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Creative Soups for the Soul: Stories of Community Recovery in Talca, Chile, After the 2010 Earthquake

Sopas Creativas Para el Alma: Historias de Recuperación Comunitaria en Talca, Chile, Después del Terremoto de 2010

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This study, conducted in Talca, Chile, a year and a half after a massive natural disaster, focused on creative thinking and art production as manifestations of resilience. Purposive sampling was used to recruit participants through community leaders and programs. Ten survivors whose houses were damaged or destroyed during the 2010 earthquake were willing to participate in semi-structured interviews that included verbal narratives and an art response. Systematic analysis illuminated conscious and latent psychological content. Three overarching themes were identified as central to survivors' recovery process and were then contrasted with data from New Orleans after hurricane Katrina, exploring universality and contextual factors in post disasters' creativity and resilience. Specifically, in Talca, the creation of craft for sale, instead of art making for emotional expression in New Orleans, was observed; idealism and future-oriented thinking were heightened in Talca, while humor and spirituality seemed more pronounced in New Orleans; and connections to natural surroundings in Talca were juxtaposed with New Orleans' residents' strong neighborhood affiliations and cultural festivities.

Keywords: resilience, creativity, disaster, Chile, New Orleans

Este estudio, desarrollado en Talca, Chile, un año y medio después de un desastre natural masivo, se centró en el pensamiento creativo y la producción artística, como manifestaciones de resiliencia. Se usó un muestreo intencional para reclutar a los participantes, a través de programas y líderes comunitarios. Diez sobrevivientes cuyas casas fueron destruidas o dañadas durante el terremoto de 2010 accedieron a participar en entrevistas semi estructuradas, las que incluyeron narrativas verbales y una respuesta artística. Un análisis sistemático iluminó los contenidos psicológicos, tanto conscientes como latentes. Tres temas principales fueron identificados como centrales en el proceso de recuperación de los sobrevivientes y fueron luego contrastados con datos obtenidos en New Orleans posterior al huracán Katrina, explorando universalidad y factores contextuales en la creatividad y resiliencia post desastre. En concreto, en Talca se observó la creación artística para la venta en lugar de la creación artística para la expresión emocional observada en New Orleans; el idealismo y pensamiento orientado en el futuro se acentuó en Talca, mientras que en New Orleans pareció pronunciarse más el humor y la espiritualidad; y las conexiones con el entorno natural en Talca se yuxtaponen con fuertes afiliaciones vecinales y festividades culturales en los residentes de New Orleans.

Palabras clave: resiliencia, creatividad, desastre, Chile, New Orleans

Natural disasters—earthquakes, tornados, tsunamis, wild fires—are regular occurrences in many parts of the world, yet bring unimaginable challenges and irregular experiences to the daily lives of millions who are recovering from these events. How people react and what is effective in recovering from disasters seems to vary depending on a cultural, societal or historical context.

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The focus of this study was to explore how everyday creative thinking (as conceptualized by Richards, 2007, and by Goff & Torrance, 2002), creative production (Prescott, Sekendur, Bailey & Hoshino, 2008), and intuitive experiences of flow (Csikszentmihalyi, 1996) might have been experienced by survivors of a natural disaster, specifically the major 2010 earthquake in Talca, Chile. This study was a replication of a previous similar exploration in New Orleans after hurricane Katrina, where a connection between resilience and creativity was found (Metzl, 2007, 2009). In Metzl's 2009 study, creativity was found to be connected to subjective wellbeing, despite exposure to the hurricane, and understood as a manifestation of resilience. Three types of creativity emerged from a thematic exploration in that study, specifically, participants ability to think in creative and original ways which fostered resilience, community and neighborhood creative engagements, and participants intuitively engaged in creative production (art making and writing) to cope with experienced adversities (Metzl, 2007).

Review of Literature

Resilience and creativity research points to their potential connections, yet clarifications of how creativity, creative product and production support wellbeing post disaster are still needed. Everall, Altrows and Paulson (2006) determined that resilience research has predominantly focused on one of three operational definitions: (a) a stable personality trait or ability protecting individuals from negative effects of risk and adversity (i.e., Dumont & Provost, 1999; Werner, 1995); (b) a positive outcome, which is defined by the presence of positive mental health or absence of psychopathology, despite the exposure to risk (Masten & Powell, 2003); or (c) a dynamic process that is dependent upon interactions between individual and contextual variables, and which evolves over time. The third perception of resilience is that of a "dynamic developmental process reflecting evidence of positive adaptation despite significant life adversity" (Luthar, 2003, p. xix). The definition of resilience focuses on the conditions under which resilience is observed: exploring when and where resilience process manifests and which protective and vulnerability factors mediate or interact with risk factors.

Some see that a decrease in functioning post-exposure is essential to resilience, as it entails a bouncing back process (Luthar, 2003; Masten & Powell, 2003), while others refer to resilience as "the ability of adults in otherwise normal circumstances who are exposed to an isolated and potentially highly disruptive event (…) to maintain relatively stable, healthy levels of psychological and physical functioning" (Bonanno, 2004, p. 102). Overall, recent research suggests that resilient people are neither exceptional nor pathological and that the ability to maintain normative levels of functioning is not rare, but often the most common response to potential trauma (Bonanno, 2005).

Recent creativity research has linked creativity and resilience. Research from expressive therapies often illustrates the use of creative production in promoting mental health (Bickley-Green & Phillips, 2003) and creativity has even been identified in a specific model as one of the seven types of resilience (Wolin & Wolin, 1993). While art making does not seem to be a manner in which most people process feelings and thoughts after exposure to a disastrous event, those who intuitively do so name art making as essential to their ability to cope (Metzl, 2009; Wolin &Wolin, 1993). In addition, art therapy research has long identified ways art making aids in processing personal and systemic challenges and fosters resilience. For example, Bickley-Green and Phillips (2003) explored the use of art making and play in therapy and art education as tools to enhance resilience. Haen (2005) asserted that verbal processing of the trauma alone is insufficient, due to the "iconic, kinesthetic, and affective components" (p. 395), and suggests that expressive arts therapy may provide a way to access and integrate traumatic memories.

Bardot (2008) found that art therapy can not only assist in processing loss, but can also transform feelings of grief to promote resilience and strength. In working with homeless adolescents, Prescott et al. (2008) found art making to be an important process in fostering wellbeing, despite of adversity. Utilizing arts-based mindfulness interventions, Coholic (2011) found that art has the potential to foster self-awareness, which in turn may assist youth in building aspects of resilience.

Other creativity researchers, such as Richards (2007), connect everyday creativity to resilience and living actively. While there are differences in the ways in which creativity manifests itself in different fields (writing, scientific creativity), there are general aspects of creative thinking, such as openness, non-defensiveness and bravery which act as facilitators in response to aversive experiences (Richards, 2007; Runco & Richards, 1997). Flexibility in solution making was also found to support cognitive and psychological adjustment (Meneely & Portillo, 2005). Another well-researched factor of creativity that is associated with wellbeing is the intense engagement while creatively producing something, often termed *flow* (Csikszentmihalyi, 1996). The concept of flow was found to co-occur with wellbeing while complete self-absorption in the creative process and a balance between high levels of skills and high levels of challenges are experienced (i.e., Asakawa, 2004).

While creativity is explored on the three levels noted above (personal creative production, creative thinking, and creative community engagement), resilience is understood as a process of restoring one's sense of normalcy and wellbeing after experiencing a traumatic event, such as a major natural disaster. Specifically, individuals who have been exposed to a traumatic event experience psychological stress as a result of the trauma (Gonzalez-Dolginko, 2002), which often constitutes a normal reaction to the event. The majority of survivors will go through an intuitive process of rebuilding and bouncing back emotionally (Norris, 2002) and, if post traumatic stress symptoms occur, they do not necessarily constitute a true mental disorder, but rather a normal stress response to an abnormal situation (Cova & Rincon, 2010). Understanding that recovery takes time and resources, the process of "bouncing back" following a natural disaster is typically thought to occur between the first and second year after the devastating event (Norris, 2002). Based on the above, this research looked at the natural process of bouncing back after surviving the 2010 earthquake in Talca, Chile, as a manifestation of resilience.

Many publications in the recent past have identified art expression and art therapy as useful assessment and treatment tools following a natural disaster (Ayalon, 2006; Gonzalez-Dolginko, 2002; Orr, 2007). Some identified that the act of creating is in itself cathartic in healing from trauma (Gregorian, Azarian, DeMaria, McDonald, 1996). The art has also been identified to serve as a distancing mechanism from the "intense affect" (Orr, 2007, p. 351) of the disaster. In this particular study we, therefore, utilized an art response following a verbal interview to increase the understanding of meaning related to a disaster as well as the recovery process.

In addition, personality and demographic factors are taken into account in models of resilience (Luthar, 2003) and creativity (Richards, 2007) to understand these processes within the relevant cultural meaning (Godakanda, 2006), resources allocation (Lothe & Heggen, 2003), and ability to relate and utilize social resources (Hunter, 2011). All of the above provided the basis for exploring creativity and resilience in Talca a year and a half after the 2010 massive earthquake.

The earthquake that occurred on February 27, 2010 was noted to be significantly stronger than the common temblors. The rupture, with 8.8 magnitude on Richter scale, broke through nearly 600 km in the area around Maule, being the fifth largest earthquake during the last 100 years (Han, Sauber, & Luthcke, 2010). Aftershocks followed for several months. The earthquake itself created massive devastation, which profoundly impacted the city of Talca and the surrounding areas.

Talca (Talca-Maule conurbation) is a city three hours south by from the capital city of Chile, Santiago. It is located in the province of Maule. According to the last census data (2012), it could be estimated around 219.573 (Chile, Instituto Nacional de Estadística, 2013). While the city itself is an urban center, the province includes several rural communities as well. Talca was chosen as the location of the research following the criteria for the original research set in New Orleans after hurricane Katrina. Talca is similarly close to the location of the epicenter of the 2010 earthquake (approximately 70 miles from the epicenter (US Geological Service, n.d.), and substantial and lasting damage to infrastructure was reported. The historical center and 15 neighborhoods had most of their housing damaged or destroyed (Rasse & Letelier, 2013).

Hurricane Katrina was a tropical storm that hit the Central Gulf Coast of the United States on August 29, 2005. Thousands of residents were reported missing, many others were displaced, and all had to adapt to the destruction and disruption of normal life caused by the direct impact of the hurricane and the fact that most of the city of New Orleans was subsequently flooded after the levee system broke (Johnson, 2005, November 21). The large-scale devastation as a result of both the Chilean earthquake and hurricane Katrina provide an interesting foundation for exploring survival and coping in two very different cultures.

Method

Research Design

This research followed a qualitative interview design (Seidman, 2006), intended to explore survivors' in-depth experience of recovery after a devastating disaster from a strength-based approach. The use of personal interviews and a creative drawing task were designed to give voice to participants and explore the connections between creativity and resilience through individual and shared experiences. The research was designed as a replication of a similar study conducted in New Orleans post hurricane Katrina, to allow for comparison between specific contexts.

Data collection following hurricane Katrina in New Orleans (Metzl, 2007) and following the 2010 earthquake in Talca adopted the same timeframe. The timing is also based on previous research findings suggesting that spontaneous recovery post disaster often takes place between the first and second year

following the event. Therefore, having a cross-sectional analysis of themes emerging a year and a half after the earthquake reflects community experiences in the midst of the resilience and recovery process.

The analytical approach was systematic and dialectic, selecting established qualitative research models. Qualitative research is a set of inquiry processes that offer rigorous but open-ended opportunities to explore human experiences in depth (Linesch, 1995), using multiple methods in an interactive and humanistic fashion, celebrating inquiries that are more about discovery. The data is, therefore, emergent and moves away from the prefigured theoretical assumptions to be tested in most quantitative designs (Creswell, 2014). The process of exploring "participants' perceptions, experiences, and the way they make sense of their lives" is as an important focus as the product or outcome (Creswell, 2014, p. 199). Lincoln and Guba (1985) assert that qualitative research is the attempt to capture a more complete picture of individual lived experience, rather than a narrow perspective of generalizations. The semi-structured interview format was selected for this study, allowing the researcher to learn about a person's "interior experiences" (Weiss, 1994, p. 1). In-depth interviewing is essentially interested in understanding the lived experience of people and the way people make those experiences meaningful (Seidman, 2006).

The research team, consisting of two North American and three Chilean art therapists, accessed research participants in neighborhood temporary housings, a local university, and a community led market place, among others. This too is comparable to the settings in which survivors of hurricane Katrina were interviewed in New Orleans in the original study replicated here.

Participants

A purposive sampling of 97 adults participated in a survey study intended to statistically explore the connection between creative thinking and wellbeing a year and a half after the disaster (results from this quantitative study are currently in review). These were survivors who have managed to function within normal limits despite sustaining some loss/damage to their homes. This criterion established the assumption that participants are survivors who have demonstrated resilience in response to the adversity they endured beyond their subjective perception of their current wellbeing. The researchers contacted community programs and leaders in impacted areas of the city and invited participants who met the criteria and were able to complete face to face interview in the time frame of the study. Ten survivors, nine females and one male, ranging between 21-75 years of age, were interested and able to meet with interviewers within the two weeks of the data collection phase, participating in in-depth interviews and art-making meant to explore subjective wellbeing and coping strategies (with a focus on creative thinking and engagements). These 10 participants' professions included a student, a craft seller in the local market, the president of the local market and a restaurant owner in it, a faith-based guidance leader, the organizer of a local women's group/social center, two homemakers, a retired hospital worker, a caretaker and receptionist of a social services agency. Two of the 10 interviewees were still living in temporary residency, which was built to house survivors of the earthquake (*mediagua*) at the time of the interview, while the other eight were living in a permanent house (either their rebuilt house, a new home, or a relative's home).

Participants' recruitment focused on communities with different socio economic status levels, cultural, personal and professional experiences, with the intent of examining how these variables may or may not have moderated wellbeing after the disaster. The research team worked closely with non-government organizations (i.e., Surmaule) and sought research participants by contacting appointed leaders in different parts of the city, such as heads of churches, university deans, and community-identified leaders (i.e., the president of the local *Mercado*), who helped in establishing relationships with study participants.

Procedure

The participants were introduced to the purpose of the study and process of the interview and researchers (who are therapists) assessed participants' wellbeing to be within normal range before beginning formal interview. Participants were notified that should there be a concern about their wellbeing or a sense that they are experiencing clinical level mental disability before or during the interview, he or she would be provided a referral to local mental health services, but would not be able to be included in the study. No such exclusion seemed necessary in the case of the 10 participants who volunteered in this study.

Participants were given the option, through informed consent, to indicate their real name or provide a pseudonym. The informed consent form was reviewed and signed by each participant prior to participation. This form was reviewed and approved by the Institutional Review Board through Loyola Marymount University.

The interviews lasted one to one and a half hour and included a semi structured 10-question guiding questionnaire, which explored the experienced adversity after the disaster, perception of healing and

recovery, personal abilities contributing to coping, resources such as family and community involvement, and experiences with governmental and international aid post-disaster. This interview guide was identical to the one used in the original study in New Orleans after hurricane Katrina (Metzl, 2009). In addition, the interview culminated with an optional directive to "Create a piece of art based upon something you shared with me in this interview". All 10 participants chose to complete a drawing. The interviews were transcribed and then translated to English by native Chileans.

Analyses of Data

The first step in comparative analysis is to identify units of meaning in the data (Lincoln & Guba, 1985). In this case, all narratives were organized in response to the study guide questions as well as emergent categories which arose from interviews, such as the crafts created in temporary housing and neighborhood support. The categories were reviewed by members of the research team; first, on a vertical level (reviewing each participant's narrative and art thoroughly) and then on a horizontal level (comparing responses of different participants to each topic). This process is noted in other narrative research analyses (i.e., Cornejo et al., 2013) as providing both clinical depth of the individual story while demonstrating the trends and width of the phenomena in question.

Team members then discussed their observations and, questions, and the data was then placed into visual charts of both verbal narratives and creative engagement, considering meaningfulness, commonality, and exceptional aspects as main categories for further exploration (Maykut & Morehouse, 1994). The artwork utilized a systemic exploration of the formal elements of the art (based on the FEATS model; Gantt & Anderson, 2009), visual and symbolic contents following the ETC model (Lusebrink, 2010), and art therapy explorations of image, such as depicted in Huss, Nuttman-Shwartze and Altman (2012) and Weiss (1994).

After categories were noted, possible connections between narratives and art pieces were distilled into themes with the help of the original research team, and corroborated with an independent group of art therapists from Chile and the Unites States. This was done to offset possible researchers' biases in interpreting the data and to include clinical perspectives on recovery in the themes constructed. Finally, the findings in Talca were contrasted with findings in New Orleans, allowing for a discussion of universal and culturally specific aspects of recovery post disasters.

Results

Three overarching themes illuminating resilience and recovery in Talca are discussed below: (a) community, the individual, and art making; (b) idealism and future-oriented thinking in recovery; and (c) essential links between natural surroundings, natural disasters and Chilean culture. Direct quotes from participants' transcribed interviews are integrated to bring context and meaning from which the themes arose. Information in parenthesis following the quotes indicates the name and the profession of the interviewee and the paragraph number where the information was taken from in the transcribed interview. The analysis of the art pieces completed during the interview demonstrated how both conscious psychological experience of recovery, such as creating craft from debris (described later), as well as latent psychological content expressed (i.e., how central symbols of nature were to participants) support the importance of creativity to meaning-making and wellbeing.

Community and the Self: Healing Collaboratively From Trauma

Narratives gathered revealed consistently the overwhelming importance of community recovery for the healing process of individuals. Participants spontaneously shared stories about the experience of bouncing back and combating helplessness and desperation when communal collaborations formed. Many participants acknowledged neighbors coming together to provide emotional support as being very useful in meeting basic and psychological needs. These creative ways of utilizing resources seem to be a manifestation of everyday creativity, as noted by Richards (2007), as linked to health and wellbeing. At the mediaaguas at Villa Hermosa in Talca, residents joined to beautify their living space, by planting potted plants outside their doors and putting a pebble covering down as gravel on the inside of the entrance gate to the community. Other communal events, which were not specifically artistic, but which were named as collective problem solving, included pooling resources together to cook food to support one's neighbors:

> … Company! That helped me a lot. Yes, because we were all in the same boat and we all helped each other. One woman asked me "Do you have bread?" I told her "no", so she said "you know what? I do. My family brought me flour". I told her "Really?" and she brought me a bag of flour. And from it we could make bread, a type of bread made over hot coal, like that. And that's what we could eat, because there was no bread. And it was like that, the cooperation of the neighbors, a lot of… we always knew we had the main meal, because we were all there, with our big common pot for the whole block. (Nora, homemaker, para. 17)

Identifying relationship to others and the importance of community emerged from the verbal narratives and was mirrored by Juan Manuel's drawing collected during the interview (Figure 1). Juan Manuel discussed his relationships with people in his life, namely, the women with whom he is close, as he created a notion of self in the context of others, depicting a group of differently colored people connected with lines. He indicated that the figure outside of the group was a representation of himself who at times feels isolated.

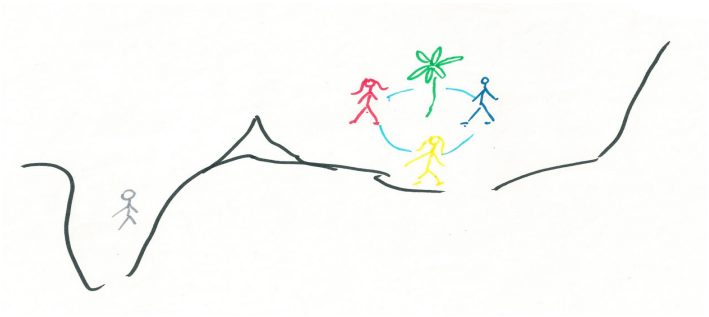

Figure 1. Juan Manuel' drawing.

Also, examples of art making occurring in the community primarily focused on crafts made to sell, in order to make a living. An example of these are the adobe slabs that were remnants of fallen houses, which one temporarily housed community utilized to make wall adornments to sell (Figure 2). These artistic responses are juxtaposed with research coming from the United States and Europe (e.g., Bardot, 2008; Coholic, 2011; Prescott et al., 2008), depicting art used predominantly for personal expression of feelings, processing traumatic events or communicating one's experience.

Figure 2. Adornments made of adobe slabs.

Women played a fundamental role in establishing change and supporting their communities after the earthquake. Gender role and generational pressures to care for one's family, both financial and psychologically, increased social expectations from women to extend support post-disaster (Cornejo et al., 2013; Magaña Frade, Silva-Nadales & Rovira Rubio, 2010). Several examples of women joining together were found in

the narratives collected. Loreto, the president of the marketplace in Talca, mobilized co-workers to create a new workspace after the original marketplace collapsed. Janette organized (and strengthened after the earthquake) a women's support group in her community. She explained how the women's group grew and changed after the earthquake to assist women to expand their ability to provide financial support for their families, and to also meet their own psychological needs. For example, she stated:

> So it's also grown in that sense, because they've tried to focus on learning… and trying to take care of themselves. (Janette, organizer of women's social center, para. 26)

Growth and learning from one another surfaced as important themes.

Centrality of Idealism and Future Oriented Thinking

Many people in Talca identified positive thinking and focusing on future goals as helpful in facing daily challenges of recovery. This was supported by symbolic/metaphorical themes found in the artwork, including symbolic indications about the future: freedom, reconstruction, personal dreams, wishes, convictions, and hopes. There were also some few participants who depicted loss and adversity in their imagery and those who did, mostly overrode one negative element by other more positive depiction (of the sun rising behind the mountains, of natural growth, of salvation, for example). The choice to focus on these ideals and positive affirmations throughout the narrative, and then to consciously refocus on these during the art response, was notable. These graphic depictions and positive thinking are perhaps used as a way of coping in a time of stress:

> Perseverance, the desire to go forward, there are many people here with a lot of determination, with a lot of … and are people that don't sit there waiting … but fight to get what they want. Those are the people with value, hard-working people… (Loreto, president of the local market, para. 42)

One drawing that exhibited idealism about freedom was that of Paula (Figure 3). The symbolic image of the heart and the wings, situated in the sky with the clouds and the stars, was drawn as a metaphorical theme of liberty, perhaps indicating a desire for a sense of liberation from some of the hardships she endured from the earthquake, titling her piece "Love in freedom".

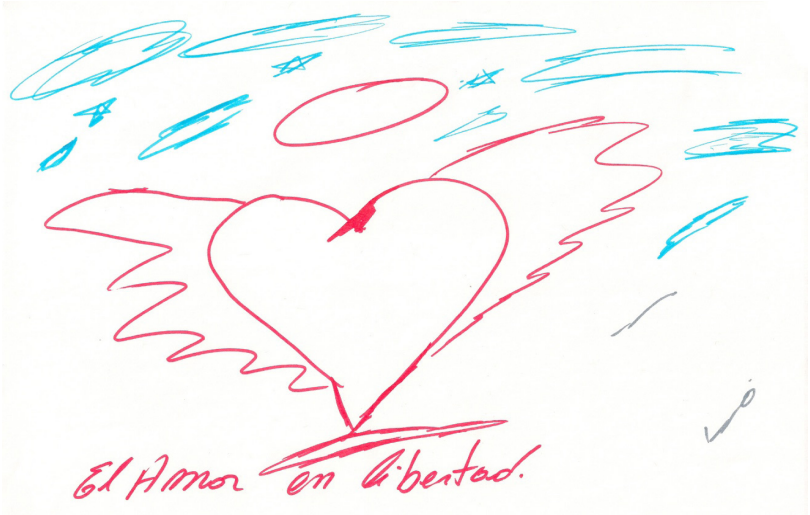

Figure 3. Paula's drawing: Love in freedom.

The art of two other participants addressed the destruction and the hopes for reconstruction related to the earthquake. Fernanda and María Eliana's artwork (Figures 4 and 5, respectively) contain commonalities in the composition (clear left and right sides, suggesting temporal steps in the recovery process). Both have houses in their drawings and both lack clear ground lines. Similar line quality can be seen in these drawings. In both images of the houses on the left (the house after the earthquake), the use of wavy and sometimes erratic looking lines are seen, while the line quality in the houses on the right (the house wanted after reconstruction) appears to be more stable, sure, and straight.

Figure 4. Fernanda' drawing: My family.

Figure 5. María Eliana's drawing: The breakage and the reconstruction.

Nature, Disasters and Chilean Culture Depicted Through Narratives and Art

Nature in particular seemed to be an important theme in the artwork. In fact, eight of 10 participants used nature to express their mood/experience. Repeatedly depicted content in the artwork included mountains, nature, roads/pathways, sun, trees, and houses, mostly used in general/symbolic fashion (e.g., not a specific person's house or an identifiable road/view); however, there were very few abstract symbols (i.e, Figure 3). One schematic element, the sun rising over the mountains/hills, was depicted in four of the art pieces, which is striking, as these artworks were not completed in the same time or place, and no interviewee was exposed to the other's images or narratives. To illustrate this emergent finding in the artwork collected, one must look at Figure 6, depicting in the sun/mountain range a smiley face in the sun. This may connect to cultural narratives of recovery in Talca, where daily images include the sun rising over the mountains. This aspect of survivors' experiences, both symbolic and concrete, seems to stress the omnipresence of nature when living in an earthquakes prone area. Thus, common depictions of the mountains and the sun serve as reminders of both the geographical rapture and reality of accepting life's adversity in this part of the world, and with its beauty and light.

In fact, the depiction of the Andes mountain range seems to serve as a ground line, providing a context for the surroundings, rather than the typical ground line commonly seen towards the bottom of a drawing (see Figure 6, for example). Most of the drawings collected lacked a clear ground line, which is in itself an interesting finding, as traditional theories of drawings development stages (e.g. Lowenfeld & Brittain, 1987) consider ground lines to be a commonly expected feature in adults' drawings.

Figure 6. I want my house like this one.

Discussion

The results of this study demonstrated three themes that seem important to understand recovery in Talca, Chile, a year and a half after a devastating earthquake, specifically, the prominence of community and collective healing, future and positive oriented thinking, and the connection to geographical nature because and despite of living in an earthquake prone area. These were depicted in both verbal and creative expressions of survivors and demonstrate how creative thinking and art making illustrate both conscious and latent psychological experience of recovery. As this study focused on ways that creative thinking and production supported resilience after a natural disaster, two main creative processes are illustrated in the three themes of recovery: a more conscious creative engagement and a more latent way in which the symbols and content depicted by the art made by participants during the interview intuitively supported the psychological centrality of their recovery. In other words, on the conscious level, participants explored how creativity allowed them to connect to others and actively respond to primary needs (food and craft). At the same time, inviting participants to make art about "…something you shared with me in this interview" seemed to have enabled participants to create a sense of meaning to their experience: that of the coping during the last year and a half and that of the interview.

The comparisons between these findings and those found in New Orleans bring forth questions about universality and context specific healing practices and illuminate resilience and creative manifestations, which speak to possible cultural differences.

Important similarities include the centrality of community and neighborhood engagement in supporting recovery in both Talca and New Orleans. Interestingly, in both communities women seem to have taken leadership positions in mobilizing social and community rebuilding, often expressing a great deal of everyday creativity (Richards, 2007), initiating or augmenting on resources available in expressive ways to reflect internal experiences and enhance psychological processing (Rasse & Letelier, 2013). In New Orleans, in addition to creating impromptu neighborhood support centers, medical clinics and physically helping remodel houses, community celebrations which included costuming, dancing, and visual creations, have empowered both personal and communal healing (Metzl, 2007).

The place of art making as a meaning-making tool in service of recovering the psychological wellbeing was strongly stated. In New Orleans, several participants—some who considered themselves as artists and some who did not—spoke about the usefulness of processing their thoughts and feelings when making artwork after the hurricane and resulting flood. These art works intuitively grew out of debris or a damaged material and the reworking of those into a newly defined and expressive piece was intuitively empowering to participants (Metzl, 2007). Most participants in Talca, including those engaged in art making from ceramic remains, considered their pieces more as craft pieces for sale rather than artwork expressing their feelings about the disaster or recovery. However, they noted that they found healing in the making of those pieces as part of a community of other survivors, focusing on positive and proactive rebuilding. Despite the difference in the expressed/contents of the artwork in these two settings, it seems that the intuitive engagement in art making played an important role in supporting resilience. Artwork collected in Talca illustrates the manner in which

art enhances wellbeing after adversity. Although none of the participants considered themselves as artists, all chose to participate in completing an art piece at the end of the interview. When looking at the images that emerged, a clear process of refocusing the attention to the core of their experience, a distilling of their "take away" from surviving the earthquake and its aftermath emerges. Some participants chose to actively depict existential foci: hopes for the future, appreciation of moving beyond what happened, or grounding themselves in existential freedom and peace. The art, thus, is an illustration of the natural ability to reframe, refocus and restore a sense of meaning and self-esteem required for recovery (Taylor, 1983). Also, visual and psychological aspects of life are communicated symbolically, at times subconsciously, and art making allows an expression of those (Huss et al., 2012; Morrell, 2011). For example, the psychological importance of the house, whether broken or rebuilt, was depicted through the commonality of the image in different participants' responses. As also noted before, the backdrop of the Andes mountains and the shaky or floating images collected possibly reflect the psychological impact of living in an area prone to serious and relatively frequent earthquakes. This supports previous findings of artwork used to uncover deep psychological content that might be unconscious (i.e., Bardot, 2008; Coholic, 2011; Orr, 2007).

While creative expression and production seem to have facilitated resilience in both New Orleans and Talca, some important differences stood out. While community and family were important resources in both settings, New Orleans' residences spontaneously depicted personal abilities or attributes (such as openness, flexibility, faith and temperament) related to their survival and commonly described their emotional journey of survival. Residents of Talca highlighted having a positive/future oriented approach as helpful, but otherwise spoke of survival in the context of a shared journey with others in their collective environment. This relational and systemic focus stood out even when asked directly for personal qualities that aided their coping, all pointing to social skills and ability to seek or create resources as part of a family, a neighborhood or a community. This was also illustrated through stories about creative engagements in the aftermath and the actual art responses collected in Talca. While in New Orleans after the hurricane many survivors seem to have engaged in expressing their feelings (anger, sadness, loss, humor) through individual art making or individual costuming/participation in cultural events, such as Mardigras, in Talca creative engagement took on collaborative decoration of common areas or making crafts for sale with other survivors. Similarly, in the art collected in Talca, depictions of people or personal feelings were almost none existent, and when they were, they focused on the shared survival narrative of the family or community.

The differences in survivors' perceptions and responses to adversity compared here support the premise that recovery must be understood within the culture and environmental context in which the disaster occurred (Godakanda, 2006). This seems important, even when a natural tendency toward spontaneous recovery over the first two years (Norris, 2002) or the importance of community and creativity as explored here, appear to be more universal.

Taylor (1983) suggests that recovery after trauma needs three main components: a search for meaning in the experience, an attempt to regain mastery over the event in particular and over one's life more generally, and an effort to restore self-esteem through self-enhancing evaluations (Taylor, 1983). In order to seek meaning, gain mastery, and restore self-esteem, a survivor must assess danger or intent for harm, ascribe meaning to exceptional or collaborative experiences, and support wellbeing through culturally acceptable self-enhancement.

Assessing intent for harm. In survivors' narratives of the aftermath of the earthquake in Talca, where the natural disaster was largely viewed as natural and emotional responses seem less personal overall, no direct sense of intent to harm was perceived. A feeling of being forgotten was related to scarce resources and the distance from other cities in Chile that received more attention recovery (i.e. Concepción) in the aftermath. Comparatively, in New Orleans post Katrina frustration and anger about resources allocation focused on distributions to different neighborhoods, with strong underlying racial tensions and anger over preferential treatment, ongoing corruption, and defected building regulations for the levees, at times seen as intentional. In addition, in New Orleans anger over the fact that the Federal Emergency Management Agency and the United States government, as well as local officials, were not better prepared for such disaster was much more apparent, and is possibly a cultural manifestation of a more financially privileged life style in the United States, less lived experience with such devastation inter-generationally, and more entitlement as an outcome.

Ascribing meaning and restoring self-esteem. In addition, the findings in Talca indicated possible cultural differences of self-perception leading to less focus on personal needs or self-expression, as compared to survivors in New Orleans, who easily named personal attributes which contributed to their survival. These differences suggest variability in constructing the meaning of resilience in the aftermath of a disaster. Specifically, cultural differences might mitigate how much individual responsibility/control a person is deemed

to have over what unfolds. It is possible that the centrality of self-enhancement evaluations to recovery from trauma noted above (Taylor, 1983) is in fact more relevant in the more individualistic cultures, replacing it with a more collective-enhancement evaluation in places like Talca.

The art products, which resulted from the art pieces interviewees completed in Talca, seem to further support this difference, as they were relatively impersonal and symbolic versus expressive (focusing on personal affects or experiences). This is interesting, as artwork of trauma survivors noted in the United States' literature is often described as high in emotional content and personal expression of psychological experience of people (i.e., Bardot, 2008; Coholic, 2011; Prescott et al., 2008). These differences might be related to differences in levels of individuation and more collective values in Chile. Specifically, Hofstede's rating scales for assessing collectivism and individualism determined that the United States scored 91 (very high on individualism), while Chile scored only 23 (very low on individualism) (Hofstede, Hofstede, & Minkov, 2010). And yet, within the 50 states of the United States, Louisiana scored second to highest score on being a collectivist culture (Allik & Realo, 2004). While communities and neighborhoods in New Orleans were also prominent in recovery stories, it is likely that its residents may be more individualistic in how they interact, relative to those in Talca. After all, societies can be individualistic and collectivist at the same time (Green, Deschamps & Páez, 2005) and individualism and collectivism are not necessarily polar opposites of one another (Allik & Realo, 2004).

This difference might also relate to differences in social behavior found in rural versus metropolitan regions. Hofstede et al. (2010) suggest that rural areas appear to be more collectivist in nature. Geographically, parts of Talca are flanked with farms and open areas. In a culture rooted in coping with catastrophic events, such as volcanic eruptions, mudslides, and earthquakes, people as a whole regularly mobilize to restore normalcy, and considering the collective above the individual needs might be an essential component in their survival.

Finally, considering the compounding exposure to adversity in Talca, the term posttraumatic growth (PTG; Tedeschi & Calhoun, 2004) might be more appropriate to understand emotional response than traditional models of resilience (i.e., Luthar, 2003) depicted earlier. Namely, while resilience refers to restoring an original baseline, PTG refers to creating a new baseline as an outcome of a positive psychological change that occurs as the result of the struggle with a highly challenging, stressful, and traumatic event. According to Bonanno (2004), "resilient individuals might not engage in the kind of meaning-making behaviors associated with PTG for the simple reason that they tend not to struggle to the same extent as might other, more traumatized individuals" (p. 420). Therefore, living with more frequent or devastating circumstances, such as surviving a natural disaster, might be a manifestation of resilience when there are ample resources to restore the original way of living. Conversely, where there is the same kind of adversity but a lack of external resources to bounce back completely, a transformation of the self and finding a new way to function may manifest itself as PTG because of and despite of the trauma.

This notion might, therefore, indicate that the meanings of these variables are culturally and possibly event specific. For example, churches and community support were important in both places but for different reasons. In New Orleans, community support seemed often more structured and formally organized by neighborhood associations, NGOs' work (such as Common Ground) and relief workers and governmental funding, while in Talca a more immediate, bottom-up process of neighbors pooling resources (food, guarding each other houses, etc.) was taking place even a year and a half after the disaster. Researchers and relief workers need to look at cultural norms with regard to expectations about assisting a community in recovering from a disaster (Ayalon, 2006; Martín Beristain, 2000). This is supported by Watters (2010), who shared that attempts to provide post-traumatic stress disorder interventions after the Tsunami in Thailand, provided by European and United States' teams, often seemed counter cultural or ineffective due to misguided assumptions of healing from trauma. The community in Talca demonstrated an instinctual way of healing collectively with relatively little international intervention.

All in all, the results of this study confirmed the way creativity can enhance healing after a disaster, as illustrated in Talca, Chile after the 2010 earthquake. The tendency to utilize resources creatively, and to utilize art production to empower survivors depicted here mirrored the link found between creativity and resilience in New Orleans post hurricane Katrina (Metzl, 2009). However, essential differences in what community solutions were made, the process and content of art pieces were then linked to cultural and contextual narratives, stressing the importance of understanding both site specific and global variables of resilience and creativity.

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