Psychosocial Capacity Building in Response to Cascading Disasters: A Culturally Informed Approach

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1. Introduction

Although disasters are continuing to "extract a heavy toll" throughout the world, mortality and losses are "disproportionately higher" in developing countries (UNISDR, 2015). This reflects an enduring dilemma that affects the practice of disaster reduction and response. For many years, the majority of theories and interventions have come from developed, Western countries, reflecting cultural, human and environmental relationships characterized by the exploitation of

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resources, and enduring asymmetries between nations (Hewitt, 1995; De Loughery et al., 2015; García-Acosta, 2017).

For example, the term "disaster mental health," which has dominated the field of psychosocial disaster response, is a reflection of what can be called 'the Western psychological project'. This project has medicalized, in Western terms, the suffering of individuals, families and communities in the wake of disasters (Summerfield, 2000; 2004). Fortunately, in last two decades there have been some improvements due to the efforts of scholars, practitioners, NGOs and international agencies. In response to the dominance of technocratic policies: significant actors such as non-governmental organizations, have advocated for greater involvement of local people and communities in disaster risk reduction, promoting a pro- active role, recognizing their unique knowledge in preparedness, response, and the recovery process (Gaillard and Mercer, 2013). The field of psychosocial support has evolved so that there is a greater emphasis than previously on resilience, prevention, empowerment, culture and local leadership, but there are still tensions between the values, assumptions and standards as articulated by the International Committee of the Red Cross (2016), United Nations (UN)(2015) and the World Health Organization (WHO) (2017; 2015) and complete respect for and full empowerment of disaster-affected individuals, families and communities. There has also been greater understanding about how complex issues such as climate change, local vulnerabilities, societal resilience, and sustainability must be considered as part of the contextual process in order for disasters to be addressed effectively (Kelman et al., 2015). Large-scale catastrophes and crises are becoming more complex to understand and address, challenging both emergency management and emergency planning to adapt to the shifting needs of interconnected societies (Alexander, 2005; Linkov et al., 2014).

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The concept of cascading crises can be seen as part of this process, focusing on those events distinguished by the exacerbation of secondary emergencies, such as the ones caused by the disruption of critical infrastructure (Pescaroli and Alexander, 2015). Although there has been a recognition in the literature about cascading disasters of the need to contextualize the response and recovery process to develop possible mitigation tools (Pescaroli and Alexander, 2016), the current emphasis has not yet explored the implications for psychosocial preparedness and response strategies.

It has been suggested that the loss of services following disasters, in addition to the original disaster, can be strongly related to symptoms of posttraumatic stress disorder (PTSD), depression, and other psychological distress, which will vary depending on where the disaster occurs, such as in urban/non-urban areas (Gros et al., 2012). Events such as blackouts can cause widespread social disruptions, increasing the needs of vulnerable populations and having intangible impacts, such as exacerbation of stress levels and adaptive changes of social behaviors (Pescaroli et al., 2017). Children and young people, for example, have been particularly vulnerable to the psychological effects of the blackout in Puerto Rico caused by Hurricane Maria (Mercy Corps, 2018). However, while the direct consequences of events such as floods, earthquakes and other large-scale disasters have been recognized and quantified in policy making, much less has been done to understand the qualitative drivers of cascading impacts (Nones and Pescaroli, 2016). Recent evidence has postulated that the loss of essential services can be associated with risk to life and personal security, but these insights need to be better integrated in policies and practices, particularly those that involve citizens as pro-active agents in worst-case scenarios (Pescaroli, 2018).

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In this article, we review the current standards of psychosocial support in response to disasters, understanding the possible role of psychological capacity building for mitigating cascading crises. The next sections will consider what would strengthen psychosocial support after the events, valuing indigenous cultural practices, empowering local people and engaging them in all phases of disaster mitigation, response and evaluation; recognizing the essential interplay between collective recovery and individual psychosocial healing. The conclusions propose groups as the modality of choice for interventions, as well as highlighting some remaining challenges for conceptualizing best practices associated with cascading disasters.

2.Self, Society and Culture

All who have responded to disasters are aware of the universal reactions that individuals have: physical, cognitive, psychological, emotional, social, and spiritual (Halpern & Tramontin, 2007; Halpern & Vermeulen, 2017; Miller, 2012; Ritchie, et al, 2006; Rosenfeld, et al, 2005; Ursano, et al, 2007; Yassen, 1995).

And of course disasters disrupt family relationships and community functioning. But when there is a disaster there are always two parallel processes (Miller, 2012). The first involves the concrete facts, what happened on the ground – that there was an earthquake or an explosion, how long the impact lasted, how many people were affected, the level of the impact and damage caused, and the response to the disaster and its effectiveness. But there is a second dimension of equal importance- the perceptions and meaning-making that contribute to the social construction of the disaster. Disasters are not simply tangible events, they are socially constructed and have

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different meanings for different people (Cannon, 2008; Miller, 2012). Or as Alexander has stated (2000) a disaster is when victims perceive it as such. The social construction of disaster includes narratives about what caused the disaster, estimations of its scale, a subjective sense of safety and security or lack thereof, and observations about the effectiveness and impact of disaster responses.

Both dimensions occur in the context of a social ecology of disaster (Bragin, 2014; Miller, 2012) (See Figure I) In other words, social insights and meanings are shaped within the context of the local cultural and environmental contexts (Hewitt, 1995) The social ecology is the socio-historical context in which the precipitating event, often referred to as the "disaster," occurs. It involves the interactions of the precipitating event(s), affected people and their community within the context of external factors: environmental, geographic and geological factors, political dynamics, structural inequalities, economic realities and constraints, physical and technological infrastructure, social networks and capital, media constructions of the event and community, and much more (Miller, 2012). This leads to differential vulnerability for diverse groups and individuals, which is closely associated with power dynamics and relations (Cannon, 2008). Considering macro-drivers such as climate change and their overlapping dynamics with disaster reduction and sustainability, a focus on the "root causes and the fundamentals of vulnerability and resilience as long-term processes" is urgently needed (Kelman et al., 2015).

Once we recognize that a disaster is much more than a series of concrete events, then culture becomes a critical variable in determining how people make sense of and react to the disaster (Hewitt, 1995; Alexander, 2005). Arthur Kleinman (1988, p.199) has said: "the construction of self involves a dialectic between universal and biological and social aspects of human nature on

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the one side and the process...of creating meaning in particular social interactions based on shared cultural models and values orientations." When helping people to recover from disasters we very much need to understand 'the construction of self' and the way that people make meaning. This entails recognizing self and personhood and the relationship between self and family in a sociocultural context, as ideas and their environment co-evolve, interacting together (Bateson, 1972)

Derrick Summerfield (2000; 2004) cautioned Western disaster responders, when responding to non-Western populations, about imposing their own paradigms of sickness and health and particularly "medicalizing" human suffering using Western concepts of psychiatric disorder, such as post-traumatic stress disorder. He considers how there are very different notions of personhood – what it means to be a person – in diverse cultures and societies. Thus, when outsiders respond to a disaster, they usually make sense of what they encounter using their own personhood frameworks, based on their worldviews, values and professional training but these do are not necessarily respond to what affected people are experiencing. However, the field has been evolving since the observations of Hewitt (1995) and Summerfield (2000; 2004), developing a more integrative process that is slowly being incorporated in disaster risk reduction practices (Gaillard and Mercer, 2013). Summerfield (2004) suggests that responders ask certain questions, such as: What kind of risks can be faced? What do people seek help for? Who do they seek help from? What do they share and not share with people outside of the family? What leads people to be hopeful? Fatalistic? What is normal behavior? Abnormal? Or as Cannon (2008) has pointed out, there can be a discrepancy between what people need and seek and what responders 'think' that they need.

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Personhood, as shaped by culture determines what we think and feel, how we express our inner worlds to others (assuming that there is even a concept of an inner world), how we make sense about what happened, what it means to 'feel better' and who we turn to at times of need (Miller, 2012; Summerfield, 2004). This informs an ethical approach to disaster response; what have individuals, families and communities lost, what do they seek and what and who will help them achieve their goals of recovery. Responders need to understand what it means for affected people to be a person in order to understand what they seek, need and expect from their families, friends, and leaders in the community. Leaders in the community may mean politicians, civil servants and professionals, such as psychologists, psychiatrists and social workers or, depending on the sociocultural context, religious and spiritual leaders, and clan and tribal leaders (Alexander 2000; 2005; Miller, 2012).

Alexander (2000) has also expressed concern about the use of practices that make sense in one cultural context to very different cultural contexts. But as he also argues, culture is dynamic, not static and culture can be negatively corrupted by authoritarian regimes, ultra-nationalism and social targeting and exclusion. Thus, local culture is not always 'good' or 'better' and there are responses developed in a given cultural setting that can be adapted to use in a range of cultural contexts. The key point is that culture should not be ignored and there are risks with taking a universalistic approach to what helps people to recover from a disaster.

Ethical disaster response involves 'doing no harm' and being mindful of possible iatrogenic effects of well-intentioned interventions. Therefore, responders have an obligation to question all that we think we know as we work in a range of communities, with a mix of cultures, and enter varied social ecologies. In many ways, it is not so much what we know and can teach others when
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responding to disasters, but the questions that we ask which help people to recover their sense of efficacy, which is culturally informed and reflects their sense of personhood.

3. Defining Disasters is Contingent

Those who constitute the community of professional disaster responders often use shorthand when even naming what is and is not a disaster. The usual typology employed by Western theorists is that of natural (e.g. earthquakes, tsunamis, fires, floods), technological (e.g. chemical spills, nuclear meltdowns, broken dams) and complex or intentional (e.g. armed conflict, terrorism, mass shootings, ethnic cleansing) (Halpern & Tramontin,2007; Halpern & Vermeulen, 2017; Miller, 2012, Pastel & Ritchie, 2006; Rosenfeld, et al, 2005; Van den Eynde & Veno, 1999). However, there are not really essentialist categories of disasters even if they are described as such. It is important, therefore, to periodically interrogate the question "what is a disaster", considering the different interpretations that may emerge from culturally shaped thematic and societal constructs (Alexander, 2005).

In other words, catastrophic events can be associated with elements that are interacting and evolving together in societal and political domains, being more than just a function of the physical environment (Alexander, 2000). Responding to a disaster can be a form of prevention for the next disaster and conversely, focusing on prevention can be a means of healing from a prior disaster. Thus, the development of possible mitigations strategies must take into account the contextual level where the interface between hazards, vulnerabilities and exposures interact and are rooted. Once the complexity of society has been recognized, with particular consideration of

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interconnected infrastructure, services and systems, it is essential to shift from risk management to resilience management, developing actions that foster the growth of components such as social networks (Linkov et al., 2014). The literature on cascading disasters supports this perspective, considering vulnerability factors which amplify how disaster impacts can escalate and become magnified in society (Pescaroli and Alexander, 2015; 2016). When Hurricane Katrina struck, there was not only the natural event – the hurricane – but structural factors such as where people lived, how vulnerable their neighborhoods were to flooding, the impact of service losses ranging from not having banks to the impossibility of cooking to the release of toxic substances, and cultural discourses that shaped whether people were lionized or vilified by the police and press – these were not 'natural' occurrences (Park & Miller, 2006). When an earthquake leads to the collapse of buildings, the quality of construction comes to mind (Halpern & Tramontin, 2007) as happened in China during the Wenchuan earthquake when many schools collapsed (Barboza, 2009; Miller, 2012). When the 'natural' Tohoku earthquake struck Japan in 2011, it set off a tsunami but also led to a 'technological' and man-made disaster when the Fukushima Saiichi nuclear plant melted down (Fujimura & Nishizawa, 2011), impacting society as a whole and contributing to an economic disaster (Tabuchi & Wassener, 2011) In the case of Hurricane Sandy the same blurring of categories occurred with medical pandemics, where overcrowding and poor medical services interacted with extreme cold and extended power failures (Kunz et al., 2013) . Or armed conflicts can contribute to competition over land resources denuded of assets by the interaction of war and climate change, such as was the case in Sri Lanka after the Asian Tsunami in the midst of an intractable civil war (Miller, 2006). In other words, cascading disasters reveal 'pathways' shaped by social ecologies, where the natural world, technology, social structure,

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culture, resources and political dynamics are all interacting to escalate the disaster's impact (Pescaroli & Alexander, 2016). This leads us to consider how local communities and individuals can improve their adaptive capacity for managing and mitigating the escalation of secondary crises which in turn precipitate events in the socio-ecological domain, such as when there are wide area power failures (Linkov et al. 2014; Nones and Pescaroli; 2016; Pescaroli and Alexander, 2016; Pescaroli et al., 2017) Thus, it is important to consider the scale of a disaster, its duration, and the range of possible cascading effects, but it is also essential to imagine a possible worst case scenario where the very emergency services responding to the disaster are vulnerable and disrupted (Pescaroli & Alexander, 2016; Pescaroli et al. 2017), Moreover, the recognition that disasters are contingent and evolving (Hewitt, 1995; Alexander, 2000; Miller, 2012), argues for the implementation of a participatory process in the long term (Gaillard and Mercer, 2013) . Root causes for the cascading effects of disasters often lie in creeping social crises– such as racism, heterosexism, political oppression and severe income inequalities, which have disaster— like consequences, such as causing trauma, anxiety, insecurity and a sense of hopelessness (Miller & Wang, 2017). A wider approach, therefore, includes focused actions on prevention, reducing vulnerabilities and inequalities in the context of an overall disaster reduction strategy.

4. Impact on Individuals, Families and Communities

Any disaster, but particularly a major disaster has negative psychosocial consequences (Hewitt, 1995; Alexander, 2000). In the West there is often a focus on the psychological and emotional stress endured by individuals but disasters also have a profound impact on families and communities. For example, cascading events that trigger the loss of services, such as blackouts, communication or transportation disruptions, can critically affect the behavior of households in

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both the short and longer term (Pescaroli and Alexander, 2015). Anticipating cascading effects from a disaster, household resilience could be enhanced by analyzing and modifying everyday consumption practices and also by improving community networks for communication purposes (Ghanem et al., 2016) as well as mitigating the isolating effects of social exclusion. The recent loss of infrastructure in Puerto Rico illustrated how a prolonged event could lead to radical changes in living conditions, with consequent physical and psychological consequences at all levels of society, community, family and the individual (Santiago, 2017). The struggle to access basic services can affect vulnerable categories, exacerbating the psychological impact and the trauma induced stress caused by the primary trigger (Mercy Corps, 2018). Indeed, blackouts can cause both direct threats to life, such as health issues, and indirect threats, such as increased needs of vulnerable categories of people, challenging operational capacity of emergency services as a whole (Pescaroli et al. ,2017). In Puerto Rico, the lack of access to electricity of hospitals, the damages to road infrastructure and emergency transportation required tailoring psychosocial responses in recognition of the constraints due to these cascading consequences, which included elderly and sick patients, who depended on electric life support, being at direct risk of losing their lives (Diaz, 2017). Additionally, when political leaders socially construct aid survivors and aid recipients as "freeloaders," it is collectively demoralizing for affected people and communities.

Evidence from Hurricane Ike suggested that further research is needed to understand how different levels of psychiatric symptoms might be associated with the loss of services (Gros et al., 2012). It is clear that cascading effects of disasters should be considered when crafting legislation, which could be lead to better outcomes for psychological well-being. It is the collective nature of a disaster, as well as cascading effects, interacting with individual experiences, that distinguishes

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disasters from personal losses and tragedies. And it is this collective aspect of disasters that fits with a PCB approach, which we will describe below.

There are a vast range of family structures and configurations. Theories about how families are impacted by disasters usually presume a heterosexual couple with biologically related children, but of course there are single parent families, blended families, families headed by lesbian, gay, bisexual and transgender people and, depending on where they live, there are varying degrees of social privilege and social targeting (Miller & Wang, 2017). With any family, there may be disruptions with family structure – parents may be depleted and less able to supervise and nurture their children, routines are disrupted, and the family may temporarily lose its ability to economically and socially support itself (Miller, 2012). Major disasters can literally separate family members from one another, temporarily and sometimes permanently (WHO, 2014-2017). There are dislocations and disruptions in family living arrangements, losses in access to neighborhood and community supports and parents may find themselves in situations (such as a temporary shelter) where there is little privacy, which in turn diminishes opportunities for intimacy.

Disasters negatively affect communities horizontally and vertically (Miller, 2012). Horizontal affects refer to cascading disruptions in social networks, community cohesion, jobs and income, food, goods and services, transportation and communication, and electricity, potable water and fuel. Government and civic associations often are compromised or even cease to function. As formal systems break down, informal systems my spring up while also bearing a greater load of responsibility than they can adequately manage. The range of social roles, formal and informal,

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available to residents is diminished. As Weyerman (2007) has observed, there is often a collective sense of disempowerment.

Landau (2007, p. 353) has articulated some of the vertical consequences for communities due to disasters through her concept of "transitional pathways," the psychological connection between past, present and future. The loss of transitional pathways occurs at all levels of impact – individual, family and community. Mementos are destroyed and places and buildings that hold memories are lost. Affected people may feel disconnected from their cultural traditions, particularly those that serve as sources of safety, comfort, strength and inspiration. For example, after the Asian Tsunami of 2004, Muslim Tamil women were concerned about their marriage prospects because their dowries were destroyed (Miller, 2006). In Northern Uganda, as a consequence of living in internally displaced person's (IDP) camps during the armed conflict involving the Lord's Resistance Army, there were tensions that led to competition between clans for use of farmland as well as the diminution of the authority of tribal leaders and elders (Corbin & Miller, 2009). In Haiti after the earthquake of 2010, many people lost their homes, access to water and food and their sources of livelihood, leading to dependency on foreign NGOs and donations while living in IDP camps; this undermined a sense of agency and autonomy, as well as a belief in the efficacy of government, Haitian leadership and in some instances pride and confidence in the value of lessons learned from Haitian culture (Miller, 2012). Also, due to the magnitude of death and destruction, traditional Haitian funeral and burial practices were abandoned in many villages, further distancing people from their culture.

When social and cultural practices are disrupted there is not only a discontinuity between the present and the past but fear and uncertainty about the future (Miller, 2012; Wessells &

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Monteiro, 2006). Hope is often an immediate causality of a disaster and uncertainty about the nature of culture and society further accentuates doubts and anxiety about future prospects. The horizontal and vertical communal consequences of disaster combine to weaken social trust and cohesion, particularly when large numbers of people are displaced and living in IDP camps. This poses a challenge to social norms and social roles, as routines are disrupted, living arrangements altered, and associational opportunities and collective efficacy reduced (Miller, 2012; Wessells & Monteiro, 2006).

5. Disaster Mental Health, Psychosocial Support, and Psychosocial Capacity Building

Given the wide range of consequences of disasters, a multisystemic, multilevel response to psychosocial needs is called for (Bragin, 2014). Although mitigation strategies for cascading disasters can include the creation of policies, for example improving inter-modal coordination, Pescaroli (2018) has suggested that emergency planners are aware that more actions are needed which recognize the role of the citizens in promoting their own resilience. In particular, better mitigation strategies need to integrate top-down and bottom-up approaches which consider unique local contexts, community resilience, information sharing, and training and public awareness (Pescaroli, 2018). Similarly, related literature, in particular on climate change, also suggests the importance of understanding social and cultural differences in coping mechanisms, how people adapt in response to adversity, and prevention, when integrating different holisitic approaches(García-Acosta, 2017). Despite the strengthening of psychological guidelines in the last decade, the implications of cascading disasters have not yet been adequately considered in psycho-social literature and in practice, such as urging greater flexibility to support the integration of indigenous paradigms. What is clear is that loss of services and supplies are risk

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factors for psychiatric symptoms (Gros et al., 2012), but what anticipatory interventions would improve disaster preparedness in the long term?

Historically, the field of "disaster mental health" focused mostly on the negative consequences of disasters using Western psychological models and categories and providing psychological services by trained professionals who were often from outside of an affected community, although this has shifted over the past decade. A major boost to bringing in the social aspects of psychosocial support was provided by the Inter-Agency Standing Committee (IASC) (2007) which developed an intervention pyramid with five levels, moving from the bottom upwards: 1. Basic services and security. 2. Community and family support. 3. Focused, nonspecialized needs. 4. Specialized services. This acknowledged how basic services and community and family supports should form the foundation of psychosocial interventions, and moving specialized services, such as therapy, to a less central and prominent role.

Subsequently, the World Health Organization (WHO) has published guidelines for psychosocial responses that focus on interventions that are "scalable" (2017) (offering psychological services by para-professionals or through other means such as audiovisual and online resources), a range of interventions that include stress management and offering legal services (2015), and an emphasis on the "social determinants of mental health (2014) (e.g. social inequalities). The WHO (2014) has also shifted the focus from being predominantly about vulnerabilities and liabilities to capacities and has taken a more developmental and social ecological perspective.

The United Nations Office for Disaster Risk Reduction [UNISDR] (2015) has published the "Sendai Framework for Disaster Risk Reduction" that has articulated a number of promising guidelines.

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The document highlights the importance of the inclusion of all stakeholders in the preparation, planning, and implementation of psychosocial support, attempting to engage all sectors of society, a recognition of cultural heritage and rights, promoting women's leadership, and the empowerment of local people and authorities. It emphasized the central role of local knowledge, wisdom and expertise, as well as the importance of sustainability with clear implications for practice: recognizing that large swathes of the world's population tend to have a collectivist orientation to social relationships and identity; an exclusive focus on individual psychological recovery may detract from working with families, groups and communities.

In the past, by centralizing the use of professionals when offering interventions, knowledge hierarchies were created which discouraged or disempowered other sources or ways of helping (Miller, 2012; Summerfield, 2000; 2004). There are many places where using trained psychotherapists is not normative and there was confusion and even perceived risk when individuals were expected to share their inner lives and reactions with a stranger. There are often no or few psychotherapists in disaster-affected areas, thus raising questions about sustainability after outside responders leave. The focus on symptom reduction can be at the expense of the collective process or healing and strengthening social connections and relationships. And by focusing on the symptoms of psychological distress, affected people feel more like victims needing professional help than survivors with sources of strength and resilience (Miller, 2012; Summerfield, 2000; 2004).

Lastly, evidenced based practice is an important ideal so as to use best practices and do no harm, but are the standards of what constitutes evidence the same in all parts of the world? Who conducts the research? Is there a research infrastructure to support what Westerners consider

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'evidence'? How is effectiveness evaluated? Vindevogal, Ager, Schlitz, Broekaert, and Derluyn (2005) offer a creative response to these questions through their use of participatory research in Northern Uganda, where local stakeholders are utilized as expert informants, focusing on resilience rather than psychological pathology, but their approach is the exception, not the norm, when evaluating what helps people to recover from disasters. Tol, et al, (2011) encourage responders to draw on empirical studies, preferably RCTs, but also recognize that there are times when innovative research designs that reflect the realities on the ground will be necessary. Gil-Rivas and Kilmer (2016), citing Harrell and Bond, identify three principles of research when working with diverse communities: 1. Every community has a unique local culture which should be validated and respected. 2. Communities must be seen in the context of the historical and socio-political factors that have shaped them. 3. Researchers must have a critical awareness of their own social positioning, values and assumptions and be cautious about imposing these on other people. Psychosocial capacity building is, as the name implies, an approach that attempts to deepen the capacity of local, affected people, using a culturally grounded approach, to strengthen their ability to socially and psychologically survive and thrive in the wake of disasters (Miller, 2012). It draws on cultural lessons and practices, focuses on sources of resilience and strength, and empowers local leaders and citizens to be decision makers, planners and implementers. It does not preclude using Western Psychological methods, but expands the intervention frame beyond a Eurocentric, individual mental health focus. While counseling may be offered for some traumatized individuals, other options include community meetings, self-help and advocacy groups, activities for parents and children, and perhaps a major role for religious and spiritual leaders, depending on the needs of the community and what is socially and

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culturally normative (Miller, 2012). . Having tribal leaders lead people in healing rituals or teaching children traditional songs and dances, may be as central to the healing process as counseling, therapy and PFA. For responders from outside of the community, the role shifts to one of consultant and supporter rather than direct provider (Miller, 2012). Asking the right questions of local people -such as how do people in Haiti usually grieve and mourn, or how do Tamil Sri Lankans usually express grief and sadness - is more important than arriving with all of the answers. Consequently, these approaches could be applied in cascading disasters where there are extended losses of services, because perceptions, use of and the consumption of services is culturally driven, so the post-disaster re-organization process must consider local practices to learn how to maximize the effective coping strategies. For example, the tactics used by households in the UK in response to power failures (explained by Ghanem et al. 2016), may be completely different in terms of perceptions, priorities, and ways of responding to families who encountered Hurricane Maria in Puerto Rico.

Culture is central to psychosocial capacity building; it is not just a peripheral add-on, a box to be checked alongside protocols that have been already established (Miller, 2012). Centralizing culture means that disaster responders may not understand what personhood means for the people who they are trying to help, which in turn implies that responders cannot assume that they can make sense of the impact of the disaster, know who is behaving normally or abnormally within their cultural context, understand the meaning of perceived 'symptoms', know what affected people feel comfortable or uncomfortable talking about, understand what affected people hope for, who they think is best positioned to help them, how this help should be delivered and whether the target of interventions should be individuals, nuclear families,

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extended families and clans, or other configurations of community groups (Miller, 2012; Summerfield, 2004). And these are but a few of the areas that outsiders may not grasp or accurately interpret.

This leads to another PCB tenet – the centrality of local people in assessment, planning and implementing services in response to disasters (Miller, 2012). There are challenges and advantages to this. Challenges include identifying people who are respected in the community and/or have the knowledge and skills to help others. In communities divided by ethnicity/race, religion, clan conflict, or by other socioeconomic markers, it can be difficult to identify local leaders who are acceptable to a wide range of people. There also may be problems that surface where they do not have the skills to intervene or when cultural practices no longer seem to be effective (Miller, 2012). .

But there are many advantages when centralizing local people. Besides understanding the sociocultural context of their own community, they have an insider's understanding of what the community needs and how to provide help. They are familiar figures at a time of destabilization and unfamiliarity. They can translate concepts and skills brought by professional outsiders and adapt them to their own population. This is often best achieved by collaborative training of trainers (Corbin & Miller, 2009); a core group of local people are trained by a team of professional outsiders and insiders (local professionals or leaders) so that they can in turn train many more local people and prepare them to intervene. Local people are more likely to respect and accept natural healing processes and are thus less likely to intervene unnecessarily. And because their interventions are more likely to be culturally normative, they are not pressuring affected people to engage in new and unfamiliar practices, such as therapy. And as they live in the affected area,

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they will be there for a longer time than outsiders who may stay for a few weeks or months, thus contributing to sustainability.

Other PCB principles include doing no harm, building on strengths and sources of resilience as a starting point for intervention, and connecting psychological well-being with social well-being (Miller, 2012). Gil-Rivas and Kilmer (2016) argue that centralizing social justice, empowerment and diversity is necessary for fostering disaster resilience. If there is a sense of collective efficacy (Samson, Raudenbush, & Earls, 1997) then people are more likely to feel empowered, hopeful, able to influence their recovery and feel connected with others which enhances their resilience.

6. Resilience and Recovery

When cascading disasters occur "interaction with other members of the community" is a central factor in improving the resilience of households when there are events such as blackouts, as well as critical factors such as the availability of external information (Ghanem et al. 2016). Similarly, urban/non-urban residence is a possible moderator in the relation between post-disaster loss of services and psychological distress which could also be related to different neighborhood and community ties (Gros et al. ,2012).

Hobfall, et al, (2007) conducted meta-research combing through the evidence about what helps people to recover from large-scale disasters and came up with five elements. These are achieving a sense of safety, the ability to self-calm, a sense of collective efficacy and the ability to achieve articulated goals, connections with other people and resources and reestablishing a sense of hope. All of these are consistent with a PCB approach. They are also compatible with the use of

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groups and activities, which will be discussed in the section below. The five elements are both a contributor to and a consequence of resilience.

Although resilience is sometimes thought to be a genetic trait in individuals, it is actually a process, which involves individuals, families and communities; resilience is something that can be cultivated (Miller, 2012). On the individual level, one form of resilience is cognitive – the ability to make sense of what happened during and after a disaster, to be efficacious, and to eventually be able to achieve a sense of meaning about the impact of the disaster. There are many ways to promote cognitive resilience such as providing information, talking with others, journaling, storytelling and goal setting.

There is an emotional dimension to resilience. The ability to self-calm and achieve emotional regulation when activated can be achieved through mindfulness techniques and breathing exercises. Positive psychology has identified many areas that contribute to emotional resilience: experiencing joy, hope, optimism, gratitude, meaning and spirituality, achieving a sense of flow, and strengthening relationships and connections with other people (Compton & Hoffman, 2013). Caring about and being kind to people fosters a sense of "oneness" with others (Otake, Tanaka-Matsumi, Otsuie, & Fredrickson, 2006). Thus, encouraging social connections, altruism and volunteerism after a disaster contributes to emotional resilience.

Another dimension of resilience is the ability to form attachments. The WHO (2014) has identified strong attachments as an important buffering and mediating factor when people have experienced disasters. Attachment styles are formed in early childhood and influence relationships in adulthood (Karen, 1998). Attachment resilience in the wake of disaster involves

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an internal process – being able to hold internalized images of sustaining and inspiring people (Rosenfeld, et al, 2005) as well as being able to actually form meaningful and enduring relationships with other people. Loving-kindness types of exercises, gratitude practices, as well as group psychotherapy, can all contribute to an improved ability to form attachments (Seligman, Rashid, & Parks, 2006; Waugh & Fredrickson, 2006).

But resilience does not only reside in individuals, there are also resilient communities and families. Resilience involves structural factors (e.g. concrete resources, political leadership) and non-structural factors (e.g. an ethic of caring, interethnic harmony) as well as formal and informal social networks (Linkov, et.al, 2014). Important structural factors that foster resilience are social justice, empowerment of local people and communities, valuing heterogeneity, and investing in social capital (Gil-Rivas & Kilmer, 2016). The unique interaction of factors within the social ecology of community and within families can lead to vulnerability but also promote resilience. Family resilience is a process (Bettencourt & Kahn, 2007), as is individual and community resilience. In anticipating cascading disasters, reducing the vulnerability loops at the lower level of organizational scale may influence the overall resilience of larger systems by producing more bottom -up positive feedback, as suggested by Pescaroli and Alexander (2016). Given the nature of complex disasters, there can also be positive feedback loops which increase contextual resilience (Alexander, 2000). For example, when there is social trust or the belief that political leaders care about the community, survivors may develop a greater sense of personal efficacy, optimism and a sense of hope.

With families, helping them to improve internal communication, clarify roles, and delineate boundaries are standard family therapy practices which strengthen family resilience (Walsh,
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2003). Disasters place strains on families and undermine optimal family functioning, but the capacity to adapt to a significantly changed reality is a form of family resilience (Patterson, 2002). This can be more challenging when there are very traditional gender roles and family practices, which is why having responders who are local and grasp indigenous cultural practices increases the likelihood of helping families to adapt to an overwhelming crisis situation.

Families are parts of communities and communities rely on communal interdependence (Miller, 2012). Since disasters disrupt social networks, organizations and relationships, reestablishing these as quickly as possible contributes to community resilience acting on elements such as social networks (Linkov et al. 2014). As mentioned earlier, this involves repairing damage to frayed horizontal collective interdependence as well as regenerating transitional pathways with the past and future (Landau & Saul, 2004). Groups are an excellent way to bring all of this together.

7. The Use of Groups and Activities When Responding to Disasters

Groups are the psychosocial capacity building modality of choice in response to disasters Miller, 2012; Miller & Wang, 2017). Groups unite people with other people, fostering collaborative social connections. When facing cascading psychosocial affects from disasters, groups offer the possibility of engaging a diverse group of actors and organizations who can respond adaptively, comprehensively and achieve collective community solidarity. Whether is it sharing stories and experiences or planning activities, groups help people to feel less alone and exemplify collective empowerment. Sharing with others goes a long way towards reducing negative emotions, such as shame, guilt, and hopelessness, which undermine a personal sense of hope and efficacy. Groups are normative in every culture although the form that groups take in different cultural

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and social contexts varies considerably; whether it is work, pleasure, recreation or being with family, people exist in groups. So using groups in the wake of disasters builds on what people are used to. As Summerfield (2000) has argued, after disasters one of the greatest losses is the loss of a socio-cultural world and groups are one way to begin to reconstruct what has been lost. Groups bring collective assets, have the potential to pool resources and the synergistic total of a group is more than the sum of individual members (Miller, 2012). They build capacity. And groups have the potential to endure, perhaps more than individual interventions, long after the initial disaster. In case of the extended loss of services, such as blackouts, they may be the basis for the re-organization of neighborhoods into functional entities, for example improving the safety of vulnerable categories of citizens. Support across households can be used to care for vulnerable people, including community level interventions, such as coordinating information and prioritizing resources (Ghanem et al. 2016).

There are many different types of groups: informational, mutual aid and support, psychoeducational and psychotherapeutic, recreational, skill-building, advocacy, altruistic and groups that combine many of these themes in their use of activities (Miller, 2012; Miller & Wang, 2017). Most types of groups can be helpful after a disaster has struck. There are four areas to address with any type of group that has been established in response to a disaster: 1. Space to process and explore negative thoughts and emotions – whether this is through discussion, activities, or creative expression. 2. Helping people to reconnect with personal and collective sources of strength and empowerment. 3. Reestablishing transitional pathways (Landau, 2007) with the past and future. 4. Drawing on cultural, social and familial traditions.

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Although in Western contexts many groups emphasize talking, there are many activities that can help people to feel safe, self-calm, buttress connections with others, and enhance personal and collective efficacy and hope, all of the key areas identified by Hobfall, et al (2007). The use of story-telling, journaling, drawing, poetry, photography, music, dance, drama, arts and crafts, and drama are some of the many ways that activities can be healing and empowering in a group context (Bryant-Davis, 2005). In many cultures and social groups, these are more effective mechanisms for healing than talk therapy.

8. Conclusions

Every disaster is embedded in a unique context and the road to recovery is shaped by sociocultural factors, individual and public perceptions (Alexander, 2000; 2005; Hewitt, 2005). Culture is central to what defines personhood and how people experience a disaster and what they need and expect in order to rebound from adversity (Alexander, 2000; 2005; Cannon, 2008; Miller, 2012; Summerfield, 2004). In other words, "it is the context that evolves" (Bateson, 1972). Cascading disasters occur within this social ecology, but imply a growing complexity of dependencies and priorities which can shape and orient the entire emergency response and recovery process (Pescaroli and Alexander, 2016; Pescaroli, 2018).

The loss of vital infrastructure may be the first element to consider to further develop the literature on this topic. Service disruptions have a profound social impact on individuals and communities, requiring new and creative actions to mitigate the escalation of secondary emergencies both in the short and long term. In the case of wide and extended power failures, such as the one in Puerto Rico (2017), the cascading effects can cause direct and indirect threats

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to life and livelihood, challenging at the same time the capacity of emergency services to supply "traditional" forms relief and recovery.   Psychosocial capacity building can be a possible tool to integrate in preparedness strategies that consider the worst-case scenarios where: a) emergency services becomes less effective for an extended period of time; b) the disruptions last long enough to significantly affect social behaviors. The impact of blackouts and electricity failures can cascade into multiple infrastructure disruptions, limiting the availability of public health personnel, or re-shaping the day-to-day routines of citizens (Pescaroli et al., 2017). Consequently, an effective psychological response to contain distress must be flexible and attuned to cultural and organizational factors, and should aim to develop effective resilience strategies that could influence local and larger systems, while maintaining their own sustainability throughout the recovery process (Linkov et al., 2014). The aim is to create links and synergies with other needs that could increase, for example, neighborhood support.   Psychosocial capacity building can be seen as a partial answer to this challenge: it is a multi-systemic approach to disaster recovery that strives to deepen the capacity of local people to take control over their process of healing and psychosocial restoration in a sustainable fashion. PCP emphasizes individual and collective strengths, sources of resilience and cultural wisdom and practices, often utilizing groups and activities. Preparedness strategies could integrate local community organizations and networks in concert with more formal structures and processes, as recognized by important stakeholders in the emergency preparedness and response sector (Pescaroli, 2018); what is essential is that community members are given respect, input and influence over all aspects of the planning process. Sometimes this will involve residents developing check lists of critical systems and social synapsis to strengthen, while in other contexts the focus may be on critical cultural practices and

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leaders and how to value and empower them; the universal goal is to plan and prepare but this should be done within the unique social ecology of every community.

However, many questions for further research remain. This short paper does not pretend to be exhaustive, but it proposes an integration of PCP with the literature on cascading disasters; they fit well together. There are many limitations, such as lack of in-depth analysis of cases studies, but these should be considered as possible avenues for developing future studies. In particular, many open questions remain associated with the application of this approach *tour court,* and need be better understood and evaluated by scholars and practitioners. First, the literature on cascading disasters suggest the need for improving the understanding of effective strategies for fostering community resilience, including training and the preparedness of citizens, families, and communities (Linkov et al, 2014, Pescaroli 2018). Although PCP is an intervention strategy to apply after a disaster, further research is needed to understand what kind of preparation or specific data is needed or actions that could be used to make it more effective in anticipating as well as responding to cascading events. Open questions include how it is possible to translate PCP principles to the preparedness phase by communities, involving local residents but also engaging formal authorities, as well as anticipating the differences (if any) between different types of losses of services and infrastructure. The recent case of Hurricane Maria in Puerto Rico may be a powerful example, in that the loss of infrastructure was so huge that it impacted all of society and its constituent groups, causing profound losses in the availability of services. And there were complicated political dynamics between leaders at different levels of authority (e.g. informal leaders, mayors, governor, President). Moreover, further consideration must be given to the evidence that cascading disasters strongly increases pressure on emergency management

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(Pescaroli and Alexander, 2015; 2016). Has PCP the potential for creating formal and also informal "safety networks" that could support emergency services to provide vital tasks, for example supporting the provision of critical information for households in case of events such as power cuts, as noted by Ghanem et al. (2016)? How can such processes be implemented or maximized? Future studies should not be based just on highly developed and industrialized countries, as cascading disasters indeed occur often in developing countries, so must include comparative studies between different areas in developing range of communities and countries. And as we have argued earlier, the design and implementation of such research should be sufficiently flexible and creative to include local people living in under-developed areas. In an evolving field such as cascading disasters, the differences in the social ecology, cultural practices and the potential of learning by engaging local people and doing could make the difference for a better understanding of the complexity of creating resilience in the face of cascading disasters and its application for disaster risk reduction and management.

Acknowledgments

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