Children's Support Networks after the 1999 Landslides in Teziutlán, Mexico

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ABSTRACT

Within the broader topic of disaster recovery, the project examined the relationship between personal networks and types of social support received by young women who were children when they experienced the 1999 landslides in Teziutlán in the state of Puebla in Mexico. I hypothesized that received support at the time of the event would be most frequently associated with familial relationships. I lived and conducted my research in the small resettlement community of Ayotzingo at the edge of Teziutlán, where many affected people relocated after the disaster, including children. While there I engaged in participant observation, semi-structured interviews, and a network questionnaire. I interviewed seventeen young women about their experience in the disaster and about their personal networks, paying particular attention to network content (level of closeness and relationship type) and type of social support received (material and emotional). In analyzing the data, I dichotomized the relationship types into either family or non-family, received social support as either material or emotional, and then classified the level of emotional closeness between the interviewee and each of the people within their network. The results indicate a relationship between closeness and material support, as well as a relationship between type of relationship (family or non-family) and material support; however, there is no significant association with emotional support. The results also reveal that age is a factor in determining type of support received, as the data shows older peers of children tended to give more material support while younger peers were more likely to give more emotional support.

INTRODUCTION

Natural disasters affect entire populations, including children. However, in the aftermath of disaster, children are often overlooked and pushed aside as adults deal with the larger and more important matters at hand. Children are seen by adults as resilient and able to quickly bounce back from anything. They are viewed as being too young to be affected. However, children are impacted just as much as, if not more than, adults. Children may not know how to use the resources, such as social networks, they may have at their disposal. They are instead often left to cope by themselves leading to possibly severe behavioral and mental health, lasting for years after the event.

There is an increasing interest in researching social networks in regards to disaster recovery; however, there has not been as much attention given to children's networks. This study examines the relationship between personal networks and types of social support received by young women who were children when they experienced

the 1999 landslides in Teziutlán in the state of Puebla in Mexico.

LITERATURE REVIEW

To provide a framework for my study of social support for children in disaster settings, my literature review first discusses previously conducted research on children and social support in normal settings, and then examines children and social support in disaster settings. It is essential to first define social support. In the article "Social Support Mobilization & Deterioration after Mexico's 1999 Flood" the authors defined social support, as "…social interactions that provide individuals with actual assistance and embed them into a web of social relationships perceived to be loving, caring, and readily available in times of need" (Norris et al. 2005:16). In coping with life's stressors including natural disasters, children rely on these webs of social relationships and the support offered through them.

Children and Social Support

Much of the research conducted on children and social support is about the important effect social support has on a child's psychosocial development (Bryant 1994) as well as physical and mental health (Kana'iaupuni et al. 2005; Baker et al. 2009) and other functional abilities (Wolmer et al. 2005). The social support examined in this research examines the web of social relations referred to by Norris, et al (2005).

Some of the factors examined by researchers interested in children's social support include relationship type, closeness, and generational differences. These factors are seen as having the greatest potential to affect the type and level of social support offered and received within children's personal networks. Family relationships are particularly important within the child's network, as family members typically are providers of important resources including emotional and financial support (Kana'iaupuni et al. 2005). Children's peers

within their own age group are equally important, especially in regards to emotional support. The level of closeness within these relationships is also imperative in regards to the tightness of the network and the level of support received. Oswald et al. (1994) discuss social support among peers of children, focusing on the closeness of their relationship with the assumption that the degree of closeness in a child's relationship determines specific behaviors, including offering support. He concluded that the closer the relationship (e.g. best friend versus playmate) determines a higher level of support including protection against ridiculing peers, encouragement in case of sadness, and others.

In my study, I also examine the factors of relationship type and closeness studied by other researchers; however, I also examine the factor of age, which proved to be a determining point as same-age peers were found to have given more emotional support while older adults gave more material.

Children and Social Support in Disaster Settings

Considerable research has been conducted on adults in disaster settings, but much less research has focused on children. Prinstein and colleagues studied children's coping assistance after natural disasters. Their findings indicated that children embedded in strong and supportive social ties are better equipped and more apt to cope well with stressful or traumatic situations than are children without those supportive networks (Prinstein et al. 1996). In their study, three different methods of coping assistance (emotional processing, reinstitution of familiar roles and routines, and distraction) were examined as well as three different groups (family, teachers and friends.) The results found that for emotional processing, most support was received by friends, while the parents most frequently gave support through the last two methods. As I did not measure coping in my study, I

was more interested in the types of coping assistance and their association with various relationships. This study focuses on the type of relationship the child has with the person giving emotional support, including age as a variable, although it does not provide information on the levels of closeness between the child and those giving support. This study also excellently examines types of emotional support, which leads us to ask about the material aspect, including how and from whom a child receives material support in the wake of a disaster.

Belfer (2006) also studied child care and support after natural disasters, using the 2004 Southeast Asia tsunami as a case study. Recognizing the unique needs of children and adolescents, Belfer outlined various methods of providing support that are necessary to the child's mental health, emphasizing the disabling affects and impacts of losing members of the child's personal network, not only on the child, but also on the community at large. Belfer specifically discusses the importance of support from family and kin groups. To round out our understanding of the role of relationship type in terms of social support, I looked at other key aspects of supporting children in the wake of disaster, such as material support, as well as looking at support received from non-kin sources.

The focus of this manuscript concerns how social network content (i.e., type of people in one's network) affects the level and type of support given to a person. Of particular interest is from where children received emotional support, and from where they received material support, which is not commonly researched. I was also interested in assessing how the source and type of support changed over a ten year period as the children became young adults.

SITE

The fieldwork for my research was conducted in the cool and rainy colonia (neighborhood) of Lomas de Ayotzingo, located on the outskirts of the hillside city of Teziutlán in the northern mountains of the state of Puebla in Mexico. The city of Teziutlán is a factory town and one of the biggest producers of blue jeans in the world. Of those who work in this industry, about half work in the factories, their hands practically dyed blue with the indigo. The other half of the workers (usually women) work from their homes, cutting loose strings or sewing on buttons, and are paid by the piece. The downtown area of Teziutlán is bustling with people who come in from the surrounding colonias—to work and/or shop. Teziutlán is located in the mountains, so the climate is rather cool. It also receives a large amount of rainfall throughout the year. This region supposedly has two seasons: wet and dry, however many residents joke that they are really wet and wetter.

In October of 1999, this region experienced devastating floods and landslides as a result of several days of unrelenting rain. In fact, in just a two day period over October 4th and 5th, Teziutlán received the same amount of rainfall that they usually receive over a gradual six-month period (Olazo Garcia 2000). This caused tremendous damage in Teziutlán and in many of the surrounding villages that were built on mountainous terrain and unstable slopes. More than 400 people died and at least 200,000 people were left homeless in eastern Mexico as a result of the landslides and flooding, and majority of those were in Teziutlán (Norris 2005). However, these numbers do not include those who were never found or recovered among the destruction. Many people lost everything, including family members. As many of my informants recollected their different experiences, they all agreed that it was an experience that is impossible to forget.

The colonia of Ayotzingo was built by the government as a location for residents from the various neighborhoods in Teziutlán

who had lost their homes, felt in danger after the disaster, or who could not afford to rebuild or purchase a new home elsewhere. In the beginning, it consisted of basic cinder block houses, no electricity or running water, and unpaved roads. During the next two years, the government continued to support Ayotzingo by paving roads, installing electricity, plumbing, and other necessary services, and building a primary school. Since the government withdrawal in 2002, members of the Ayotzingo community continue to develop their colonia by remodeling their homes, building other schools, small shops or tienditas, and constructing a church. Over the past ten years, Ayotzingo has experienced slow, but definite material progress; however, the people of Ayotzingo are still trying to make the colonia their home. Many do not want to live there, but it is for many, their only option. Relocating to Ayotzingo was a major adjustment for everyone, and some people continue to struggle with it to this day.

Ayotzingo is a small neighborhood with a population of no more than 250 households and 1607 residents (based on a 2007 community health census) living within fourteen blocks of tightly packed-in houses and a few corner stores scattered around. There is a primary school as well as a secondary school in Ayotzingo, but to attend high school adolescents must travel outside of the colonia to another neighborhood or to Teziutlán. There is one small communal farming area as well as a small grassy area for the kids to play. However, the colonia is still rather bare; the majority of the houses have only cement walls with no insulation from the cold and wetness caused by the constant rainfall. For the duration of my fieldwork, I lived in Ayotzingo with my colleagues (a fellow student from the US conducting similar research, and the field coordinator for our advisors' study) in which we rented a small room in a house owned by a single middle-aged woman who spent

most of her time working in a factory in Teziutlán. Living among the residents, eating with them, and interacting with them on a daily basis gave me an extraordinary opportunity to not only get close to them, but also to witness their day-to-day lives within Ayotzingo, including the many hardships that this relocation has brought.

The colonia of Ayotzingo is geographically isolated from the larger city of Teziutlán, which has proven problematic. It was built by the government upon a separate hilltop on the outskirts of the city. For most, a combi (local bus/van) is the primary means of getting to town, although some people occasionally must take taxis. In the early years of its foundation, people stated that transportation was extremely difficult since roads were not fully developed and the transportation cost many people money that they did not have. The people living in Ayotzingo were also socially isolated from the larger city, including family members, old friends, and neighbors. I observed that social isolation was a major factor influencing the social networks of the young women I interviewed, causing their networks to be closed and restricted to the confines of the colonia. With the exception of the women who worked in a factory (or maquila) many women do not leave the colonia on a regular basis. Also observing and conducting research within this region, Norris et al stated: "[o]verall, isolation from, or even loss of, primary attachments was more common than not, making it quite predictable that Teziutlán survivors would find it difficult to feel reliably connected to others" (Norris 2005:17).

A typical day for residents of Ayotzingo starts with waking up at first light. Those that work in the factory wake up even earlier, as they take the combi into town to work, where they remain until nightfall. Many will run errands on their way home or stop to visit friends and relatives. Those that stay within the colonia enjoy a more relaxed, but

equally productive day. Residents will open their businesses and get to work, whether it is at a store, making and selling food, or running the small laundry service. Women tend to the house and children, all the while preparing the main afternoon meal, after which the pace slows down a bit. During this time residents will visit with one another, go into town, or simply rest.

A typical day of my younger female informants varies slightly. During the school season, they get up early to go into town for school, since the only two schools in the colonia are for lower levels. Sometimes, they will return for the main meal, or stay in town until returning home later in the evening where they help out in the house, do their homework, and socialize. However, during periods of vacation from school, or if not attending school, young women spend more time at home helping with the responsibilities of the house. They also spend a great deal of time socializing, both within and outside of Ayotzingo. In the evenings they can be found chatting online at the local internet café, or when it is not raining, socializing in the street.

As a resettlement community for people affected by the landslides, people from several different areas were brought to live together in Ayotzingo. Due to the differences in origin, people tend to stick together with those from their previous community, and do not rely on others for support. For the most part residents are pleasant to one another but tend not to form deep relationships.

Children were also affected by this relocation. Not only did they suffer loss of possessions and loved ones, they were also uprooted from everything familiar to them and relocated to a new, under-developed area where nothing was familiar. My interviews focused on female residents who were children at the time of the landslides. Many young girls interviewed stated that they suffered loss of dear friends, not because

of death, but rather due to relocation. For many of the children, relocation to Ayotzingo was a long, arduous transition. They had to make new friends. Many were delayed in their return to school and almost all of the girls I interviewed said that it took at least a year to reach a point of stability and "normalcy."

I did not have much interaction with the children of Ayotzingo; however, because they were out of school for summer vacation, I was able to observe them a bit within the colonia. They seemed to break the boundaries of non-engagement. When they are not helping out in their home, they interact with one another, forming friendships. During the rare non-rainy moments, large groups of children run through the streets chasing a make-shift soccer ball or play together on the small rusty playground, which is the only place in the colonia where grass can be seen. Most of these younger children did not experience the trauma of the landslides or relocation. They were born in Ayotzingo; it is their familiarity, their home.

METHODOLOGY
Participants and Sampling

The participants were 17 unrelated young females aged 17-33 living in the resettlement colonia of Ayotzingo that had experienced the 1999 disaster and subsequent relocation. My actual sample had an age range only slightly larger than my desired sample. My interest was in talking with women who had been 7-17 years old when the landslides occurred. Since this research took place in 2010, the women at the time of my research would be approximately 18-27 years old, which was my intended sample. I chose the ages 7-17 (at the time of the landslides) because their memories would have been stronger than those of smaller children under the age of seven, whose brains and memories are less developed.

In selecting participants, I used various sampling methods including purposive, convenience, and snowball. I solicited help from older adults in the colonia that may have known young women in the appropriate age group that experienced the disaster and relocation. I also used the personal networks elicited from initial interviewees to locate other young women of the appropriate age range living in Ayotzingo. Of those solicited, seven of the twenty-eight refused, were too busy, or couldn't be contacted. Of the twenty-one I originally interviewed, seventeen were available for follow-up questions.

The majority of the women within my sample were eighteen or nineteen years of age at the time of the interview. I chose this population of young females not only because they were the most available within the colonia of Lomas de Ayotzingo, but also because it was a population easier for me to identify with, as they were of my same gender and age group. Table 1 demonstrates the variety within my sample.

The sample population represented a variety of social, economic and educational backgrounds. The majority of the young women I interviewed were in their last year of high school, but other occupations included factory worker, teacher, homemaker and street food vendor. My sample population also represented a variety of former neighborhoods in Teziutlán. My informants relocated to Ayotzingo after the disaster from the following neighborhoods: Aurora, Francia, Xoloco, Aire Libre, Chignaulingo, Huehuemico, Avila Camacho, Colonia Juarez, La Legua, El Estadio, Campo Verde, and Fresnillo. The young women in my sample also come from varying family sizes, which is a possible factor in their support networks. The range of family sizes includes three to ten members, with a median of six people. This variance within my sample reflects the variance within Ayotzingo, which affects social ties and social support as family and neighborhood ties are critical to social support.

Participant Observation

For the duration of my fieldwork, I lived in Ayotzingo which allowed me to conduct participant observation by living, eating and interacting with the local residents on a daily basis. A typical morning was spent by waking up early and hitting the streets, greeting neighbors and chatting with people while occasionally conducting a structured

Table 1. Demographic Description of Sample

Participant	Age	Neighborhood of Origin	Family Size	Occupation
1	18	Aurora	10	Student
2	18	Francia	5	Student
3	19	Xoloco	7	Home Maker
4	19	AireLibre	7	Student
5	19	Chignaulingo	6	Student
6	22	Huehuemico	4	Student
7	17	Avila Camacho	4	Student
8	30	Avila Camacho	6	Home Maker
9	18	Juarez	4	Student
10	24	La Legua	7	Home Maker
11	27	Aurora	6	Home Maker
12	18	Avila Camacho	4	Student
13	18	Xoloco	9	Food Service
14	26	Campo Verde	6	Factory Worker
15	20	Estadio	5	Student
16	18	Fresnillo	3	Student

interview (see description below), though most of the structured interviews occurred in the afternoon. At the main meal around 2 p.m., my two colleagues and I ate with an older woman and her grandchildren, chatting and getting extra information and explanation about both the disaster and the social and political nature of Ayotzingo. Afternoons were spent conducting, or attempting to get, structured interviews and typing up field-notes. On the occasions when we had no interviews, we took the bus into Teziutlán or visited other neighborhoods that had been affected by the 1999 landslides. In the evening we either went to the local internet café, which was one of the hot spots for the young people of the colonia, or enjoyed a coffee and snack with various members of the community.

I gained a lot of insight and information through my participant observation in Ayotzingo. Upon arrival in the colonia, my colleagues and I familiarized ourselves with the area and people. I was able to observe the children in the colonia and their daily activities and interactions. We conversed often with the woman from who we rented our room when she returned at night from work. I received a great deal of background and social information from the woman with whom we ate on a daily basis, as she became one of my key informants. Not only did she serve as a source of reference for the disaster and Ayotzingo, but I was also able to interact with and observe her grandchildren, their personal relationships, and the social support available to them. I also gained quite a bit of insight and background information through accompanying my colleague on her interviews with older women and with the authority figures of Ayotzingo.

Structured Interview

All interviews were conducted in Spanish, usually in the participants' homes. Often during the day, many were not home, so late afternoons and Sundays were the best times to interview the young women. My structured interviews consisted of two parts, spread out over two separate interviews.

The first interview with each woman lasted approximately one hour. In this part, I collected qualitative data using a questionnaire of eight multi-part questions in which they described their situation before, during, and after the disaster, as well as how they dealt with the relocation and the aftermath of the landslides, plus what they learned from their experience and how they moved on afterward. (All questionnaires available from the author or faculty mentor on request.)

The second part of the structured interview involved collecting more data about their social support networks. This second interview lasted thirty to forty-five minutes. With each participant, I asked them to recall their personal network from 1999 at the time of the disaster, as well as provide a separate current personal network from 2010.

In the 1999 network, I asked for the names of ten people of their age with whom they associated most immediately following the landslides. This resulted in the 17 interviewees naming a total of 170 people with varying demographics and different ways of offering support. I asked about the type of relationship, how emotionally close they were, where they lived, and whether they had received any type of support (material or emotional) from that person during the time period of the disaster and relocation. Then I recorded the connections within the personal network by asking how much they felt each of the ten people mentioned interacted with one another during the period following the landslides. The scale used for estimating the level of interactions between people in their network was: a lot, a little, badly, or not at all. In terms of the total possible ties that would be possible between the 10 people in each network, it is 45 of

(10*10-10)/2 because it is assumed that if A interacts with B, then B interacts with A; there is no directionality and thus the other half of the NxN matrix is not needed. In total, across all 17 interviews, there could have been 765 ties, or 17*45).

With the personal network for 2010, I used the same format and questions as stated above; however, I only asked for the names of five people in order to decrease respondent burden, giving me half as many network individuals and network attributes. I asked the same questions from the first network with this second contemporary set of relationships. I was hoping to observe variation in the degree to which types of relationships and levels of social support from their 1999 personal networks continued into the 2010 personal networks.

After collecting the personal networks, I followed up on the two different types of social support (material and emotional) that was received from their networks. If they had answered "yes" to having received a type of support from a specific person from their networks, I asked them specifically in what way they were supported and for what time period they had received that support.

Informal Interviews

My informal interviews were usually during meal times or as a result of casual interaction on the street or a bus. In conversation, I would ask about their experience in the landslides and who, if anyone, had helped them. Informal interviews were normally with older female adults. Occasionally they were the result of accompanying my colleague on her interviews, though occasionally interactions outside on the street or during meals. Once the residents of the community understood my purpose for being there, most were willing to talk and share their stories and perspectives. Since my focus was on younger women, I did not use the information in my data analysis, but it did serve as contextual information regarding the landslides, the immediate period of relocation to Ayotzingo, and the subsequent years of hardships and adjusting.

Measures and Variables

The overarching goal of the analysis was to look at how network content predicts levels of support with the context of the 1999 landslides and resettlement in Teziutlán.

Attributes of Interviewee: As potential correlates or independent predictors of received social support, I gathered the following information about each person I interviewed: occupation since it gives an idea of a person's wealth and even type of work network; previous residence since it gives an idea of wealth because of neighborhood; family size because more family could give more support; and gender because women and men can receive different levels of support, with most studies concluding that women typically better utilize relationships and therefore are more likely to receive support in time of need than are men (e.g. Taylor et al. 1988; Beggs et al. 1996). However, in Burke's (2010) study on social support after the 2006 volcanic eruption in Ecuador resulted in a different conclusion that men reported having received support more than did women.

Network Structure: As potential independent predictors of received social support, I included a couple of measures of social network structure, which refers to the patterning of relationships for any given network. When I asked the informants for the names of 10 people and then whether each of those 10 people knew one another, this produced a personal network—or a network from the point of view of someone about people in their life—that has structure as characterized by how dense or sparse or connected it is, etc. I used two measures of structure of their individual personal networks: centralization of the network because this would give me a sense to which an informant's network revolved

around one or a couple of key people; and number of components (disconnected individuals or subgroups) because this would give me an idea of how hard it might be to move support through a network.

Network Content: There are three independent variables that I chose to focus on in this study relating to network content. Network content refers to the nature of the people in a network, such as demographic characteristics or the nature of their relationships with others. The three variables were the age of people the interviewee named as part of their personal network because I expected age to matter for youth networks, the closeness the interviewee felt to each of the people they named as part of their personal network (0=none, 1=some, 2=a lot) since I expected the strength of the relationship to predict social support provided, and the relationship with each of the people they named as part of their personal network—coded as family versus non-family—since I expected family to provide more social support than did not-family.

Received Support: The dependent variables focused on in this study were the two types of support received by the interviewee: material support and emotional support. After my interviewee had named ten people, of each one I asked whether she had received material support (e.g.: money, food, lodging, clothing, toys, etc) or emotional support (e.g.: kind words, encouragement, someone to talk to and/or share experiences, etc). Received emotional support and received material support (from network member to interviewee) were elicited as present/absent (yes = 1, no = 0). In addition, the type and duration of social support were investigated more in depth through follow-up open-ended questions, including to whom they went for help, what specific support they were given, and what their general experience was during the period of landslides and relocation.

Quantitative Data Analysis

In analyzing the quantitative data I ran several statistical analyses using SPSS software in order to find significant correlations between the type of received support (material or emotional) and the independent variables. This included several descriptive analyses, means tests (ANOVA), and means-ranking tests (Kruskal Wallis). I tested several different variables including level of closeness, age, relationship type, occupation, previous residence, family size, gender, centralization of the network, and number of components (disconnected individuals or subgroups) of the network as correlates of social support. The resulting significant correlations were age, relationship type, and level of closeness.

Qualitative Data Analysis

In analyzing the qualitative data I gathered, I first used Microsoft Excel to combine the data from the structured interviews, according to the organization of the questionnaire. I was then able to conduct textual analysis of the data, in which I examined the responses of each of my interviewees and searched for their intended meaning. I individually analyzed each of the quotes given as responses to the questions, with my primary intention being to draw out the unstated emotion. In this analysis I aligned the quoted text with side notes I had made during the interview about facial expressions, tone of voice, and other forms of body language. In my textual analysis I also compared the individual quotes to the responses of the other participants for each question in order to determine what the norm was, if one existed. This analysis also provided me with an effective means to draw out specific quotes from the interviews to apply to the quantitative data and the findings that resulted from the quantitative analysis.

Some themes of analysis that I focused on from the qualitative data include people/relationships mentioned that my

informants had gone to for support as children (e.g. immediate family, other relatives, friends, teachers, etc), ways in which they felt they were supported (materially or emotionally), as well as their description of their experience of the disaster and period of relocation and restoration. I chose these specific points of analysis not only because they provided supplementary information to the quantitative data, but also because it allowed me to compare and contrast the experiences and social support networks of young females in Ayotzingo and develop a generalized understanding of this specific gender and age group. According to Schensul (1999), personal network research and the information it provides is helpful in quickly establishing the important traits (e.g. network size, closeness and duration of relationships) of typical networks in a given culture and/or age or gender group. It is further explained that the traits of the typical networks can then be related to other characteristics associated with people's lives in that culture (e.g. level of social support, quality of life, success in personal relationships, etc).

RESULTS AND DISCUSSION

My results for this manuscript cover the relationship between the dependent variables of received emotional and material support and the independent variables of age, relationship type, and level of closeness. I present each of the independent variables and discuss the correlation (if present) with the dependent variables.

Age and Received Support

While age was not originally a variable I was searching for in terms of received social support, it seemed to be a factor as I analyzed my qualitative data. According to the interviewees, they received emotional support mostly from people their own age, while adults were more focused on providing them with material needs. One young woman stated, "Adults didn't pay much attention to children due to all of the problems they already had to deal with." Another woman, while talking about only receiving emotional support from peers of her own age group stated, "I didn't receive emotional support from anyone else because they were all older."

To analyze this variable, I ran a means test (ANOVA) using the total number of network members provided by the 17 interviewees. I first removed the five oldest people, between the ages of 39 and 60 (thus, n=165) because it would have skewed the results and because I really was not looking for peers older than 39 years of age. In soliciting the personal networks, I had asked my informants to name people within their own age group, and some people did not. I interviewed women who were 18 years or younger at the time of the disaster, so eleven years later the oldest interviewee would be 29. I then allowed a 10-year range in either direction for the peer group, so anyone older than 38 on the list was removed from the data set for analysis because I am more interested in the peers of these women/children.

The results as displayed in Table 2

Table 2. Age of Alters Giving Support (1999)

Type of Support (n=165)	Mean Age of Alters Not Giving Support	Mean Age of Alters Giving Support
Material (p=.005)	12	16
Emotional (p=.019)	16	12

supported what was emerging from my semi-structured interviews and unstructured interactions in the community. The relationship between these two variables is clear, showing that 12 was the average age of peers who gave emotional support, and a slightly older average age of 16 for peers giving material support.

This result is important, especially when researching children's mental health after disasters. It is first necessary to know where children go for emotional support before one can begin to implement strategies for emotional coping. Children and adolescents in Mexico looked to their parents and older adults for emotional support; however, due to a variety of factors, they sought and found their emotional support more often with people their own age, perhaps because they could better relate to and disclose feelings and worries and because adults were more focused on making ends meet and getting families back on their feet. Many of my informants stressed how they engaged in activities that allowed them to take their minds off the disaster, which they did with other children who were also trying to do the same thing. Others also mentioned sharing memories and experiences with friends and cousins of their own age, so that they could know that there were others going through the exact same hardships and difficulties.

However, due to their young age, these children and adolescents were unable to support each other materially. They therefore looked to parents and older adults, of working age, to provide these needs. While they did occasionally report receiving material support from people within their age group, this support most likely came from the parents of that reported person.

Relationship Type and Received Support

In soliciting the interviewees' social networks, I asked for their specific relationship to each of the people listed. I dichotomized this information into either family or non-family relationships. During the semi-structured qualitative portion of the interview, most of the young women stated that they looked only to their families for support. One woman said "family during that time was the most important. We stuck together and helped each other. We didn't have anyone else." Many others echoed similar sentiments. This included both forms of support; material support in the form of food, shelter, clothing, and money; and emotional support in the form of soothing words, explanation, encouragement, and distraction. For example, the majority of the young women I interviewed recollected hearing the words "everything is going to be okay." Others even got together with others their own age to share their individual experiences as a form of emotional support.

However, in gathering the data from their social networks, each of the seventeen young women listed at least one non-family relationship, and a couple of them listed all non-family relations and reported receiving one or both types of support from them. The ties listed in the personal networks consisted of approximately half familial ties (44%) and half non-familial ties (56%). I asked that interviewees "please name 10 people of your age with whom you associated most immediately following the landslides," so people were not limited to naming family, nor were they limited to naming people who had provided support of some kind.

Based on 170 ties for 1999 (17 people that named 10 individuals each) and 82 ties for 2010 (17 people that named 5 individuals each), I ran a Kruskal Wallis test, or a means-ranking test, on whether the level of social support offered through these ties differed based on the dichotomized relationship type (family vs. non-family). In Table 3, I show the average levels of support from 0-1 rather than means-ranking for family/

Table 3. Relationship Type and Received Support (1999 / 2010)

Type of Relationship (n=170 / 82)	Received Material Support		Received Emotional Support	
	1999 (p=.005)	**2010** (p<.001)	**1999** (p=.144)	**2010** (p=.918)
Family (44% / 18%)	0.4	0.5	0.7	0.7
Non-Family (56% / 82%)	0.2	0.1	0.8	0.8

non-family, but then provide Kruskal Wallis levels of significance for 1999 and for 2010.

For material support, the type of relationship was significant in both 1999 (p=.005) and 2010 (p<.001), however emotional support did not correlate with relationship type for either year. The results also indicate that received material support was higher among family-relationships for the present and the recalled past of a decade ago.

There exists a significant relationship between relationship type and material support, with familial relationships providing the most support. This relationship is exemplified in a quote by one of my informants as she stated "My cousins helped my family. They brought us food, toys and clean clothes, and gave us a place to live. One cousin…even gave us money." Other informants echo this pattern, reporting to have received material support from family members including, but not limited to, money, shelter, food, medicine, clothes, toys, and help in finding a job. Therefore, although my informants listed a larger percentage of non-family ties within their personal networks, it was from their family ties and bonds that they received the most material support. However, although received support among familial relationships was higher than in non-familial ties, the average levels of received support were not extremely high, the highest being only .5 on a scale of 0-1. This is most likely due to the fact that the people listed within the personal networks were also enduring the same hardships. One of my informants stated "It was difficult to get help from anyone because we were all in the same situation."

However, average levels of received emotional support were high, with an average of .7 among familial relationships and a slightly higher average of .8 with non-family relationships. The lack of a significant correlation between relationship type and emotional support simply suggests that during the time of disaster as well as currently, these young women are receiving emotional support from a variety of sources. One informant stated "With my family, I always found the emotional support I needed. I felt safe with them and everyone around me." However, while talking about returning to school, another informant describes receiving her emotional support from a different source: "when I returned to school, I began to receive emotional support from my friends."

This result is important in understanding the social networks of young girls and women in Mexico, especially in times of disaster. Kinship and the expected obligations associated with familial ties are extremely important among Mexicans (Norris 2005). Each of my interviewees stressed the importance and value of family and how they looked to one another in time of need. Therefore, for these young women who suffered this disaster as children, it is important to have networks containing members of their kin group, and to be able to rely on them for material support.

Closeness and Received Support

Finally, I looked at the variable of closeness. In soliciting personal networks, I asked how close they felt to each of the people they named, asking them to choose between "not very," "somewhat," and "very." I originally hypothesized that this variable would have a significant relationship between both types of received support.

I ran a Kruskal-Wallis test on whether the level of support offered through these 170 ties (1999) and 82 ties (2010) differed based on levels of closeness, or how close the interviewee felt to each of the people they named. In Table 4, I show the average level of support from 0-1 and the levels of significance for 1999 and 2010.

The relationship between material support and closeness was significant for both 1999 (p=.003) and the present of 2010 (p<.001). There is also a linear relationship between receiving material support and how close the interviewee felt to the person they listed in both 1999 and 2010. For example, one of my informants stated "I did not receive material support from anyone else because we were not very close." However, this is not the case for emotional support when the children were little in 1999 (p=.346), but as adults (in 2010) there is a strong association between emotional support and closeness (p<.001).

Therefore, closeness is associated with received material support both in 1999 and in the present in that people either feel close to those who have supported them, or they are helped by those with whom they have close relationships. However, as was the case with the variable of relationship type, the average reported levels of received material support are extremely low. Although the level of closeness did make a major difference in the level of received material support, people simply did not have enough to give.

This variable of closeness is only associated with received emotional support in 2010. This means that as children, these young girls are receiving emotional support regardless of how tight the bond is; but as adults, they are choosing close relationships for receiving emotional support. As displayed in the table, the average reports of received emotional support in 1999 were equally high (.7) among the varying degrees of closeness within the various relationships listed. Though in the 2010 data set where there occurs a correlation, the average levels of received emotional support are higher among the relationships claimed to be very close. An interesting point for further research would be to investigate why the average levels were higher among relationships claimed to be not very close, than relationships claimed to be quite close.

In addition, as kinship ties are important in whether young women receive material

Table 4. Closeness and Received Support (1999 / 2010)

How close are they to you? (n=170 / 82)	Received Material Support		Received Emotional Support	
	1999 (p=.003)	2010 (p<.001)	1999 (p=.346)	2010 (p<.001)
Not very (15% / 14%)	0.1	0.1	0.7	0.7
Somewhat (26% / 18%)	0.2	0	0.7	0.5
Very (59% / 68%)	0.3	0.3	0.7	0.8
Average (100% / 100%)	0.3	0.2	0.7	0.8

support in Mexico, having tight, close relationships, whether with kin or non-kin, is equally important for receiving material support.

CONCLUSION

To summarize my results, age determined the type of support given as peers gave more emotional support and adults more material support. Relationship type determined that it was the family relationships that gave more material support, while emotional support had no significant relationship to this variable. And finally, closer relationships provided more material support across the board, while closer relationships did not predict emotional support for children, but did once those children became adults.

One major conclusion that can be drawn from these results is a difference between emotional and material support, in that emotional support is not well-predicted for children (with the exception of the variable of age), while material support is. As adults, people choose with whom they want to be close and are presumably more readily accepting of both material and emotional support. Family is more likely to help with material support than are non-family, but are not more likely to provide emotional support.

Another conclusion is that average levels of reported emotional support were repeatedly higher than the average levels of reported material support. Natural disasters like the landslides that occurred in Teziutlán do not only affect individuals, but rather the entire community. While some were affected more than others, the whole region suffered loss, greatly limiting their ability to provide for themselves, much less help others materially. Instead, the majority had to look to the government for material needs, which were provided in shelters and open to whoever needed them. However, the people of Teziutlán during this time helped each other however they were able,

usually in the form of emotional support. It may therefore be concluded that while important, personal networks that are a bit wider to include people from different regions would perhaps be more helpful in terms of receiving social support, especially material support.

This study reaffirms the research that family relationships are very important in a child's network, especially in the wake of disaster. However, my research adds that non-kin relationships within a child's network is also important, especially with peers within their own age group. This study also reaffirms previous studies in that peers give more emotional support and that close, meaningful relationships as adults also provide more emotional support. This research also adds to the literature in that all three of these variables (age, relationship type, and closeness) predict material support, which is equally important in times of loss and disaster. One difference that I found between my study and existing research is that the factor of closeness in a relationship is not necessarily a deciding factor of receiving or not receiving emotional support; however this may be amounted to the difference between a disaster versus a normal set of circumstances.

This study can be useful for governments to bear in mind when rebuilding after disasters. People's social networks are critical to the type and amount of support they will receive. It is important to look at the resettlement community of Ayotzingo as an example of a socially non-unified community and to consider that perhaps people from a variety of neighborhoods may not want to live with one another and that once resettled, they may feel isolated and alone and not receiving the social support they need. Future points of further examination may include a stronger emphasis on the structure of the personal networks and the influences that has on received social support, including people with wider personal

networks able to receive outside support from those unaffected network members. It would also be enlightening to study and compare the results from a differing age and/or gender group.

Structured Interview Questionnaire and Personal Network Sheets are available upon request from the author or faculty mentor.

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