imperative in the recovery process. However, “crises are not linear” (Pennington-Gray, 2018, p. 137): therefore, qualitative research is warranted to interpret crises on a more profound level (Cahyanto & Pennington-Gray, 2017).

There have been several key research contributions on disaster management processes and procedures related to tourism, specifically by Faulkner (2001), and the resilience process, notably the seminal book by Hall et al. (2018); however, there is a need for more research on the relationship between resilience, tourism crisis management, and sustainability (Pennington-Gray, 2018), as well as “destination development and management from a resilience perspective” (Luthe & Wyss, 2014, p. 161). Specifically, more research is needed that explores the disaster event as it directly relates to the stages of the resilience process, as further, diverse scholarship is needed to “help advance the

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destination crisis management scholarship while, at the same time, aiding the industry to mitigate crises both prior to as well as during times of need" (Pennington-Gray, 2018, p. 136). Despite increased interest in the impacts of disasters on tourism destinations, the research on resilience is in its infancy (Sheppard & Williams, 2015), as tourism management research related to the crisis management process (Khazai, Mahdavian, & Platt, 2018) and destination resilience (Schroeder & Pennington-Gray, 2018) is limited. There is a lack of research connecting the response to the disaster with the reactions, such as durability, flexibility, and strength, of a local, tourism-based community.

This paper addresses the aforementioned gaps in the literature by identifying the relationship between crisis management procedures and local resilience responses. The purpose of interpreting these relationships is to identify how crisis management decision-making can impact how the local community responds to a natural disaster. Utilizing the disaster event of the 416 Fire in Durango, Colorado in the summer of 2018, privileging a similar resilience viewpoint as Hall et al. (2018), and utilizing a critical constructivist lens (Denzin & Lincoln, 1994, 2011; Hollinshead, 2004), it is proposed that the resilience of the community is a process that is impacted by the decision-making practices surrounding the reduction of the disaster impact. This study identifies that the process of resilience as experienced by the local community directly connects to the recovery strategies employed by destination managers. Although it is understood that each case of a disaster or crisis is limited to that given context, wildfires are one of the "most common climate-oriented disasters that can have serious impacts on tourist destinations" (Pennington-Gray & Pizam, 2011, p. 316). The purpose of this research is to interpret the resilience process of the 416 Fire disaster with the intent to showcase the impact on community sustainability. This study is guided by the following research questions:

- (1) What practices impact resilience processes during disaster events?
- (2) How can these processes be managed sustainably?

## 2. Research background

### 2.1. Crisis management

Crisis management is comprised of "planning for, responding to, and recovering from a crisis or disaster" (Pennington-Gray et al., 2011, p. 312). There is a strong differentiation between disasters and crises based on whether the event was induced by actions or inactions of a firm (crisis) or natural phenomenon that are external to human action (disaster) (Faulkner, 2001). Hall et al. (2018) suggest that disasters are a product of vulnerabilities and Hall (2010) identifies that crises may be a normal part of doing business. Impacts from disasters and crises are both direct and indirect, with the potential to influence tangible resources and intangible economic, social, and environmental factors (Lindell & Prater, 2003).

It should be assumed that post-crisis, decision makers will be operating in a climate of persisting uncertainty (Amore, 2016). Recovery is iterative and the crisis conditions are often dynamic, requiring that stakeholder integration is a priority (Gurtner, 2016). Individual tourism businesses may be more active agents in the industry's recovery through stakeholder engagement and collaboration (Granville, Mehta, & Pike, 2016). As a crisis management activity, communication is key because of the need to engage stakeholders in each of the recovery stages (Hystad & Keller, 2008). In times of crisis, different entities may operate in isolation and without open communication channels that facilitate collaboration, there could be redundancy and confusion as to which party is responsible for taking action (Hystad & Keller, 2008). Communication supports the activation of social capital which can help engage members of the tourism destination to respond through bottom-up crisis management (Jones, 2016). Further, per Norris, Stevens, Pfefferbaum, Wyche, and Pfefferbaum (2008), communication is one of the four capacities that encompass community resilience.

### 2.2. Destination resilience and the local community

Resilience is "the capacity of a system to absorb disturbance and reorganize while undergoing change so as to retain essentially the same function, structure, identity, and feedbacks" (Walker, Holling, Carpenter, & Kinzig, 2004, p. 6). Each decision changes the context in which the other decision-makers are operating, illustrating the inter-related and interdependent nature of organizational and community resilience (Hall et al., 2018). Thus, the community response can be a reflection of the crisis management procedures (Beattie, 1992). In a tourism dependent economy, resilience of small businesses can impact the community in terms of financial losses, community support, and resource availability (de Vries & Hamilton, 2016). While individual businesses may reflect the resilience of the community, not all organizations need to survive a crisis for a community to be considered resilient (Hall, 2016).

There is no globally accepted framework for tourism destination resilience (Pennington-Gray, 2018) nor a measurement scale of resilience (Cahyanto & Pennington-Gray, 2017). There are five identified gaps in the literature for destination resilience: the need for a theoretical model, the need for empirical models, and the connection of destination resilience to sustainable tourism development, smart tourism, and tourism recovery (Schroeder & Pennington-Gray, 2018). Pennington-Gray (2018) explains that our approach to managing crises is linear even though the crises themselves are dynamic and do not always behave in a sequential manner. It is critical to acknowledge that destination resilience is a process rather than an outcome (Cahyanto & Pennington-Gray, 2017). Despite this recognition of crises as a sum of interdependent activities and decisions, (Pennington-Gray, 2018), the literature frequently presents resilience models that process through linear stages.

Sharifi and Yamagata (2016) outline the four abilities of community resilience as planning, absorbing, recovering from, and adapting to the conditions caused by the event. Another approach to community resilience echoes these four phases based on the ability to absorb the impacts, adaptively respond to threats, re-organize, and recover from disasters (Cutter et al., 2008). While adapting to and recovering from the crisis are the phases that may get the most attention, the importance of the planning and preparation phase should not be underestimated. In fact, lack of disaster preparedness impacts disaster response and recovery (Granville et al., 2016). In tourism destinations where disaster events are likely to occur, poor preparation may exist and make individual businesses or the destination as a whole more susceptible to negative outcomes from the event (Hystad & Keller, 2008).

### 2.3. Tourism in crisis

Hall et al. (2018) identify five necessary conditions for tourism destinations to be resilient through disaster and crisis events: destinations must be aware of the vulnerability of their resources, destinations should prioritize development that benefits all key stakeholders, destinations should approach crisis events through long-term strategies, destinations should work to combat the fragmentation in traditional governance models, and destinations should ensure that they are operating at appropriate regional and local scales. Recovery from a disaster, especially tourism recovery, relates to a reduction in vulnerabilities based on sustainability (Gurtner, 2016). For tourism destinations to be sustainable, they must balance the priorities in the triple bottom line of economic, social, and environmental factors (Elkington, 2013). Resilience is still presented in the literature as abstract (Schroeder & Pennington-Gray, 2018) and the "tourism industry is fairly deficient in the foundations and principles of destination resilience" (Schroeder & Pennington-Gray, 2018, p. 229) and the relationship between resilience, tourism crisis management, and sustainability is currently a gap in the literature (Pennington-Gray, 2018). Tourism destinations work within highly competitive settings while

they actively cultivate their brand and promote opportunities for future visitors, though tourism systems often do not have a “blueprint of the entire system in mind” (Hall et al., 2018, p. 1).

Community tourism decision-makers, such as Destination Management Organizations (DMOs), while typically operate proactively in the realm of marketing, are also responsible for taking a leadership role during and after a time of crisis to help the local tourism industry react to and recover from the event. DMOs are only one decision-making body within the community and operate in specific spaces of metagovernance (Amore & Hall, 2016a) which has the potential to limit the degree of agency and authority in their response. This challenge may be exacerbated in a community that is dependent on tourism for employment and economic stability (Amore & Hall, 2016a). Each decision changes the context in which others make decisions, and too narrow a focus on the tourism industry may disregard the need of the wider community (Amore, Prayag, & Hall, 2018).

Historically, successful tourism recovery is quantified as the restoration of consumer confidence and rebounded arrival numbers (Gurtner, 2016). However, a disaster or crisis that has the potential to derail the goals of the tourism destination and recovery will depend on a holistic view of how the economic losses can be minimized without compromising the natural and human resources of the region. There can be immediate, short term negative impacts on tourism when natural disasters occur, although collaboration among decision makers supports the possibility that a disaster or crisis could enhance the destination's ability to navigate future challenges and actually result in positive impacts (Beattie, 1992). Ultimately, tourism leaders need to prioritize protecting their destination image and minimizing damage to their brand after a crisis event (Pennington-Gray & Pizam, 2011).

### 3. Research design and methodology

#### 3.1. Research setting

The city of Durango sits at an elevation over 6500 ft in southwest Colorado. It has a population over 18,000 and is considered the hub of the predominantly rural La Plata County that has a population over 55,000 (Leeds, 2018). La Plata County spans 1690 miles (La Plata County Colorado, 2019). Tourism is an important base industry in the county and supports 26% of jobs (Region 9, 2019). La Plata County's economy is highly seasonal and while Purgatory Resort draws visitors for winter recreation, there is an even higher seasonal upswing of summer visitors partaking in activities on the Animas River, visiting nearby Mesa Verde National Park and San Juan National Forest, or riding the Durango & Silverton Narrow Gauge Railroad. (Leeds, 2019). Durango had recent experience recovering from disasters and crises that impacted tourism, namely the Missionary Ridge Fire in 2002 and the Gold King Mine Spill in 2015 (Informant #12, March 2019).

The 416 Fire started on June 1, 2018 approximately 13 miles north of the downtown area of the city of Durango (416 Fire, 2018a). The fire burned over 55,000 acres in the first month and became “contained” on July 31st (Armijo, 2018). Over 1900 residences were evacuated (Ruble, 2018), with many other residences in pre-evacuation status during different stages of the disaster. No injuries were reported and no structures were lost. On November 30th, 6-months after the fire started, the fire was officially declared out (Romeo, 2018). The U.S. Forest Service's investigation of the 416 Fire has yet to determine a cause (Romeo, 2019a, 2019b).

The 416 Fire had significant impacts on the Durango community. There were many people who were displaced and lost employment, as well as lived with the inconvenience and health threats of significant reductions in air quality from the smoke (Lachelt, 2018,). The fire had a marked impact on summer tourism with a decrease in sales tax of 3.2% and a decrease in lodging tax of 13% during June and July compared with 2017 (Leeds School of Business, 2019). Despite the immediate economic impacts, research showed that the economy recovered

relatively quickly and stabilized within a few months (Armijo, 2018). Further, the 416 Fire was a disaster within a larger context, as the physical change in the landscape resulted in significant flooding events in the area of the burn scar (Nicholson, 2018). Research regarding the human impact of disasters (CRED, 2019) reveals that flooding is more likely to occur and result in economic losses and human deaths than wildfire disasters. The 416 Fire and the resulting floods are inextricably linked due to being extreme events in the same geographic region within a short window of time.

#### 3.2. Metatheoretical perspective

This study deploys a critical constructivist paradigm (Denzin & Lincoln, 1994, 2011; Hollinshead, 2004; Pernecky, 2012), where the researchers' main lens stems from the constructivist paradigm with a strong critical component. This approach, emerging from a relativist ontology, subjectivist epistemology and hermeneutic methodology (Guba & Lincoln, 1994), privileges a unique lens through which to view the crisis management and resilience phenomena. Per Ritchie (2004), the understanding of crisis management processes is limited in terms of differing frameworks; thus, employing a critical constructivist lens provides the opportunity to view this disaster from a multidimensional paradigm supporting differing phenomena in the emergence process. Further, the goal of this study is to support a stronger understanding of crisis management processes as related to destination resilience in an attempt to help other locations that may experience similar disasters. Per Pernecky (2012) constructivism implores these dimensions of social change.

#### 3.3. Data collection

To identify the relationship between the crisis management procedures and community resilience, two methods of data collection were employed: engaging in semi-structured interviews and collecting and interpreting secondary sources. These two qualitative methodological processes were utilized to supply a larger picture of the disaster by interpreting hands-on experiences and illuminating the related external communication. The intent of utilizing these two data collection methods together was to implore the magnitude of the disaster and the crisis management responses in the most accurate manner. This approach intends to address the need for more qualitative research to deepen the academic understanding of resilience (Cahyanto & Pennington-Gray, 2017).

Regarding the semi-structured interviews, 15 interviews were conducted during the months of January, February, and March of 2019. Informants were chosen from personal interactions with researchers, evacuee status, and leadership positions in local tourism boards and businesses. The approach to identifying the sample was based on the need for multiple voices and perspectives of different stakeholders to be reflected (Basurto-Cedaño & Pennington-Gray, 2018) in the data collection since the understanding of resilience must incorporate “multiple layers and actors of the tourism system” (Schroeder & Pennington-Gray, 2018, p. 230). The interviews were semi-structured as the researchers had questions to follow (see Appendix A), but the conversation would shift based on the informants' interest and intent. If applicable, the interview was recorded and later transcribed. Each interview lasted between 45 and 75 min and was held in a place of the informant's choosing. Of the 15 informants, five were local business owners, six were managers of local tourism or hospitality businesses, and four were city or state employees; seven of the informants had been residents of the community for over 20 years; nine were evacuees, on pre-evacuation status, or were closely connected to evacuees; and 13 had a direct professional connection with the 416 Fire. A description of the informants is included in Appendix B.

The interpretation of secondary sources involved a sifting through of newspaper articles pertaining to the 416 Fire that were published by

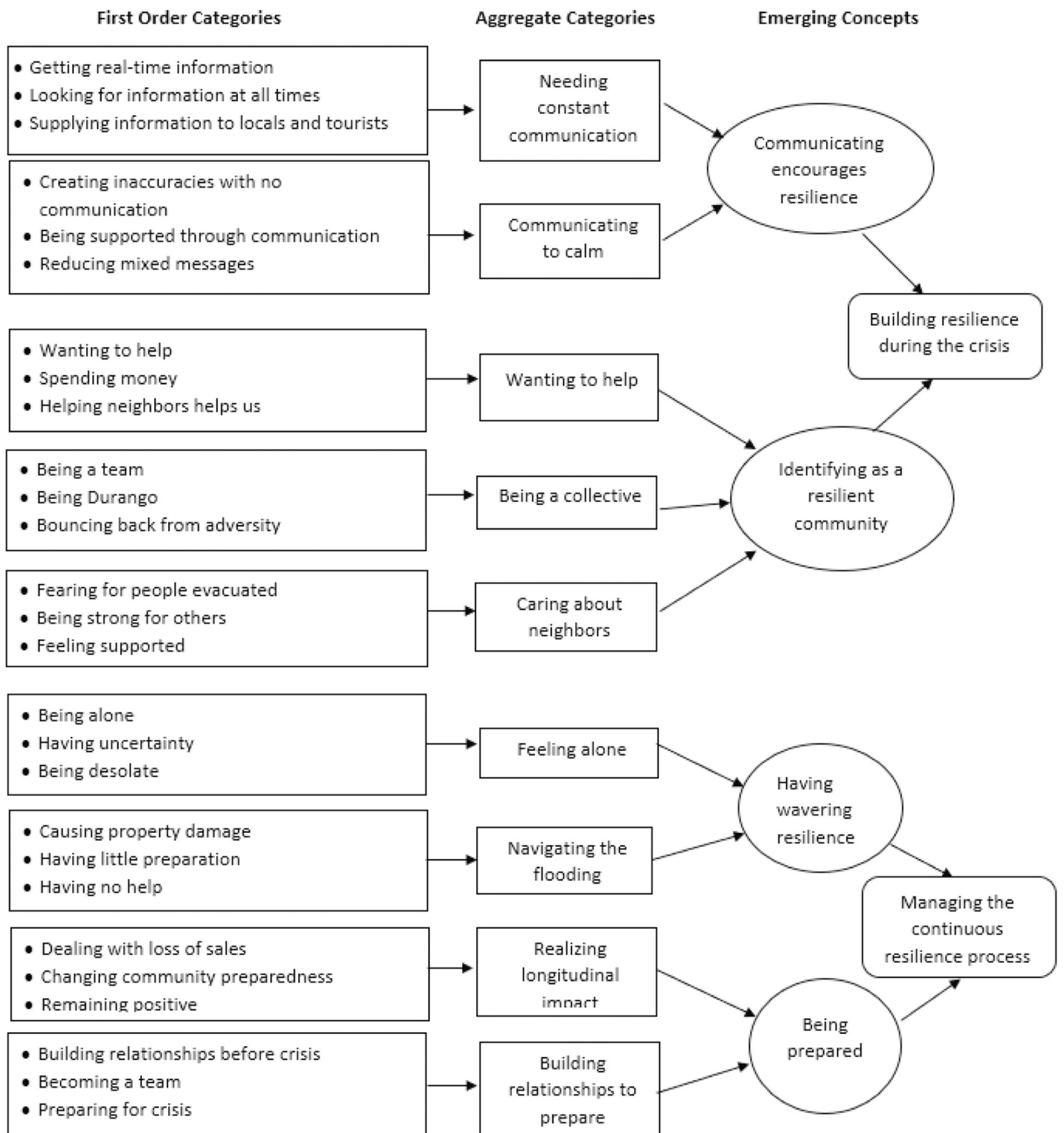


Fig. 1. Data structure findings.

the major local newspaper, the Durango Herald. These articles were published between June 1st (fire start) and November 30th (fire extinction). The majority of the articles related to the 416 Fire were published between the fire start and the middle of July, when the fire was considered contained, although related articles have been continuously published through December 2018. A total of 34 articles were sampled from over 350 articles that directly connected to the fire. The aim in choosing the articles was to provide a random sample of the local media that were directly related to the progress of the crisis management efforts, the resilience process, and the impact on tourism. Of the

34 articles chosen, thirteen articles were published in June, five in July, five in August, three in September, three in October, and five in November. Thirteen articles were categorized as crisis management focused articles, thirteen were categorized as resilience focused articles, and eight were categorized as tourism focused articles. These categorizations were determined by the majority of the content in each article and was agreed upon by all researchers. A list of the articles chosen is included in [Appendix C](#).



### 3.4. Data analysis

Building upon Philmore and Goodson (2004), Taylor and Bogden (1998) and Denzin and Lincoln (2011), it was determined that the most appropriate method of interpretation pertaining to the research questions is qualitative content analysis with the use of gerund coding techniques. This study implored four levels of gerund coding allowing us to stay close to the data and the emerging themes relevant to the content. This process “preserves the fluidity of their experiences and gives you new ways of looking at it” giving the ability to interpret “an insider’s view” (Charmaz, 2014, p. 121) which becomes especially important in this sensitive context. The coding process began with reading the articles and listening to/reading the transcribed interviews. The researchers then began with line-by-line gerund coding. This process formed the first order categories through analysis of the emergent themes. Next, the second stage of coding, focused coding, identified aggregate categories that represent “the most useful initial codes” (Charmaz, 2014, p. 139). Then, these subcategories and categories were continuously interpreted in a fluid manner to determine the emerging direction and themes present throughout the text. This process allowed the researchers to begin from a position of being close to the data with specific line-by-line content gerund coding with the goal of interpreting the intermingling of these codes to represent the holistic picture of this disaster as a process of resilience.

Throughout this coding process a constant comparative methodology was utilized, when “the researcher simultaneously codes and analyzes data in order to develop concepts” (Taylor & Bogden, 1998, p. 137). Simultaneous data collection and analysis allowed the coding and recoding of data in an effort to interpret the emerging themes present throughout. The sample size for both the secondary sources and the semi-structured interviews were determined by this constant comparison process. The constant comparison process involves working with and through the data and emerging codes until there are no new themes developing; thus, the sample number was not imperative. The emerging themes were the guide to the sample size decision-making process as “categories are saturated when gathering fresh data no longer sparks new theoretical insights” (Charmaz, 2014, p. 213). Credibility for this type of research is established through trustworthiness, credibility, dependability, confirmability, and transferability (Denzin & Lincoln, 2011; Guba & Lincoln, 1994), and each have been recognized in this research process.

## 4. Findings

The content analysis gerund coding process resulted in over 900 usable gerund codes, 27 first-order categories, nine aggregate categories, and four emerging concepts. The emerging concepts became split between two different time frames. It became apparent that there were two distinct resilience processes connected with the disaster event: a fluid resilience focused on moving toward the end of the crisis, supported by the first two findings (communicating encourages resilience and identifying as a resilient community) and an emergent resilience that liquifies in response to the aftermath of the crisis event, supported by the second two findings (having wavering resilience and being prepared). The data revealed that although resilience is a process of changing, fluid feelings and actions built from crisis management procedures, resilience differences can be segmented by the connection with the disaster timeline. Thus, the two processes of resilience intertwine to reflect the community’s response to the differing stages of the crisis management process. Data structure findings are represented in Fig. 1 and further expanded on in the following section.

### 4.1. Building resilience during the crisis

Two emerging concepts constitute the first major topic of “Building resilience during the process”, “Communicating encourages resilience”

and “Identifying as a resilient community.” During the disaster event communication and identification of the collective self played major roles in how resilience was formed and developed. Communication played a large role in knowledge building for both locals and tourists and identification and connection with others in the community played a large role in mentally managing the crisis. Both findings are discussed below:

#### 4.1.1. Communicating encourages resilience

Communication of the crisis management activities was extremely vital to resilience process development. In general, clear and distinct communication is a key component of the crisis management and resilience process. Supporting and building on Hystad and Keller’s (2008) suggestion that communication is imperative in crisis management, this research suggests that the type, amount, and timeliness of communication in the disaster management process had the ability to impact resilience of the local community. Communication supports engagement (Jones, 2016) and in order for it to be successful and positively impact community resilience, the communication needs to be constant and focused on supporting a calm reaction to the disaster.

4.1.1.1. *Needing constant communication.* The crisis management communication was extremely valuable for the local community impacted by the 416 Fire. Several communication channels were opened and continuously maintained during the disaster. Some examples of the communication channels that the researchers witnessed are as follows: (1) a volunteer led hotline was established, (2) a Facebook page was developed, (3) posters of fire progress were placed strategically around the city and county on “sandwich” boards (Informant #13, March 2019), (4) local city briefs were frequently developed, and (5) city and county public meetings were held. Constant communication, even if it did not reflect any changes in the current situation, represented a feeling of comfort and stability that many residents came to appreciate and connect with.

*“The fact that you have all that communication makes you feel better about the situation. It makes you feel like you are more in control of the situation than you would be if you didn’t know what was going on...It makes you feel like you are part of the team that is out there. You are looking for control in a situation you can’t control.”* (Informant #8, March 2019).

For tourists, constant communication became a means to understanding the current state of the environment and the possibility of travel decisions. Although the constant communication to the local community came from different sources, such as the local newspaper, for the tourist community the communication came from tourist development areas.

*“Our role when a crisis occurs is how we can get messages to travelers so they know what opportunities are still accessible, what opportunities are not, and how they can stay safe and still enjoy Colorado.... What we do like to do is keep in touch with those partners on the ground and find out when it’s best to send people back.”* (Informant #9, January 2019).

4.1.1.2. *Communicating to calm.* Communication reduced anxiety and fears of the unknown. Many informants suggested that in times of disaster communication becomes a means to reduce the imagination building up unknown stories about what may be happening. One local informant suggested that you cannot trust your brain in times of crisis, and communication helps with reducing that mistrust (Informant #1, January 2019).

Further, it became apparent that the communication in the local community was quite different than the communication that was being shared on a national level. The local communication was focused on calmness, while the national news was focused in a much more drastic and incorrect stance. The local communication focused on calming

those directly impacted and was aimed toward reducing the mixed messages that were apparent within the media.

*“They heard Durango was on fire, and that was the wrong information that was being communicated by the national news services.” ... Continuing, “There’s so many good things that did happen...the firefighters, the Type 1 commanders, were spot on, professional communicating every day.... Everyone was Facebooking, sharing it, putting out good communication, not just what the national news wanted to throw out and make it look like.”* (Informant #12, March 2019).

For tourists, communication was aimed at increasing calmness and providing correct information so as to support a stress-free travel setting. The goal of communication in the tourist realm was focused on creating calmness through the organization of media communication so as to reduce mixed messages aimed at environmental changes that could impact plans.

*“What I see as a big takeaway for us here is how critical and important those relationships and partners are on the ground. So that we’re able to all get on the same page with what’s happening and disseminate that information to visitors and to media so that we are not mixing messages.”* (Informant #9, January 2019).

#### 4.1.2. Identifying as a resilient community

The second emerging concept recognized that being a resilient community became the identity of the collective and became a way of mentally managing the crisis from an internal viewpoint. This finding supports Hall et al.’s (2018) idea that resilience is a process of ever-changing decisions, as the results suggest that the resilience of the community became the way in which the community managed the crisis on a collective level. The identification of the community as resilient is a process, not interdependent activities (Cahyanto & Pennington-Gray, 2017; Pennington-Gray, 2018), where interactions and actions were formulated as a way to cope with the disaster and define oneself throughout the event. Further, this finding supports and extends the literature focused on the importance of stakeholder response (Gurtner, 2016; Hall et al., 2018) by suggesting that the community, as a stakeholder, responds through identification of being a collective.

**4.1.2.1. Wanting to help.** Helping others during the disaster became a prominent theme in the data. It became clear that to be resilient, and to mentally deal with this disaster, helping others was at the forefront of many community members’ minds. The local newspaper showcased numerous stories of local community members wanting to help in any way they could, for example by spending in businesses that were economically challenged by the crisis.

*“I came to spend some money,” King said. “I wanted to volunteer, but most of the spots were already filled. I thought, ‘Well, what can I do? I can spend some money.’”* (Armijo, P., June 19, Armijo, 2018, Durango Herald).

The disaster even inspired one local resident to continue to help beyond the 416 Fire. An article from October focused on one local resident’s experience with the disaster and how that experience encouraged her to join the Red Cross.

*“Just going through the forest fire, day after day, the smoke, seeing the people who had to evacuate, watching the plumes, and then the floods – we were spared – but I thought: I could give more.”* (Armijo, P., October 1, 2019, Durango Herald).

One informant shared that her entire staff, although the business was evacuated and operating on a limited format, were all interested in helping in some way. The informant suggested that helping is a way that each person becomes resilient in the face of the disaster event.

*“There was not one person on our crew, our entire staff, who stopped. I mean they literally kept going... it was ‘I’m gonna keep working. They didn’t even know if they were going to get paid... I was getting text messages, what can I do.”* (Informant #1, January 2019).

The community interest in helping those directly impacted by the fire was apparent through a number of volunteer opportunities, such as donating items, contributing monetarily to the Community Foundation Serving Southwest Colorado (Herald Staff Report, June 12, 2018, Durango Herald; Armijo, P., October 26, 2018, Durango Herald), attending a community prayer service (No author, June 7, 2018, Durango Herald) or participating in a local food tour that supported restaurants that may have been negatively economically impacted by the fire (No author, June 15, 2018, Durango Herald). The local community also felt a need to help the firefighters. Two informants (Informant #8 and #12) shared that they thought the firefighters felt the love and appreciation of the local community as community members strongly responded to any call for items needed.

**4.1.2.2. Being a collective.** Forming an identity of a collective, or a team, became a prevailing theme in the data analysis. It was identified that being a team, being from Durango, and being a whole together, aided in living through the challenges of the disaster. Almost every informant mentioned that being in the crisis together, as a collective, became a way in which they identified as a community aiding in the resilience process. The following quote demonstrate this emphasis on the community as a collective:

*“In town, the spirit was always upbeat. Even though the smoke was crazy here and sometimes you couldn’t go outside because of the smoke pollution ... it was like everyone was so happy, so upbeat... like we got this. You know we are together, we are a team, we are a community, we are Durango. It’s as simple as that.”* (Informant #1, January 2019).

An article written within a month of the start of the fire signifies this same idea of the community (city and county together) being a collective body working together to move through the disaster.

*“We are strong together, as we’ve seen from the various challenges La Plata County has faced over the years; the 416 Fire response from within our community and far beyond it is both inspiring and reassuring.”* (Lachelt, G, July 6, Lachelt, 2018, Durango Herald).

The strong sentiment of collectivism and its impact on being resilient was further solidified six months after the start of the fire by the owner of the local ski resort (which was evacuated during the fire).

*“Coleman said while 2018 was tough, the year’s challenges showed the resiliency of Southwest Colorado and its ability to bounce back from adversity. ‘Now, we head into the 2018/2019 winter season with great optimism and strength, and we are looking forward to a very strong year,’ he wrote.”* (Armijo, Nov. 16, Armijo, 2018, Durango Herald).

**4.1.2.3. Caring about neighbors.** The last aggregate category that emerged to develop the main finding of “Identifying as a resilient community” centered around the idea that having care for one’s neighbors became a part of the identifiable resilience process. The interpretation of the findings suggests that care for the other is a predominant theme in identifying as a resilient community. As discussed in the quote below, many evacuees (Informants #1, 3, 4, 5, 6, 7, 8) felt the outward care of others through the constant comments of worry related to food, shelter, businesses, livestock, etc.

*“Durango is a special place because of the local support. A ton of people checked in with us... asked how we were. We had a lot of calls from customers about how we were doing.”* (Informant #4, February 2019).

There was also a predominant care for neighbors that reached outside the evacuee status to include those in management or active

positions directly connected with the disaster event.

*“These were our friends and neighbors out battling massive flames that were traveling at an alarming pace in extreme conditions – and they were stunningly successful in protecting homes and critical infrastructure. We owe them a debt of gratitude.”* (Lachelt, G, July 6, Lachelt, 2018, Durango Herald).

The care of neighbors in the direct line of the disaster was also seen through the numerous supportive signs that hung on businesses, schools, and homes (Durango Herald photo archive, 2018), the countless Facebook posts (416 Fire, 2018b), the thank you cards and donations dropped at the crisis management staging facilities, and other attempts to say thank you, such as coloring contests and discounts on food at local restaurants (Informant #8, March 2019). Further, there was agreement among most of the informants that the economy was able to stay afloat due to the support of neighbors.

*“I do think that locals did play a huge role in keeping the economy rolling. I mean, I think about the hotels that dropped rates and figured out how to get the evacuees that could afford something into hotel rooms so they weren't at the shelter”*

(Informant #13, March 2019)

#### 4.2. Managing the continuous resilience process

The second set of emerging concepts that constitute the major topic of “Managing the continuous resilience process” are “Having wavering resilience” and “Being prepared.” It became apparent that immediately after the initial threat of the disaster was reduced a new and different, although connected, resilience process emerged. This new resilience process was directly connected to a major stepping stone related to the disaster, the changing of the crisis management procedures. When the crisis management procedures became less intense (i.e., the fire was dwindling and less of a threat) the fluidity of the resilience became connected to changing feelings and preparing for the future. Both emerging concepts that make up the “Managing the continuous resilience process” concept are discussed below:

##### 4.2.1. Having wavering resilience

The concept of “Having wavering resilience” emerged once the immediate danger was reduced. Although the disaster became more controlled, it was far from over due to feelings that resulted in a wavering of the previously established positive resilience. It was revealed that the crisis continued beyond the immediate threat through the feeling of loneliness when returning after evacuation and the lack of management of the resulting floods in a climate of continuous uncertainty as Amore (2016) attests. As suggested in Sharifi and Yamagata's (2016) interpretation of the abilities of resilience, the timelines of the disaster had a direct impact on the resilience stages of the community. This affirms the literature (Sharifi & Yamagata, 2016; Cutter et al., 2008) that focuses on the stages of resilience, to suggest that resilience occurs based on the ability and desire to absorb the impacts of the disaster. Further, this finding suggests that to be a resilient community, there needs to be an awareness of resilience shifts relating to activities that are occurring, building on the literature that suggests communities respond to crisis management procedures (Beattie, 1992) even though crises are not linear (Pennington-Gray, 2018).

**4.2.1.1. Feeling alone.** The presence of the crisis management teams increased the size of a county community of 55,000 people by hundreds of individuals that were based in the area to work on the crisis management activities. These individuals had a large presence in the community resulting in feelings of safety and security. Approximately 40 days after the fire started, the majority of the crisis management team had left (Semademi, A., July 10, 2018, Durango Herald). Many

evacuees and local community members commented that as the fire dwindled and the crisis management teams reduced communication resulting in diminished direct contact with the disaster, there was an overwhelming feeling of loneliness. The findings suggest that people felt alone, had uncertainty of the future, and felt desolate.

*“When the evacuation got lifted...it's almost like the apocalypse... there were no zombies, but there was nobody... it was very, very surreal... all the emergency staff had left...I can't even almost describe the feeling ... it was desolate, the smoke was still there...and there was no one... it was very creepy.”*(Informant #1, January 2019).

*“The fire was scary, but the firefighters were around. If they aren't afraid, there is no reason for us to be afraid. They day they left, we became scared.”* (Informant #4, February 2019).

It seems that this loneliness has subsided in the community, that people are not having as strong of a desolate feeling. However, the memory of the 416 Fire is still prevalent in this community as can be seen with the multitude of articles (over 20) that mention the 416 Fire from Dec. 1, 2018 to March 31, 2019, 10 months after the fire start, as the uncertainty of its impact is still unknown, threatening the future sustainability of the Durango area.

**4.2.1.2. Navigating the flood.** One of the major aftermath issues of the 416 Fire is related to the burn scar that remained after the disaster event. The consequence of the reduction in vegetation in the burned areas resulted in substantial flooding in areas with limited past water movement. It became apparent that the initial crisis management process was focused on the fire event (i.e., safely stopping the burning and saving structures); however, the crisis management process mainly ceased when the fire stopped and did not continue when the flooding occurred. Due to the lack of crisis management processes related to flooding, the aftermath of the fire resulted in heavy rains that resulted in property damage.

*“After heavy rains on the 416 Fire burn scar brought down mudslides and debris flows in July, causing serious property damage to homes north of Durango, there's plenty to clean up.”* (Romeo, J., Sept. 9, 2018, Durango Herald).

From interviews with individuals directly impacted by the fire and subsequent flooding, it was revealed that the flooding could be more stressful than the fire as outside help was reduced by that time.

*“The fire was not as stressful as the floods. Evacuation was the most traumatic part of the experience. We kept calm during the fire, but we lost it during the floods.”* (Informant #1, January 2019).

As one informant shared, the flooding will occur for more than one year and may have a large impact on the community as a whole.

*“But for the community as a whole, obviously a burn scar has flooding implications... Hopefully with the amount of moisture we have gotten this year, that will help revegetate the area, but that's not going to be done in one year or even three years. We're going to be living with the threat of flooding for a while.”* (Informant #14, March 2019).

There is still uncertainty regarding the future potential for flooding. An article from February 2019 states the following:

*“...But with all that snow comes the risk of flooding and debris flows into homes, structures and roads adjacent to the 416 Fire burn scar.”*Continuing, *“The Forest Service is tasked with repairing trails, managing invasive plants, removing downed bridges and cleaning out sediment ponds, among other measures needed in response to a wildland fire. But placing diversions above homes to protect them from flooding hasn't proved effective from stopping debris coming down.”* (Romeo, J., February 26, 2019, Durango Herald)



#### 4.2.2. Being prepared

The concept of “Being prepared” emerged from an understanding that the 416 Fire would have a longitudinal impact on the community and that relationships were important in the management of the disaster event. This finding supports and extends the work of Granville et al., (2016) and Hystad and Keller (2008) by affirming that preparation is imperative and extending that this preparation should partially focus on alleviating the local longitudinal repercussions through relationship development. Further, the findings support the sustainability efforts of balancing social, economic, and environmental factors (Elkington, 2013), stakeholder engagement (de Vries & Hamilton, 2016; Granville et al., 2016), and in tourism-dependent communities, such as this, tourism decision-maker leadership (Amore & Hall, 2016b; Pennington-Gray & Pizam, 2011), while also extending that the sustainability process can be managed by acknowledging and preparing for a “fluid” disaster time frame in which there is a subjective, non-concrete ending. For example, this preparation can happen through the development of relationships within DMO leadership.

**4.2.2.1. Realizing longitudinal impact.** One of the major longitudinal impacts of the 416 Fire is related to the presence of the disaster as a major event that will change the structure of the community. As one informant shared:

*“The 416 will be in our vocabulary for decades. You know it’s one of those things, where were you when John Kennedy was killed? Where were you when the towers came down? So the 416 will be a part of the vocabulary of Durango.”* (Informant #12, March 2019).

The longitudinal impact is also related to the economic challenges associated with the initial disaster and the subsequent attached crises, as is interpreted below:

*“One of the more challenging parts was dealing with insurance. Lost quite a few days of business during our peak season. Felt let down that the process is so difficult... We had lots of different disasters going on at once, and we are still not through the process. This is quite challenging.”* (Informant #4, February 2019).

The realization that there would be economic longitudinal impacts related to the fire was also realized by state officials and agencies as can be seen with activities related to resilience support.

*“According to a joint news release, [Senator] Bennet and [Governor] Hickenlooper coordinated efforts between local officials and state and federal agencies to apply for the Emergency Watershed Protection funds meant for local communities recovering from natural disasters.”* (Martin, E., November 20, 2018, Durango Herald).

The longitudinal impact is being further explored as it relates to tourism in this community. One article suggests that there is a possibility of an impact on tourism, although the impact may not be as long or as large as expected.

*“In a study dated Aug. 27, economics professor Tino Sonora wrote, ‘Taking stock of the current fire (416 Fire) in La Plata County, relatively few structures have been damaged. The local economy was disrupted by evacuation calls, but as before, the largest impact will be the loss of tourist revenues, which we should know by the end of the year.’”* (Armijo, P., November 19, 2019, Durango Herald).

**4.2.2.2. Building relationships to prepare.** Within the realm of managing the continuous resilience process, it became apparent that building relationships between crisis management entities and the community will be beneficial in preparation for possible future crises and disasters. Building relationships and becoming a team before the next disaster event will encourage a positive resilience process for the crisis management decision-makers and the community as a whole.

*“One of the things we have been talking about is that you don’t want to be building those relationships {with resources and crisis teams} in times of crisis. It’s critical to have those already established so that you can call {someone on the ground} and ask what do you really need help with ...”* (Informant #9, January 2019).

A major aspect of developing partnerships is communication. It was suggested by multiple informants (Informant #13 and #14) that clear communication will be a major aspect of building and supporting relationships in the future. Informant #14 shares how these partnerships will be managed on a personal level.

*“The biggest learning lesson was... information is kind of a 24-hour thing. So, we need to be able to schedule our employees to be able to cover for the times when we would expect information to be delivered.”* (Informant #14, March 2019).

Further, Informant #13 suggested that these relationships and the development of a team environment, similar to what occurred during the disaster event, will support the way this community is viewed from outside community members, i.e. tourists. This informant suggested that building relationships to prepare for future disasters, and coming together as a collective community after the disaster, will be an identifiable feature of this community seen by tourists.

## 5. Discussion and conclusion

The purpose of this study was twofold: to interpret the practices that impact resilience during disaster events and to identify how these processes can be managed sustainably. The results suggest that the main practices that impact resilience during the management of a disaster will prioritize maintaining a balance of emphasis on the local people, the economy, and the local environment. The practices that impact community resilience processes are related to the development of timely communication, evolution of a collective community, acceptance of the space after the disaster and support for the preparation of future disaster management activities at the community level.

These processes can be managed sustainably through the identification of time frames related to the disaster. Previous research suggests the importance of crisis management procedures (Beattie, 1992) and abilities (Sharifi & Yamagata, 2016) or impacts (Cutter, et al., 2018) of resilience when managing a disaster event, although crises are not linear (Pennington-Gray, 2018). Contributing to this work, this research suggests that there are two distinct time frames of the resilience process that are impacted by the crisis management activities. However, these time frames are fluid where there is no concrete end to the management process as the disaster and the connected activities shift. In the first time frame – during the disaster event when the crisis management activities are high and focused – communication and identifying as a resilient community both encourage and support the resilience process. In the second time frame, resilience begins to waver and preparation activities within the community increase in an effort to manage the continuous resilience process. Both pieces of the resilience puzzle need to be identified for a sustainable community to prevail.

## 6. Contribution

### 6.1. Contributions to scholarship

This qualitative study responds to a call to add depth to the understanding of resilience in the literature (Cahyanto & Pennington-Gray, 2017). The case of the 416 Fire adds evidence to address the current gaps related to resilience and tourism and resilience and sustainability (Schroeder & Pennington-Gray, 2018). The findings suggest that interpreting the community response to crisis management from the lens of resilience allows a more thorough and intricate identification of the destination resilience process in a tourism-based society.



This research supports Hall et al.'s (2018) suggestion that resilience is a process of ever-changing decisions, where decision-making related to crisis management is a process of multiple levels structured by the crisis management response timeline. Further, this research extends Beattie's (1992) suggestion that crisis management decisions impact community response by identifying that the resilience response becomes malleable once the crisis management decisions are reduced/changed (i.e. after the disaster is not a threat). This paper also works to fill a gap in the literature by identifying the economic, environmental, and social impacts of the 416 Fire on the local residents to demonstrate the relationship between resilience, tourism crisis management, and sustainability (Pennington-Gray, 2018). The cultural and social impacts of the crisis that were identified in the findings clearly indicate that the economic concerns were coupled with the need to build cultural and social assets among stakeholders in the tourism industry (Basurto-Cedaño & Pennington-Gray, 2018).

In addition, the findings of this research contribute to Sheppard and Williams' (2015) concern that the understanding of community resilience is in an embryonic stage by developing our knowledge in this regard to support a more thorough identification of the resilience process outlined in fluid stages. This research extends that of Sharifi and Yamagata's (2016) by expanding the interpretation of the four abilities related to resilience, notably the recovery and adaption stages. Further, this study extends the work of Granville, et al., (2016) and Hystad and Keller (2008) to suggest that disaster preparedness should emphasize building a collective among the community. Community resilience is dependent on preparing for (1) constant and calm communication, (2) a collective community in the helping and caring phases, (3) the wavering of resilience that occurs after the initial disaster, and (4) the longitudinal impacts that will influence relationship building.

## 6.2. Practical implications

This research can be utilized by policy makers and tourism decision-makers in three distinct ways. First, the findings of this research suggest the importance of identifying the need to be proactive rather than reactive in crisis management planning, specifically with communication structure. The findings of this study should be used as a guide in preparing communication channels that should be focused on accuracy and speed. The success of the recovery phases may be dependent on the planning and preparation, specifically of communication channels, that occurs before the disaster and will be utilized within and after the disaster event. Second, as tourism destinations wrestle with the increasing threats of the environmental impacts from climate change, disasters and crises have the potential to increase in frequency and force. The results of this research gives tourism decision-makers and city officials an interpretation of the resilience process from direct sources aiding in the realization that identification as a collective community is imperative to the resilience process and that the resilience process can waver based on management activities. Lastly, this research can be used as a guide during and after disasters through the

## Appendix A. Sample interview questions

- Please tell us how you first heard about the 416 Fire.
- Please tell us what your immediate reaction was to hearing about the 416 Fire.
- Please describe the impact that the 416 Fire had on you personally and/or professionally.
- Do you have ongoing concerns about the impacts of the 416 Fire.
- What did the resiliency process look like for the Durango community?
- Can you reflect on the crisis management process? What did the management of the fire look like from your lens?
- Please reflect on the media coverage of the 416 fire.

Note: These questions are a guide. If we find that the participant is building on one concept or another, we can continue the conversation in that direction.

utilization of a holistic approach. As was discussed in the findings that suggested the importance of building relationships in the preparedness process, crisis management is inadequate when decision-makers operate in isolation. Collaborative approaches that maximize the knowledge and skills of key players throughout the community will likely result in a more efficient use of resources and encourage more confidence throughout the community during the recovery phase.

## 7. Limitations and future research

Although our research encompasses a wide range of viewpoints related to the disaster, there are some limitations that need to be considered. First, this community did not experience structural loss or injuries. This is distinct from many of the global disasters that have occurred recently. We recognize that the physical impact of the 416 Fire was unique in terms of the scope of its destruction. However, we believe this distinction provided an advantage of interpreting resilience as it relates to disasters with little physical destruction, shedding light on the differing processes of personal and collective resilience. Second, we recognize that one of our limitations is connected to the time frame of this study. We were not able to gather primary data during the fire due to our close proximity to the disaster event. This limitation is consistent with issues related to timelines and tensions for crisis research (Hall et al., 2016). However, we believe that the time frame of our study poses benefits to the data, such as retrospective interpretation and reflection on the continuous resilience process. Third, the Durango community is located in the Southwest portion of the United States. Disasters similar to the 416 Fire are not uncommon in this environment. Many of the individuals in this community may have an exclusive resilience process associated with preparation based on their past experience.

As Informant #12 shared "Fire and flood- they go together" (March 2019). This is a distinct aspect of this type of disaster event that pleads for additional research. The longitudinal impact of disaster events is yet to be examined in detail. Future research should focus on the longitudinal impact of disasters beyond the scope of this study. In addition, communication was a main component of the findings of this study. Further research that focuses on the specific types of communication used, mainly media and social media communication, would be beneficial in identifying how differing communication sources impact the resilience process. For example, findings of this study could be used to further extend a quantitative analysis focused on communication channels and the impact of these sources on the resilience of this community and the potential for tourism influxes during and after the disaster.

## Author contributions

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\*No outside funding was obtained for this research.

## Appendix B. Informant information

	Position	Community Experience	Personal Connection	Professional Connection
Informant #1	Manager -Recreation Club	2 years	Yes (Evacuee)	Yes (Business evacuated)
Informant #2	Owner - Ranch and Farm	20+ years	Yes (Pre-evacuation)	Yes (Partial Business Closure)
Informant #3	Owner -Ranch and Farm	20+ years	Yes (Pre-evacuation)	Yes (Partial Business Closure)
Informant #4	Owner - Food Business	20+ years	Yes (Family evacuated)	Yes (Business evacuated)
Informant #5	Manager - Food Business	5 years	Yes (Family evacuated)	Yes (Business evacuated)
Informant #6	Owner- Food Business	20+ years	Yes (Family evacuated)	Yes (Business evacuated)
Informant #7	Manager - Recreation Club	2 years	Yes (Evacuee)	Yes (Business evacuated)
Informant #8	Owner - Food Business	20+ years	Yes (Evacuee)	No
Informant #9	Manager- Tourism Office	7 years	No	Yes
Informant #10	Manager - Tourism Office	5 years	No	Yes
Informant #11	Manager- Media Business	20+ years	No	No
Informant #12	City Leader	20+ years	Yes (Family evacuated)	Yes (Decision-maker of community)
Informant #13	City Employee	10+ years	No	Yes (Decision-maker of community)
Informant #14	City Employee	5 years	No	Yes (Decision-maker in community)
Informant #15	State Employee	N/A	No	Yes (Decision-Maker)

## Appendix C. Secondary sources

Date	Author	Title	Link	Category
2-Jun-18	Semadeni, A.	Firefighters gain ground on 416 Fire	<a href="https://durangoherald.com/articles/226635-firefighters-gain-ground-on-416-fire">https://durangoherald.com/articles/226635-firefighters-gain-ground-on-416-fire</a>	Crisis Management
4-Jun-18	Simonovich, R.	Three community meetings to update residents about wildfire	<a href="https://durangoherald.com/articles/226862">https://durangoherald.com/articles/226862</a>	Crisis Management
6-Jun-18	Herald Staff Report	How to help with the 416 Fire	<a href="https://durangoherald.com/articles/228033-how-to-help-with-the-416-fire">https://durangoherald.com/articles/228033-how-to-help-with-the-416-fire</a>	Resilience
7-Jun-18	Armijo, P.	416 Fire not harming tourism, director says	<a href="https://durangoherald.com/articles/227383-416-fire-not-harming-tourism-director-says">https://durangoherald.com/articles/227383-416-fire-not-harming-tourism-director-says</a>	Tourism
7-Jun-18	No author	Community to pray for 416 Fire evacuees	<a href="https://durangoherald.com/articles/227443-community-to-pray-for-416-fire-evacuees">https://durangoherald.com/articles/227443-community-to-pray-for-416-fire-evacuees</a>	Resilience
8-Jun-18	Semadeni, A.	Firefighters slow 416 Fire's advance on Hermosa homes	<a href="https://durangoherald.com/articles/227673">https://durangoherald.com/articles/227673</a>	Crisis Management
15-Jun-18	Coram, D.	Effort against 416 Fire is remarkable	<a href="https://durangoherald.com/articles/228812-effort-against-416-fire-is-remarkable">https://durangoherald.com/articles/228812-effort-against-416-fire-is-remarkable</a>	Crisis Management
15-Jun-18	No author	Local food tour to contribute to 416 Fire relief	<a href="https://durangoherald.com/articles/228746">https://durangoherald.com/articles/228746</a>	Resilience
18-Jun-18	Romeo, J.	Ash runoff from 416 Fire turns Animas River black	<a href="https://durangoherald.com/articles/229109-ash-runoff-from-416-fire-turns-animas-river-black">https://durangoherald.com/articles/229109-ash-runoff-from-416-fire-turns-animas-river-black</a>	Tourism
19-Jun-18	Armijo, P.	Silverton shop owners feel economic squeeze from 416 Fire	<a href="https://durangoherald.com/articles/229115-silverton-shop-owners-feel-economic-squeeze-from-416-fire">https://durangoherald.com/articles/229115-silverton-shop-owners-feel-economic-squeeze-from-416-fire</a>	Tourism
19-Jun-18	Armijo, P.	Purgatory deals with financial hit from 416 Fire	<a href="https://durangoherald.com/articles/229136">https://durangoherald.com/articles/229136</a>	Tourism
22-Jun-18	Semadeni, A.	NIMO team takes command of 416 Fire	<a href="https://durangoherald.com/articles/229301-nimo-team-takes-command-of-416-fire">https://durangoherald.com/articles/229301-nimo-team-takes-command-of-416-fire</a>	Crisis Management
29-Jun-18	Romeo, J.	Baby bear undergoes rehab for burned paws	<a href="https://durangoherald.com/articles/229614-baby-bear-undergoes-rehab-for-burned-paws">https://durangoherald.com/articles/229614-baby-bear-undergoes-rehab-for-burned-paws</a>	Crisis Management
2-Jul-18	Romeo, J.	416 Fire on track to become one of Colorado's largest wildfires	<a href="https://durangoherald.com/articles/229990">https://durangoherald.com/articles/229990</a>	Crisis Management
3-Jul-18	Shinn, M.	Burned bear cub gains international attention, seen as symbol of hope	<a href="https://durangoherald.com/articles/230227">https://durangoherald.com/articles/230227</a>	Resilience
6-Jul-18	Lachelt, W.	Together, we face 416 aftermath	<a href="https://durangoherald.com/articles/230681-together-we-face-416-aftermath">https://durangoherald.com/articles/230681-together-we-face-416-aftermath</a>	Resilience
10-Jul-18	Semadeni, A.	Firefighters pack it up as storms loom over 416 Fire	<a href="https://durangoherald.com/articles/231128-firefighters-pack-it-up-as-storms-loom-over-416-fire">https://durangoherald.com/articles/231128-firefighters-pack-it-up-as-storms-loom-over-416-fire</a>	Crisis Management
31-Jul-18	Semadeni, A.	416 Fire declared 100 percent contained; interior still smolders	<a href="https://durangoherald.com/articles/234477">https://durangoherald.com/articles/234477</a>	Crisis Management
23-Aug-18	Semadeni, A.	Railroad ridership down about 27% after fire, debris flow	<a href="https://durangoherald.com/articles/238015-railroad-ridership-down-about-27-after-fire-debris-flows">https://durangoherald.com/articles/238015-railroad-ridership-down-about-27-after-fire-debris-flows</a>	Tourism
26-Aug-18	Armijo, P.	City sales tax down in June, but not as much as feared	<a href="https://durangoherald.com/articles/238127-city-sales-taxes-down-in-june-but-not-as-much-as-feared">https://durangoherald.com/articles/238127-city-sales-taxes-down-in-june-but-not-as-much-as-feared</a>	Tourism
27-Aug-18	Armijo, P.	Small Business Administration offers loans to businesses hit by 416 Fire	<a href="https://durangoherald.com/articles/238553-small-business-administration-offers-loans-to-businesses-hit-by-416-fire">https://durangoherald.com/articles/238553-small-business-administration-offers-loans-to-businesses-hit-by-416-fire</a>	Resilience
30-Aug-18	Armijo, P.	La Plata County homeowners get glimpse of federal flood aid program	<a href="https://durangoherald.com/articles/239066-la-plata-county-homeowners-get-glimpse-of-federal-flood-aid-program">https://durangoherald.com/articles/239066-la-plata-county-homeowners-get-glimpse-of-federal-flood-aid-program</a>	Resilience
31-Aug-18	Shinn, M.	Durango & Silverton railroad repairing damages from mudslide	<a href="https://durangoherald.com/articles/239195-durango-silverton-railroad-repairing-damage-from-mudslides">https://durangoherald.com/articles/239195-durango-silverton-railroad-repairing-damage-from-mudslides</a>	Crisis Management
8-Sep-18	Romeo, J.	Volunteer group helps with 416 Fire flooding	<a href="https://durangoherald.com/articles/240391-volunteer-group-helps-with-416-fire-flooding">https://durangoherald.com/articles/240391-volunteer-group-helps-with-416-fire-flooding</a>	Resilience
24-Sep-18	Herald Staff Report	In wake of fires, more than \$500,000 raised to support disaster relief	<a href="https://durangoherald.com/articles/242803-in-wake-of-fires-more-than-500000-raised-to-support-disaster-relief">https://durangoherald.com/articles/242803-in-wake-of-fires-more-than-500000-raised-to-support-disaster-relief</a>	Resilience
27-Sep-18	No author.	San Juan National Forest offers 416 Fire field trips	<a href="https://durangoherald.com/articles/243156-san-juan-national-forest-offers-416-fire-field-trips">https://durangoherald.com/articles/243156-san-juan-national-forest-offers-416-fire-field-trips</a>	Resilience
1-Oct-18	Armijo, P.	416 Fire inspires new red cross volunteer	<a href="https://durangoherald.com/articles/243649-416-fire-inspires-new-red-cross-volunteer">https://durangoherald.com/articles/243649-416-fire-inspires-new-red-cross-volunteer</a>	Resilience
16-Oct-18	Martin, E.	Unauthorized drone usage over wildfires may become a felony	<a href="https://durangoherald.com/articles/246082-unauthorized-drone-usage-over-wildfires-may-become-a-felony">https://durangoherald.com/articles/246082-unauthorized-drone-usage-over-wildfires-may-become-a-felony</a>	Crisis Management

26-Oct-18	Armijo, P.	Community foundation raises, spends \$416,000 to aid residents hit by 416 Fire	<a href="https://durangoherald.com/articles/247566-community-foundation-raises-spends-416000-to-aid-residents-hit-by-416-fire">https://durangoherald.com/articles/247566-community-foundation-raises-spends-416000-to-aid-residents-hit-by-416-fire</a>	Resilience
16-Nov-18	Armijo, P.	Ski season is on its way in Southwest Colorado	<a href="https://durangoherald.com/articles/250906-ski-season-on-its-way-in-southwest-colorado">https://durangoherald.com/articles/250906-ski-season-on-its-way-in-southwest-colorado</a>	Tourism
19-Nov-18	Armijo, P.	Study: Short-lived economic hit from wildfires	<a href="https://durangoherald.com/articles/250848-study-shortlived-economic-hit-from-wildfires">https://durangoherald.com/articles/250848-study-shortlived-economic-hit-from-wildfires</a>	Tourism
20-Nov-18	Martin, E.	Grant to aid in wildlife recovery, including 416 fire	<a href="https://durangoherald.com/articles/251378-grant-to-aid-in-wildfire-recovery-including-416-fire">https://durangoherald.com/articles/251378-grant-to-aid-in-wildfire-recovery-including-416-fire</a>	Resilience
21-Nov-18	Murray, D.	Environmental experts exacerbate fires	<a href="https://durangoherald.com/articles/251462-environmental-experts-exacerbate-fires">https://durangoherald.com/articles/251462-environmental-experts-exacerbate-fires</a>	Crisis Management
30-Nov-18	Romeo, J.	Six months later, no cause released for 416 Fire	<a href="https://durangoherald.com/articles/252763-six-months-later-no-cause-released-for-416-fire">https://durangoherald.com/articles/252763-six-months-later-no-cause-released-for-416-fire</a>	Crisis Management

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