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Puerto Rican Cultural Arts and Expressive Arts Therapies:
Mental Health and Collective Resilience
Post-Hurricane Maria

Capstone Thesis

Lesley University

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Expressive Arts Therapy

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Abstract

The research aimed to study how integrating Puerto Rican popular cultural arts with the expressive arts therapies could assist the recovery process post Hurricane Maria. During post-disaster recovery efforts, access to formal psychological services are not always viable to survivors and the services available are usually not enough to cover the demand. The literature review examined the relationship between: mental health in the aftermath of natural disasters; cultural relevancy within the field of psychology in Puerto Rico; resilience in post-disaster communities; and psychosocial community interventions. Findings encouraged for programing for Puerto Rico's psychosocial recovery from Hurricane Maria, or any future natural disaster, to reach vulnerable populations. For example: low socioeconomic communities, children, adolescents, older adults and those with less access to formal mental health services. In addition, psychosocial interventions should be ethno-culturally focused and place-based, and work within a critical-cultural and de-colonial framework towards resilience. Lastly, findings encourage for local community organizations to be trained in trauma-informed approaches in order to achieve greater mental health outreach. That way, they can assist in the recovery process by facilitating emotionally supportive environments and the use creative resources for the collective processing of traumatic events.

Keywords: natural disasters, mental health, Puerto Rico, ethno-cultural, coping mechanisms, expressive arts therapies, psychosocial interventions, resilience

Puerto Rican Cultural Arts and Expressive Arts Therapies:
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Introduction

On September 2017, two back-to-back, category four, hurricanes caused massive devastation in the Caribbean. Hurricane Maria made landfall in Puerto Rico just two weeks after Hurricane Irma had already made its way through. Hurricane Maria was the most dangerous hurricane the island has lived through in nearly a century (Frtiz, 2017). It made the list of the ten most intense Atlantic hurricanes on record (Erdman, 2017), and it is currently categorized as the strongest tropical cyclone worldwide in 2017 (Foy, 2018). The hurricane had a historic impact in the archipelago and left Puerto Rico and its citizens in a critical, unstable and vulnerable state. Nearly all telecommunication and electrical infrastructure was destroyed in the catastrophe, provoking the largest and longest blackout in US history (Irfan, 2018).

The psychological effects of living through a natural disaster of this magnitude, and the humanitarian crisis (Lopez, Hernandez, Osterman & Conde, 2018) that subsequently unfolded, are of great concern. Immediately after the hurricanes, suicide levels sharply increased, alarming mental health professionals and public officials (Puerto Rico Senate, 2017). During post-disaster recovery efforts, accesses to formal psychological services are not always viable to survivors and the services provided by organizations and volunteers are not enough to cover the demand (Kar & Bastia, 2006).

Informal neighborhood groups and collective self-help efforts can assist survivors to “reestablish feelings of control and self-worth, and overcome feelings of helplessness (Sattler et al., 2002). In addition, they can also assist survivors in reestablishing previous social support networks, establish new social support networks and aid in their emotional processing (Sattler et al., 2002). In addition, Rajkumar, Premkumar and Tharyan (2008) state

that after a disaster, mental health recovery should “be grounded in ethno-cultural beliefs and practices and should be aimed at strengthening prevailing community coping strategies” (p. 844).

A critical – cultural perspective is key when exploring the concept of resilience. According to Grove and Adey (2015) it is crucial to approach the concept critically in order to evade totalizing or generalizing the meaning of resilience. In their research, the authors explored what resilience meant to specific communities and individuals. In order for mental health practitioners to assist in the development of post-disaster recovery programs, it is crucial for them to understand that resiliency can have varying definitions across different communities.

One of the aims of this research is to examine mental health in the aftermath of natural disasters. In addition, it looks to analyze how different artistic means of expression embedded within the Puerto Rican culture, that have historically helped foster collective resilience, could be incorporated into mental health and expressive arts therapies work in Puerto Rico. It also looks to explore how these popular forms of creative expression can aid in strengthening or enhancing community resilience on the island during the recovery process post Hurricane Maria.

Puerto Rican cultural expressive art forms range from music and dance (*bomba, plena, trova, salsa, reggeaton*), to visual arts (printmaking, painting, mask-making, woodworking) to writing and storytelling (poetry, stories, myths, legends). These art forms have served as collective coping mechanisms passed down from generation to generation. However, engagement with some of these art forms has diminished throughout time. This arises questions of whether it may be due to defunding for arts-based programs in schools and communities, lack of education about and access to these expressive art forms, and/or assimilation to USA’s dominant culture.

Nonetheless, as the economic and political situation of the island became increasingly tumultuous and uncertain in recent years, Puerto Rican young adults began reclaiming some of these art forms. These historic and popular cultural art practices can continue to be retrieved, explored, altered and made new. Puerto Rican artists have been doing this for some time through photography, film, mixed media, performance, sculpture, and installation. However, these typically remain within the elite spheres of galleries and museums. Instead, there is a possibility to examine how individuals could reclaim local popular and folkloric art forms (Ortiz, 2012) and translate them into their contemporary experiences. Mental health programming can also look to incorporate them within an expressive therapies lens to help assist in the healing and recovery process of communities.

Rationale

This research is timely because in the last couple of years we have seen an interest in, and resurgence of traditional cultural art forms within younger generations, paralleling the political, social, and economic crises of the island. Hurricane Maria caused great devastation in Puerto Rico and multiple forms of recovery are going to be needed. One route may be for post disaster mental health programming to examine how integrating ethno-cultural artistic practices with the creative arts therapies could help strengthen individual and collective resiliency.

This research is urgent because mental health treatment in Puerto Rico is underfunded and many trained professionals have had to leave the island due to economic decline (Bram, 2018). In addition, the cases of mental health issues have and will continue to significantly increase after the recent natural catastrophe (Rivera & Arroyo, 2017). Finding new and healthy ways of coping, sublimating, and fostering resiliency are more urgent than ever.

Literature Review

Cultural Relevancy and Psychology

Defining Culture

For the purposes of this paper, culture will be defined as “the system of shared beliefs, values, customs, behaviors, and artifacts that the members of society use to cope with their world and with one another, and that are transmitted from generation to generation through learning” (Bates & Plog, 1990, p. 7). However, it is important to note that cultures are not monolithic. Both individual and collective identities are constantly “in-process” or “in-the-making” (Sajnani, 2012).

Cultural Relevance Within the Field of Psychology in Puerto Rico

In 1967 two pioneers in the field of psychology in Puerto Rico, Carlos Albizu and Norman Matlin, presented three theses that examined and critiqued the psychology of continental America, the United States and Puerto Rico (Velasquez et al., 2006). The arguments they presented, regarding the urgent need for changes within the field of psychology within the archipelago, are still relevant today. Understanding these arguments are important when examining the role of arts-based cultural practices and conceptualizing the integration of expressive arts therapies within post-disaster psychological recovery.

Velazquez et al. (2006) reviewed Albizu’s and Matlin’s theses. They state that the first thesis argues that the Psychology of America is a reflection of the Psychology of North America, specifically, the United States (2006). The second thesis states that it responds to and reflects the reality of the Anglo-Saxon middle class culture, concluding, “that said frame of reference is not consonant with the Puerto Rican social context” (p. 2). Velazquez et al. (2006) also state that the approach of generalizing the Anglo-Saxon middle class reality challenges

the ontological notion of the modernist paradigm that postulates the existence of a unique and objective reality. The vision proposed in the paper assumes that reality is constructed and that it is directly influenced by the social, historical, political and cultural context. (p. 2)

Albizu's and Matlin's postulate that the field of psychology should be created by, formulated and rethought by those who inhabit and better understand the geographic and cultural space of the population they are serving (Velazquez et al., 2006).

The field of psychology in Puerto Rico receives most of its curriculum and education from translated U.S. American sources or texts, with the objective of receiving and maintaining the accreditation of the American Psychological Association (2006). The authors state that, "voluntarily or involuntarily the systems have to tolerate and temper with these structures, because there is a real economic [and political] dependence" (p. 2). In addition, they argue that the over 500 years (over 100 which have been under U.S. rule) of "colonization crosses all social spheres, tainting them with its particular elements" (p. 2) and that "it is from this relationship that psychology continues its alienation from the Puerto Rican social context, distorting the practice by uncritically submitting to the political and economic machinery" (p. 3).

Regarding the use of instruments developed on the basis of the representatives of Puerto Ricans residing in the continental United States, Velazquez et al. (2006) argue that [...] The same error is repeated, since considering nationality alone as the only element of prediction, without counting on the socio-cultural context in which it is based and nurtured, is not enough to pretend their validity for their use in Puerto Rico. It is important to mention that even within the own culture there exist subcultures that build their own concepts of normality. (p. 6)

In addition, they mention that, more often than not, there is a “disconnection between what is taught and the socio-historical conditions of the country, [a] predominance of the theoretical over the practical and the disarticulation between the academic community and the Puerto Rican reality” (p. 9).

Velazquez et al. (2006) conclude by encouraging the development of a “new contextualized vision of psychology in Puerto Rico that recognizes the complexity” of Puerto Rican reality (p. 13). A vision of psychology that “confirms a new work perspective that resists crystallization” by constantly renovating itself, “trying to understand the diversity and relativity of knowledge” (p. 13). The arguments exposed and proposed in this article are similar to the critical race feminist paradigm’s perspective of culture as collective and individual identities ‘in process’ or ‘in the making’ (Sajani, 2012). As well as connects to Rajkumar et al. (2008) study on post-disaster mental health, ethno-cultural coping strategies and resilience.

Natural Disasters and Mental Health

Mental Health in the Aftermath of Natural Disasters

The following studies examine mental health in the aftermath of natural disasters. Throughout these analyses a few commonalities exist which can offer guidelines for future mental health programming in post-disaster settings. Three things that are common in the literature include: 1) the importance of identifying the populations most vulnerable to the mental health issues post-disaster; 2) that the mental health services available are typically not sufficient to cover the demand; 3) and that the prioritizing of mental health should be focused on both short-term and long-term recovery efforts.

Natural disasters are categorized as traumatic events and can be severe stressors as a result of “their disruptive nature, high extent of impact, production of terror and horror scenes, undesirable and uncontrollable occurrences, and prolonged alterations in the social

and material environment” (Felix et al., 2011, p. 589). Studies have shown that people from low socioeconomic status, children, and youth are at risk of developing mental health issues including, but not limited to: PTSD, generalized anxiety, separation anxiety, social phobia, panic, major depression, and suicidal ideation (Kar & Bastia, 2006; Lowe, Sampson, Gruebner & Galea, 2015; Cagney, Sterrett, Benz & Tompson, 2016; Rivera & Arroyo, 2017). The psychological and socio-emotional impact of natural disasters can last for up to a year or more, depending on the magnitude and duration of a natural disaster, the level of exposure, the level of stress and resources available during the recovery process, and the placement within the “at risk” spectrum of vulnerable populations (Lowe et al., 2015; Cagney et al., 2016; Rivera & Arroyo, 2017).

In a study done 14 months after the 1999 super-cyclone in Orissa, India, Kar and Bastia (2006) found that “a considerable proportion of adolescents suffered from stress related symptoms and had psychiatric diagnoses [with sever symptoms] around one year after the super-cyclone” (2006, p. 6). They recollected data from 108 students enrolled in two high schools in Jagatsinghpur, one of the most affected areas. An English and a translated version in the vernacular Oriya of the Mini International Neuropsychiatric Interview for children and adolescents (MINI-KID) was first piloted and then utilized in the study (2006). Chi- square testing was used to test the association between the categorical variables. The study found that PTSD, MDD and GAD (as categorized by the DSM-IV) were prevalent one year after the disaster and that there was a 39.0% comorbidity rate among diagnosis. Adolescents from middle socioeconomic status (SES) showed to be the most psychologically affected.

The study (Kar & Bastia, 2006) offers insight into long-term psychological effects of natural disasters in adolescents through a need-focused study; however, information on pre-cyclone psychiatric morbidity, which can influence the post disaster morbidity, is lacking. In addition, other risk factors and traumatic experiences (i.e. death of family members and

physical trauma) were not noted. The researchers pointed out that the subjects of the study hadn't received any formal psychological support due to the level of demand required post natural disaster (2006).

According to them, the need for psychological "screening and intervention continues to be there, especially so when the mental health care has not been in place from the beginning along with other disaster related support" (Kar & Bastia, 2006, p. 6). However, although there was a high psychiatric morbidity, the majority of the adolescents were not suffering from severe psychiatric symptoms, to which the authors attribute to the "possibility of many mechanisms of informal psychological support from close-knit social network in Indian villages" (p. 5).

A study by Felix et al. (2011) examined the persistence of psychological disorders in Puerto Rican children and youth after the 1998 category two Hurricane George. Participants were between the ages of 4 and 17 and were selected from an island-wide probability household sample, where 1,886 parent-child dyads were interviewed. A multi-staged method for cross-cultural adaptation and translation of study measures derived from the medical, sociological and psychological literature was used to develop what was considered culturally and linguistically appropriate measures (Felix et al., 2011). Data were then analyzed utilizing Chi-Square analyses and logistic regression.

The study (Felix et al., 2011) found that psychological distress post-disaster typically manifests as internalizing disorders more than externalizing disorders. Internalizing disorders refer to depressive disorders (major depressive disorder and dysthymia) or anxiety disorders (social phobia, separation anxiety, panic, GAD and PTSD). Externalizing disorders refer to disruptive disorders (conduct, oppositional defiant disorder), attention-deficit hyperactivity disorder or any substance disorder (2011). They also found that people living in lower SES were more likely to have higher exposure to the disaster effects (flooding, heavy loss, illness

or injury, or fear of death) and a relationship between the level of exposure and the prospect of internalizing disorders such as: MDD, social phobia, and separation anxiety.

Researchers corroborated that the psychological effects of natural disasters may persist for over a year after the event. Nonetheless, Felix et al. (2011) argue that findings are consistent with other disaster research in that at 30 months post disaster, symptomatology tends to decrease. However, they make the distinction between Hurricane George's category two and the exception of survivors of Hurricane Katrina, which was a category five hurricane and had a slow recovery (2011). This is important to consider when examining the long-term impact of Irma and Maria as back-to-back category four hurricanes and the current state of recovery of Puerto Rico.

Felix et al. (2011) suggest a proactive approach of providing psychological services "to help children recover form initial hurricane-related internalizing distress and thus prevent the development of chronic internalizing psychopathology" (p.589). The also argue for the provision of services in the long-term recovery process post-disaster. As most other studies, researches didn't have evidence of previously existing psychological conditions, which can influence post-disaster psychopathology. Nonetheless, the study added valuable knowledge to research involving children and adolescent disaster mental health due to its longitudinal nature and large, randomly selected representative sample (Felix et al., 2011).

In December 2017, the Puerto Rican Institute for Youth Development (*Instituto del desarrollo de la juventud*) - a non-profit organization that works to advance public policy at state and federal levels to improve the quality of life of children and youth in Puerto Rico - published The Impact of Hurricane Maria in Puerto Rican Childhood: Analysis and Recommendations. In their analysis, Flores and Quijano (2017) examined local census records as well literature on post-disaster research, particularly those related to Hurricane Katrina. In the report, they present three general predictions: 1) after the hurricane, more

children will fall under the poverty line; 2) more families with children will be forced to emigrate; 3) and an increase in mental health conditions and reduction in academic achievement (2017).

They presented data stating that in 2016, fourteen percent of children lived close to the poverty line, fifty-six percent of children lived in poverty, and thirty=six percent in extreme poverty (Flores & Quijano, 2017). The areas with highest unemployment rates and childhood poverty in the main island included the Southeast and Central mountain region, the same areas that received the strongest impact from Hurricane Maria. They argue that this is concerning due to the findings consistent in previous research which demonstrate that populations in low SES have a predisposition towards a higher level of exposure and fewer available resources during the recovery process (2017).

In addition to housing concerns, economic insecurity can also influence an increase in mental health issues in the general population. Before Hurricane Maria impacted the island, approximately 4,000 people had filed for unemployment due to the economic crisis (Flores & Quijano, 2017) At two months after the hurricane approximately 15,000 people had filed for unemployment (2017). The authors make a point that the majority of children in Puerto Rico encounter two main sources of chronic stress: “poverty and the effects of a natural disaster” and that the effects on mental health and academic achievement will be felt throughout the following decade (p. 7).

Flores and Quijano (2017) exhort prioritizing mental health services for children as well as their caretakers in order to achieve better development post-disaster and reduce negative impact on academic achievement. In the analysis, the authors make recommendations addressed to the philanthropic sector, federal legislators, the Fiscal Control Board, and the executive and legislative branches of Puerto Rico. Among their recommendations, they advocate for the philanthropic sector to “train community-based

organizations in evidence-based practices and provide them with tools to achieve greater outreach” (2017, p. 9).

Resiliency in Post-Disaster Communities

Resilience is a concept that, at times, has been used by dominant Western psychological understanding to identify and depict people in need of certain angles of intervention. Grove and Adey (2015) state that, “care should be taken not to overwrite diverse accounts and disparate versions of resilience [...] as an inevitable, universal resilience project” (p. 78). The authors warn against,

the way in which it has become common to write and represent resilience that we can actually identify the performance of a creeping colonization [where] authors tend to flatten the more subtle differences of resilience out of objects of comparison, prioritizing certain similarities. This has enabled not a plurality of versions of resilience to co-exist, but several dominant ideal types that erase those quieter differences. (p. 79)

Therefore, resilience can be understood as a social coping that requires certain social and localized mechanisms to be continued or activated based on the cultural context of the people being impacted by natural disasters (2015). This outlook on resiliency, along with a critical race feminist paradigm (Sajani, 2012) offers an opportunity to consider the role of the capacity of a community to “bounce forward” (Atallah, 2016) after disasters. And to do so guided by how people within their respective communities choose to define what it means to be resilient.

Defining Resilience: First, Second and Third Waves

In his article, Atallah (2016) exposes the different ways that resilience is conceptualized within the global discourses of Disaster Risk Reduction (DRR). Through his research, the author presents three ‘waves’ of viewing and researching human resilience. The First Wave is prevention-based, with a disciplinary-specific approach, and a bouncing back

lens. Particular focus is placed on the role and function of two core coping mechanisms: vulnerability and protection. The Second Wave is amelioration-based, with a focus on strength-based, relational, cultural, and temporal dimensions. The Third Wave is transformation-based, with a transdisciplinary approach, metaphorical lens, and focus on eco-social processes and pathways.

Atallah (2016) writes that, “historically, resilience has been conceptualized as a person’s or system’s capacity to ‘bounce back’ after an adverse experience, impacted by multidimensional vulnerability and protective factors” (p. 95). Largely developed by the field of psychology, psychiatry and human ecology, this “individual-focused perspective” on resiliency is considered the First Wave (p. 95). The main focus lies in understanding the mediating factors that affect individual vulnerability; identifying and creating interventions that promote protective factors associated with positive individual outcomes; and preventing psychopathology for improved individual functioning (2016).

According to Atallah, the Second Wave represents a paradigm shift, where resilience is viewed as a process instead of a capacity (2016). It conceptualizes resilience as a “collective process of harnessing, navigating and negotiation resources to strengthen family systems and even ‘bounce forward” (p. 95). This approach is based on interdisciplinary work between psychology, psychiatry, child development, ecology, social work, disaster studies, anthropology, and cultural and gender studies. The main focus lies on “exploring temporal dimensions, ‘polyvictimization’, and the stacking accumulation of risk; understanding ‘trickle-down effects’ and ‘mental health cascade’ across generations; understanding the intersections of cultural contexts and resilience; and ameliorating or enhancing the quality of interpersonal relations and social environments” (p. 95).

Lastly, Atallah (2016) presents the Third Wave, where he expresses that “resilience is not viewed to be something that describes the nature of a system, a process, a person, a place,

or a thing” (p. 96). Instead it is viewed as, “ a metaphor for the outcome of intersecting ecosocial processes that are shaped by power relations and are always multileveled and evolving through time” (p. 95). This current transdisciplinary perspective was developed through the previously mentioned fields in addition to: public health, political science, sociology, development, geography, postcolonial studies, and grassroots & community-based knowledge. Atallah cites that this perspective argues for a “bottom-up approach, empowerment of local communities, and the inclusion of multiple stakeholders” (2016, p. 97). However, he warns about this perspective’s ‘risk’ of succumbing to similar pitfalls as the First Wave framework, by masking social inequities that may lead to interpretations of oppressed groups responsibility over their own vulnerabilities (2016). Ultimately, he highlights “the importance of building more intersubjective insights into the multitude of meanings of ‘resilient’ outcomes” (p. 96).

Decolonial Perspective on Resilience

Atallah’s (2016) research on resilience presents insightful points as to why and how the field of expressive therapies can begin to work from a decolonizing framework when engaging with the concept of resilience. One of the first things he echoes is that “researchers should purposefully focus more on increasing knowledge of the efforts of colonized groups to cope with historical trauma caused by centuries of colonialism” (p. 98). Furthermore, Historical Trauma (HT) is described as containing four core components: 1) colonial injury; 2) collective experience; 3) cumulative effects; and 4) cross-generational impacts. This is of particular relevance, because although these core components were developed by examining indigenous Historical Trauma, similar components can be found in other colonized populations such that of Puerto Rico.

The author (Atallah, 2016) argues that future research and Disaster Risk Reduction (DRR) plans and programming should consider including decolonization frameworks.

Specifically, those that look “to identify and promote collective resilience processes, across multiple generations, in response to indigenous historical trauma and ongoing conditions of overlapping socio political and socio natural crises” (p. 99). In addition to “mapping out key complicating factors and facilitating resources that impact these resilience processes” (p. 99).

A decolonizing lens aims to assist historically oppressed and colonized groups with preserving and reclaiming their unique cultural legacies and institutions (Atallah, 2016). Atallah (2016) states that research “has yet to explore intersections across resilience processes associated with responses to environmental hazards that may actively overlap with resilient response to historical and ongoing socio political crises” (p. 98). This research suggestion is relevant to the case of Puerto Rico, regarding Puerto Rican arts-based cultural capital and its potential effect on collective resiliency in response to Hurricane Maria.

Community Resilience in Post Disaster Environments

In their aesthetic response to resilience, Grove and Adey (2015) express the importance of not turning “attention away from the conditions that give shape to and help legitimize resilience, such as emergency, long-term environmental change or poverty” (p. 81). The authors highlight the importance of not denying the “insights of genealogy which would explore both the conditions for, and circuits of possibility that enable, resilience to evolve” (p. 81). They also suggest to not lose perspective of how some rationalities spread, “how they confront other rationalities, how they de- and re-code material and affective relations to reconfigure life in ways that produce apparently ‘resilient’ subjects” (p. 81). In addition, Grove and Adey (2015) exhort not to loose perspective of “the points where these subjectivations fail, where life exceeds discourses of resilience” (p. 81).

Rajkumar et al. (2008) state that “cultural sensitivity is a crucial issue in adequately understanding complex human experiences and in adapting interventions shown to be effective following disasters in industrialized societies to non-western traditional societies”

(p. 851). For example, three key domains of community resilience found in aboriginal communities in North America include: 1) social capital (effective bonding, bridging, and linking processes); 2) ecological capital (the quality of natural, built, social and human resources); 3) and cultural capital (emphasis on family and community interconnectedness, oral traditions and storytelling, connection to the land, healing traditions, spirituality and ceremony, collective knowledge and identity, political activism, and cultural continuity) (Atallah, 2016). In the previously mentioned study of the adolescents who experienced the 1999 super-cyclone in Orissa, India, Kar and Bastia (2006) reported that a reason why the majority of the adolescents were not suffering from severe psychiatric symptoms was attributed to the “possibility of many mechanisms of informal psychological support from close-knit social network in Indian villages” (p. 5).

In a qualitative study researching the psychological impact in countries affected by the 2004 Tsunami, Rajkumar et al. (2008) focused on “gaining insights into the ethno-cultural coping mechanisms of affected communities and evaluating resilience in the face of incomprehensible adversity” (p. 844). The authors examined four coastal villages of the Nagapattinam district in Tamil Nadu, India. The research (2008) was part of a larger study that looked to combine quantitative and qualitative methods to evaluate the “prevalence and associations of mental health sequelae in the Tsunami affected population and to ascertain the ethno-cultural factors contributing to the differences in the prevalence and presentations of PTSD” (p. 846).

Through their research, Rajkumar et al. (2008) learned about changes that occurred in social structures and attitudes toward different aspects of life and the role of local community coping strategies. The coping mechanisms examined included individual, social and spiritual strategies. As individuals, survivors focused on a collectivist perspective and tended to “view themselves as integral units of a larger traumatized society”; were proud that they were

known for their hardships and resilience; and were thankful for the elders that had taught them to how combat adversity (p. 848). On a social level, survivors perceived themselves to be more united and reported a reduction in communal conflicts; held frequent gatherings and developed customs to remember those who passed; and community leaders took responsibility in looking after the bereaved (2008). Youth reported that self-help groups improved their confidence to manage future disasters and highlighted how cultural programs and festivals had been helpful. Four themes emerged for the community as they identified the spiritual coping strategies: requiems, rituals, religious beliefs and spiritual seeking, some of which were held with traditional music and social customs.

Acknowledging that they may not address all the complexities involved in delivering holistic and efficient care for disaster survivors, Rajkumar et al. offer a number of strategies to “help in the organization of care for disaster hit communities in developing countries with cohesive family and community structures” (2008, p. 852). Some of the suggestions based on their findings include: 1) reconsidering the timing of formal psychiatric services, offering them after the acute stress reactions subside and period of resolution of normal grief is over; 2) strengthening locally prevailing community sanctioned support systems; 3) increasing cultural competence and understanding of the nuances of ‘post-disaster culture’ of mental health professionals; 4) integrating services of community self-help groups, spiritual organizations and other resources in aid attempts; 5) sharing local coping mechanisms along with the pathos in order to strive for a more holistic understanding and optimal rebuilding of post disaster communities worldwide (2008).

Their findings revealed that survivors “valued their own cultural and spiritual practices and community resources more” than the professional mental health services that had been provided during nine months after the natural disaster (p. 852). The results of the research suggest that interventions after disaster should be grounded in ethno-cultural beliefs

and practices and should be aimed at “strengthening prevailing community coping strategies” (p. 844). Lastly, the Rajkumar et al. (2008) express that resiliency amidst adversity may be more common than expected and that “appreciation of the inherent resilience of individuals and society is essential to understand and to work with any disaster-affected society” (p. 851).

Community Psychosocial Interventions and Expressive Arts Therapies

The integration and use of the expressive arts therapies and community psychosocial interventions is not new to post-disaster mental health treatment. Models have been proposed and/or implemented in the aftermath of tornadoes, earthquakes, tsunamis, cyclones and hurricanes. In this following section presents some examples.

Interdisciplinary Action Research and Community Based Expressive Arts Therapies

Chile is a country with an extensive history of multiple forms of natural disasters including earthquakes, tsunamis, floods and volcanic eruptions, and each new event greatly impacts various aspects of society (Espinoza et al., 2016). On February 2010 Chile endured an earthquake, categorized as one of the top five in magnitude ever recorded (8.8 on the Richter scale), which was then followed by a tsunami which waves reached up to 10 meters (Espinoza et al., 2016). In the weeks following the natural disaster, Espinoza et al. (2016) developed and implemented interdisciplinary action research and psychosocial interventions targeting approximately 150 older adults from seven rural areas in Paredones.

Before implementing any work, they first defined the process and interventions that would be employed by examining “the geographical, social, and cultural particularities of the population” (p. 278). They did this by working alongside the leaders of senior local organizations whom helped to identify issues, invite participants, co-evaluate activities and provide the communities’ feedback from the communities (2016). Eight workshops were

conducted on Saturday afternoons for a period of four hours, with 15 – 20 participants in each session (2016).

Espinoza et al. (2016) opted to utilize the participatory action research methodology, which was developed in Latin America by Osvaldo Fals-Borda (1985), as one of their “political, social, and cultural research approaches” (p. 282). This approach was central to the conceptualization of their study because it confirms the “idea that the self-knowledge that the older people possess allows them to rethink and question their social context in light of the catastrophe and therefore to identify and assess their capabilities and cultural knowledge during the post-disaster social reparation process (p. 281). In addition, their interventions involved psychosocial and support strategies because these address the connection between psychological and social processes, and interact constantly with each other in a reciprocally influenced relationship (Espinoza et al., 2016).

Espinoza et al. (2016) identified that the participants’ “strengths as members of these communities were directly related to the culture and traditions of the Chilean countryside, particularly folk music and folklore as means of expressing their oral history” (p. 280). People expressed stories of natural disasters in their locality through national folkloric songs and dance (2016). The authors state that knowledge of these forms of expression allowed them “to develop future interventions and define the cultural relevance of employing music and art therapy techniques” (p. 280). This approach allowed the researchers to mirror the participants’ strengths back to them. It also provided them a gateway to incorporate visual art when there was initial hesitancy over engaging with this medium due the participants’ illiteracy and the materials’ association with schooling.

Furthermore, the Espinoza et al. (2016) highlighted the importance and influence of popular education and the role of artistic education in Latin America, “from the critical pedagogical perspective of Paulo Freire, whereby the contextual view and cultural relevance

serve as the foundation for the development of meaningful experiences through art” (p. 285). For the authors, the “practice of artistic education offers sensitive methods that make it possible to approach phenomena from within, that is, from the sociocultural reality of the individual, as opposed to a more external perspective, using empathy and sensitivity as the main tool” (p. 285). Providing such collective instances were a “first step in processing and integrating these traumatic events into the individual historical continuum, which is integrated into a group narrative from which it is possible to understand group members’ life experiences” (p. 284).

The psychosocial workshops typically followed the following structure: 1) an opening focused in developing self-awareness about physical and emotional states to promote mental and corporal relaxation; 2) the re-creation of folk music; 3) a collective activity with visual and plastic materials; 4) reflecting over the creative experiences and discussing both individual and collective themes; 5) ending with a ‘mateada’ or communal sharing and drinking of mate (2016). Espinoza et al. state that design for research and interventions in other post-disaster contexts should involve the following aspects:

- (a) The work should begin by considering the needs identified by the community itself.
- (b) The intervention team should encourage the development of ties and trust within the community. This would allow the team to negotiate and respond realistically to community demands that may emerge during the process.
- (c) Such an effort should identify the geographical characteristics of the locality and the particular characteristics of the community, e.g., age group, with whom the team will be working.
- (d) It is necessary to have knowledge of the sociocultural context and identify elements of the local popular culture, including myths, legends, and local stories, which will be used as the basis for the interventions and will make it possible to ensure that such interventions have cultural relevance. These cultural expressions

in the communities have served historically, among other things, to collectively face previous traumatic events. (e) The team must include professionals from the social sciences and art therapy. (f) The members of the team are expected to engage in various tasks for which they must have previous training, such as group facilitation and emotional support as well as the use of creative resources in the collective processing of traumatic events. (g) Every intervention in the field produces important information, thus allowing for the design of an adequate intervention that can later be implemented in the community. (2016, p. 291)

In this study (2016), Espinoza et al. managed to develop a culturally sensitive and strength-based model for community interventions while incorporating local cultural arts-based practices along with the expressive arts therapies.

Post-Earthquake Art Workshop with Haitian Children and Youth

In 2010 Haiti experienced a 7.0 magnitude earthquake (DesRoches, Comerio, Eberhard, Mooney, & Rix, 2011) that caused massive devastation, both in terms of human casualties and material damage (Brolles et al. 2017). Brolles et al. (2017) researched about resilience and the creative process in Haitian children and adolescents living in the streets who had been victim/survivors of the earthquake. The authors developed a creative art group initiative to assess the ability of the children to engage in creative activities and whether the workshop facilitators could provide substitute parental figures. In addition, it looked to examine the extent in which these activities could facilitate their reintegration to society and provide them with opportunities for personal and cultural expression about their reactions to the multiple traumatic experiences endured (2017).

The art workshops were held at La Timkatec, a residential care home that provided lodging, food, care and schooling for children in the streets. The date or year in which the workshops were held is unknown, as it is not referenced in the article. Thirty-three children

participated in the 12-session initiative; 15 of them were ‘boarders’ (those in full care of the residential home) and 18 ‘tourists’ (those who lived in the streets and used the services provided at the rate they wished) (2017). For the activities, the groups were divided into sub-groups of those who were under the age of 15 and over the age of 16. It is unclear in the article as to whether the researchers were present during the 12 sessions of the initiative or during one workshop.

Brolles et al. (2017) clarify that, more than being therapeutic interventions, these were mostly cultural, but with a therapeutic impact. The ‘creative mediation schemes’ offered were aimed at acquiring and improving drawing skills and were facilitated by multiple artists, a social worker and a psychologist (2017). The activities “did not involve any verbalization of the experiences behind the representations produced by the children, through any kind of associative process” (p. 6). The authors state that they nonetheless “were able to observe the impact of the context (i.e. the earthquake and being homeless) on the children’s attitudes and the artwork they produce[d]” (p. 6). In addition, they conclude “the deployment and evocation of the children’s personal and cultural symbols during the workshops (music, religious signs, family links, street life) show that the workshops were potential spaces of creation and cultural experience development” (p. 6).

The results of the study revealed that even though the participating artists were successful in facilitating the artistic techniques, they were not trained in managing the children’s expression of their trauma history. The participating artist also varied in their approach, which provided a psychological and emotional inconsistency for the children (2017). Some artists were open and welcoming of the children’s output, while others were stricter and more pedagogical, focusing solely on teaching techniques. Brolles et al. (2017) conclude by highlighting the need to enroll trained art therapists in these types of interventions in order to provide the adequate therapeutic support required by emotionally

vulnerable children.

The study is helpful in that it presents the importance of having facilitators -whether artists, therapists, or community members - trained in trauma-informed approaches and practices before guiding any form of intervention that involves psycho-emotional vulnerability and disclosure. On the other hand, the article is vague about the details clarifying on which part of the aftermath of the earthquake the interventions were facilitated and how many sessions the researchers studied. This information would have been helpful in order to fully conceptualize the study's findings.

Place-Based Psychosocial Interventions

Humanitarian Psychologist, Prewitt Diaz (2017), proposed that psychosocial place-based interventions are the most appropriate approaches for a situation such as Puerto Rico's recovery from Hurricane Maria. According to him, "place-based interventions are nimble, cost-effective, community-owned, and bring communities together after a disaster" (p. 2).

Psychosocial support interventions looks to reestablish the social and psychological well being of people by providing tools individuals can use to rebuild their social networks (2017). According to Prewitt Diaz (2017), "disaster affected communities must be the architects of their own psychosocial recovery and what the re-established place will look like" (p. 3). Placed-based psychosocial support interventions offers the space for people to recognize the psychological and emotional impacts of disasters, express feelings, an initiate a reconstruction process with and within social networks such as their neighborhoods and communities (2017).

Some of the benefits of this approach are that they "include the affected people in defining what they need to feel better, participate in the planning of re-establishment of place, and become active actors in the re-making of place" (p. 2). He encourages for interventions to focus on a strength-based perspective and states that solution-focused place-based activities

that look to reestablish a sense of place require “critical thinking and a genuine dialogue for community-led answers to the problems caused by the Hurricane, rather than focusing on a list of items lost or how the hurricane exacerbated existing problems” (p. 3).

Prewitt Diaz (2017) clarifies that although the processes may appear to be similar and in “cookie cutter patterns, the internal dynamic of the process is different for every community” (p. 2). He highlights the importance of culture in the recovery process and how a cultural sense of place is denoted by communal activities (2017). In communal activities and “information is exchanged, groups learn about customs and traditions, and discussions focus on learning from a common history” (p. 3). Regarding the case of Puerto Rico, the author states that

[...] culture is paramount and it sets the stage for recovery. Most Puerto Ricans dedicate popular music, poetry, and other forms of artistic expression to the Island (*Puerto Rico Patria Mia, Verde Luz, Preciosa*). Even in the initial days after the hurricane, neighbors, and families were meeting together for collective cookouts, singing *Plena* and playing traditional instruments (*maraca, pandereta y pandero*) (p. 2).

Therefore, the harnessing of cultural practices and local ways of convening can be a key tool to organize gatherings that provide opportunities for people to share information and support each other in post disaster settings (2017). Establishing a cultural sense of place is one of the ways in which members of a community can begin to reestablish a sense of place and initiate or continue the process of recovery (2017).

Discussion

On a Culturally Relevant Field of Psychology in Puerto Rico

The field of psychology in Puerto Rico adopts from and adapts to the field of psychology in the United States due to the colonial relationship that keeps Puerto Rico under economic and political dependence (Velasquez et al., 2006). Carlos Albizu's and Norman Matlin's theses urging for a the development of a more culturally relevant field of psychology in the archipelago are still relevant over 50 years after they were written. According to Albizu and Matlin, in order for the field of psychology to truly serve the Puerto Rican population, the field should be created, formulated and rethought by those who inhabit and are closer to the geographic and cultural realities of the Puerto Rico (Velazquez et al., 2006). In order for mental health professionals to better understand these realities, it's key to factor in the social, historical, political and cultural contexts that directly influence their construction (Velazquez et al., 2006).

Velazquez et al. (2006) echo Albizu and Matlin's call to action. They also encourage the development of a new vision within the field of psychology in Puerto Rico that acknowledges the social complexities, diversities and relativities of knowledge present in the archipelago. A vision that is open to continuous renewal, versus one that becomes irrelevant due to crystallization (2006). This approach would signify a shift that would, ultimately, be more consonant with the fluid and dialogic nature of culture, and more relevant to the multiplicity of contexts and subcultures within Puerto Rico.

Mental Health in Relation to Natural Disasters

Natural disasters are categorized as traumatic events (Felix et al., 2011). Before and after a natural disaster occurs, there are things that should be taken into account: 1) access to and availability of psychological services; 2) 'at risk' and vulnerable populations; 3) the psychological impact, symptoms, and possibilities of psychopathologies. During the recovery

efforts after natural disasters occur, access to formal psychological services is not always available or viable to survivors. In addition, services provided by organizations and volunteers are oftentimes not enough to cover the demand (Kar & Bastia, 2006). Even though natural disasters impact entire societies, some people are more ‘at risk’ or vulnerable to psychological impact due to higher levels of exposure and fewer resources during the recovery process (Felix et al., 2011, Flores & Quijano, 2017). Such groups include, but are not limited to: people in lower socioeconomic status, children and adolescents (Felix et al., 2011, Flores & Quijano, 2017), and older adults (Espinoza et al., 2016).

Psychological impact in the aftermath of natural disasters may manifest as internalizing disorders such as: PTSD, generalized anxiety, separation anxiety, social phobia, panic, major depression, and suicidal ideation (Kar & Bastia, 2006; Felix et al., 2011; Lowe et al., 2015; Cagney et al., 2016; Rivera & Arroyo, 2017). Studies have shown that the psychological and socio-emotional impact of natural disasters can last for up to a year or more. (Felix et al., 2011; Lowe et al., 2015; Cagney et al., 2016; Rivera & Arroyo, 2017). The lasting effect greatly depends on the magnitude and duration of a natural disaster, the level of exposure, the level of stress and resources available during the recovery process (Felix et al., 2011; Lowe et al., 2015; Cagney et al., 2016; Rivera & Arroyo, 2017).

Given that many trained professionals have had to leave the Puerto Rico in recent years due to the economic decline (Bram, 2018) searching for other ways of dealing with the psychosocial health of communities is of particular urgency. Informal psychological support from collectivist and close-knit social networks may assist in reducing severe psychiatric symptoms (Kar & Bastia, 2006). In addition, self-help groups and cultural programs can aid in alleviating the socio-emotional impact produced by natural disasters (Rajkumar et al. 2008, Espinoza et al., 2016, Prewitt Diaz, 2017).

Resilience in Post Disaster Communities

The resiliency of communities can be conceptualized as the coping strategies that require certain social and localized mechanisms to be continued or activated, depending on the cultural context of the survivors (Grove & Adey, 2015). From a Disaster Risk Reduction (DRR) perspective, the concept of resiliency is in its Third Wave. Whereby resiliency is considered “a metaphor of the outcome of intersecting eco-social processes that are shaped by power relations and are always multileveled and evolving through time” (Atallah, 2016, p. 95).

People working in post-disaster contexts should explore resilience through a critical - cultural perspective. Otherwise, they risk masking the social inequalities and power dynamics that oppressed groups experience (Grove & Adey, 2015; Atallah, 2016). Experiences that may have historically helped shape and legitimize their resilience (Grove & Adey, 2015; Atallah, 2016). Masking the social inequalities and power dynamics may lead to interpretations of oppressed groups’ responsibility over their own vulnerabilities (Atallah, 2016).

Instead, it is important for people working with post-disaster mental health and recovery, to build intersubjective insights of the multiple meanings of ‘resilient outcomes’ (Atallah, 2016). This helps to avoid a colonization of the term and seeks to avoid overwriting the diverse accounts and disparate versions of resilience (Grove & Adey, 2015). A grass roots and bottom-up approach, that includes a variety of stakeholders in defining what it means to be resilient, greater facilitates community empowerment and their capacity to ‘bounce forward’ (Atallah, 2016).

Ethno-Culturally Focused Place-Based Psychosocial Interventions

Psychosocial place-based interventions are the best approach for Puerto Rico’s recovery from Hurricane Maria, and incorporating culture is paramount, as it sets the stage

for recovery after natural disasters (Prewitt Diaz, 2017). This approach goes in line with research done in countries with cohesive and collectivist cultures around the world, which suggest that interventions post disasters, should build from ethno-cultural beliefs and practices (Rajkumar et al., 2008; Espinoza et al., 2016). Interventions should part from a strength-based and solution-focused perspective and work on strengthening prevailing local coping strategies and community sanctioned support systems (Rajkumar et al., 2008; Atallah, 2016; Espinoza et al., 2016; Prewitt Diaz, 2017).

Mental health professionals should apply a critical - cultural perspective when conceptualizing interventions for post-disaster communities. By doing so, they can then work from a contextual outlook and culturally relevant foundation in order to develop meaningful experiences through creative art therapy techniques (Espinoza et al. 2016). This also allows for practitioners to part form an internal perspective and the sociocultural reality of individuals and communities, versus an external perspective that uses empathy and sensitivity as the core tool (Espinoza et al., 2016).

Program Development

Programing for Puerto Rico's psychosocial recovery from Hurricane Maria and any other future natural disaster should focus on vulnerable populations such as: low SES communities, children, adolescents, older adults and those with less access to formal mental health services. Interventions should also be provided in the short-term and long-term phases of recovery. Rajkumar et al. (2008) suggests for formal psychiatric services to be provided after the acute stress and grief period is over. However, place-based and ethno-culturally focused psychosocial intervention can be provided in both short-term and long-term periods after the disaster (Kar & Bastia., 2006; Rajkumar et al., 2008; Felix et al., 2011; Prewitt Diaz., 2017). Convening and re-establishing social networks is one of the first steps for survivors to validate the psycho-emotional impact of disasters, process their emotions, and

initiate a process of recovery and reconstruction along with their communities (Prewitt Diaz, 2017).

Recovery work needs to include a decolonization framework towards resilience. Which looks to enhance already existing intergenerational collective coping mechanisms and resilience processes that have historically served to manage sociopolitical and socionatural crises and traumatic events (Atallah, 2016; Espinoza et al., 2016). This allows for mental health practitioners to part from a culturally sensitive (Rajkumar et al., 2008) and culturally relevant platform that examines the geographical, social, and cultural particularities (Velazquez et al. 2006) of Puerto Rico and its sub-cultures. Parting from a culturally sensitive approach also allows for relevancy by renewing itself along with the evolving dialogic of culture.

Place-based psychosocial community interventions and programming post-Hurricane Maria should incorporate Puerto Rican ‘cultural capital’ (Atallah, 2016) and identify elements of the local popular culture and folklore (Espinoza et al., 2016; Prewitt Diaz, 2017). Puerto Rican cultural art practices such as: music and dance (*bomba, plena, trova, salsa, reggeaton*), visual arts (printmaking, painting, mask-making, woodworking), writing and storytelling (poetry, stories, myths, legends) have served as ways for people to sublimate, cope with and express a wide range of emotions. Throughout the archipelago’s history, as well as immediately after the hurricane, many artists and civilians have dedicated music, poetry, visual arts, and other forms of creative artistic expressions to Puerto Rico (Prewitt Diaz, 2017). Present and future mental health programming should look to examine, integrate and reclaim local popular and folkloric art forms (Ortiz, 2011) through an expressive therapies lens. By doing so, they provide the opportunity for individuals to translate them into the contemporary experiences of their different communities and allow the art forms to assist during the healing process.

When mental health resources to assist survivors of natural disasters are limited, it's important to train community-based organizations and provide them with tools and practices to achieve greater outreach (Flores & Quijano, 2017). By harnessing the cultural capital and integrating it with the expressive arts therapies, not only can approaches be more culturally relevant, but it also allows interventions to reach a wider range of people. Prior and after a disaster occurs, mental health professionals and expressive art therapists can train community organizations, artists and community members in trauma-informed approaches and expressive arts therapeutic practices. Doing so allows organizations and volunteers to be able to facilitate emotionally supportive environments and use creative resources for the collective processing of traumatic events and commence or continue the path to recovery (Espinoza et al., 2016; Brolles et al., 2017).

Future Research

For countries, nations and states in geographical areas with high risk of hurricanes and cyclones, more critical research is needed in order develop programing that best serves specific locations. The following recommendations are put forward as important topics for further examination.

First, and in line with Atallah (2016), there is a need to study how historical and ongoing sociopolitical resilience processes within oppressed groups intersect with, overlap, and translates into responses over environmental hazards and natural disasters. Second, the field of psychology in Puerto Rico would benefit from examining culturally relevant arts-based psychosocial and therapeutic interventions and their impact in different communities throughout the archipelago. Lastly, further global research is needed on how the expressive arts therapies can be utilized within the recovery process in the aftermath of cyclones and hurricanes as an immediate and preventative intervention that sustains social systems and coping through intense isolation, loss, and devastation.

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