Abstract

The primary focus of this study relates to the various types of informal support received by people who have been relocated due to a disaster, in this case in a town near Mt. Tungurahua, Ecuador, as a result of its eruptions in 2006. More specifically, since it is well-known that family plays the strongest role in providing informal types of support, I chose to focus on the settings in which non-familial informal support was provided in this time of need, while controlling for other factors such as gender and relationship type. The types of support studied were grouped into four categories: tangible, informational, emotional, and job-opportunity. In conducting interviews designed to highlight these instances of non-familial support, it was then possible to note patterns the respondents shared. The results indicate that acquaintances considered to be ‘friends’ or ‘neighbors’ are the most likely non-relatives to offer support, and that emotional support was the most common form of informal support received by respondents, followed by informational. Results also suggest that males, contrary to other similar studies, were more responsible for both receiving and reciprocating these various types of support.

Introduction

This study concerns the various types of non-institutional and non-familial support received by victims of a natural disaster—these people have been relocated to a small town, Penipe, near Mt. Tungurahua as a result of its eruptions in 2006. In many disaster settings, the government and other specialized organizations are available for various forms of assistance. This type of help—institutional or formal— is responsible for supplying considerable tangible, or material, aid to many victims of disaster, but does not provide all the forms of support that people need. More specifically, research suggests that family often plays a strong role in providing the other forms of support not provided by institutions. However, beyond the support of family, less is known systematically about the importance of non-family in supporting in disaster settings. Thus, it is the goal of this study to focus on non-kin social support in a time of need. Perhaps by reviewing circumstances in which informal support is most commonly utilized, institutional methods could be improved to better handle cases similar to those of Penipe. Factors such as relationship type and gender were also considered to assess the possible influences they bear on support results in an emergency situation. Utilizing both closed and open-ended questions in my interviews with 26 people, I was able to analyze circumstances under which non-familial, informal support is provided to disaster victims.

Incidence and Importance of Informal Support
Ample research has been conducted in the fields of both formal and informal types of social support. Many of these studies are aimed at evaluating under which circumstances one can expect to receive or give support. In a broad study conducted on stress and support in various situations, Unger and Powell (1980:567) conclude that “When families needed advice in emergencies, they typically went to relatives, the local druggist, bartender, or priest. Formal agencies were not utilized by families in trouble.” Unger and Powell cite some instances in which formal agencies were relied upon for support following an emergency, but the overall trend tended to be that “informal sources were utilized just as often, or more frequently, than agencies” (1980:568). A number of informal venues were listed as sources of informal support in Unger and Powell’s report, including personal ties to relatives, friends, pastors, teachers, and physicians, although some of these might be considered formal support if serving in their official capacity on behalf of an institution. Formal support organizations have had a large impact on the resettlement in my study site of Penipe. These forms of support are relatively easily measured. Less easy to measure is support provided by friends and neighbors. I investigated these more personal, or informal, instances of support in order to understand non-kin sources of informal assistance in recovery following disaster.

What are the instances, then, in which people tend to receive non-family informal support? Degree of urbanization is one factor. Scott and Roberto (1987) conducted research on support involving older adults and concluded that persons living in rural areas are more likely to both give and receive informal support compared to those living in urban areas (448). This suggests that populations living outside the city depend more upon personal relationships than institutions for help. As Penipe is a very small community, I considered it a rural area and so I expected to find ample situations in which support was exchanged on a more personal/informal basis. Because transportation in the area is limited to those who can handle it physically and afford it, distance (and thus neighbors) became a relevant aspect to consider for these sparsely scattered populations in central Andean Ecuador.

It makes sense that those situated farther away would be less dependable than the people living in closer proximity in the event of an emergency, unless longer-term assistance is offered. However, studies involving support and distance are limited. One study conducted in a rural area of Thailand showed that construction of schools and temples linked villages and citizens in ways that would have otherwise not existed because of the relatively long distances (Faust et. al. 2000). Events involving the exchange of machinery and/or labor, such as tractor sharing, happened over shorter distances, thus strengthening more proximate social networks. In a study conducted on distance and types of support pre-internet era, ‘tangible’ and ‘emotional’ support were most often received from those residing within close proximity to the respondent—in this particular case, within a 10-mile radius (Mok and Wellman 2007). I expect to find similar results due to the lack of telecommunication devices throughout the community, such as computers and internet.
A study conducted on African-American social networks for cases of need throughout the United States focused on a number of different variables that determined the types of informal support givers (Taylor et al. 1998). Specifically, as family members are more commonly situated in more remote areas from one another, non-kin instances of support (20.6%) increases in a time of need (Taylor 1998). Although family and kin may still be the more preferred choice overall, friends and neighbors are the more likely candidates in situations where relatives live further than is comfortable to travel on a regular basis. In these instances, neighbors and friends become the best alternatives for help in an emergency situation. Common characteristics, as well, do play a role not only in strengthening social ties but in increasing likelihood of receiving support.

Demographics are another important factor in disaster and informal support studies. By analyzing characteristics of African Americans, such as marital status, gender, age, and location, Taylor et al. (1988) studied the contributions of both relatives and non-relatives in a time of need. Those authors discovered that “Both family and non-kin were found to be important sources of emergency assistance” and concluded that adults ages 25 – 45 report the highest instances in which friends would be of service in a time of need. In the same study, they reported that black seniors without children rely on non-relatives not only for maintaining social networks, but to replace the role a child would presumably fill. In these instances, non-kin become the most likely candidates for support following a disastrous event.

Gender also seems to be a factor that limits or creates opportunities for informal support following a unexpected destructive event. A study conducted by Drabek (1986) in Topeka, Kansas, analyzed the influences of relatives and non-kin on support patterns after the touch-down of a large Tornado. It appears that in response to the disaster, men were more inclined than women to help individuals outside their families (Drabek 1986), but were generally less likely to receive support from others (Taylor et al. 1988). According to the same study, women are much more likely than men to utilize a range of relationships to ensure support in a time of need. Beggs et al. (1996:207) also report this trend, noting that following Hurricane Andrew, “individuals who are embedded in networks with high proportions of men should have better access to informal recovery support.” In their findings, Beggs and colleagues conclude that although men were more likely to offer aid to acquaintances, they were less likely to receive support than women.

Finally, concerning the type of support that people receive in post-disaster settings, Kaniasty & Norris (2000) found that Caucasian, African American and Hispanic Americans in the US were equally comfortable asking for emotional and informational support, but somewhat less so for tangible support. In terms of receiving support, emotional support was most common, followed by informational support, and then tangible support. No comparable study has been done on support in the form of work opportunity in a disaster setting.
Hypotheses

In order to account for these findings on informal support, I formulated hypotheses to test in Penipe, Tungurahua Province, Ecuador. To begin, I expected to have many well-documented instances of varied support to work with utilizing socio-demographic data from an on-going project in the same area. By using these data I could better narrow my sample-size and create a group of qualified respondents with whom to conduct this project. Thus, I expect that, from within this sample, people who experienced non-familial informal support since the 2006 eruptions of Mt. Tungurahua would:

• have experienced emotional support as the most common type of support
• be helped mostly by males
• be females with dependent children.

Methodology

Measures: To capture variation in received informal support, I considered numerous types of support a person can receive, and then categorized these into four broad groups: tangible, emotional, informational, and work support. The first three are commonly identified in research on social support (e.g., Kaniasty and Norris 2000), and the last was a specific kind of support commonly mentioned while I was in the field so I felt it would be important to include. Tangible or instrumental support is commonly considered the giving/receiving of any physical item or assistance that can be used to better one’s situation, and includes unpaid labor, food and shelter in addition to other materials. Emotional support refers to cases in which the respondent confides within another person for the purpose of self-relief or problem solving. Informational support is defined as an instance in which the respondent has an opportunity to become more knowledgeable of an event or of recovery resources by means of verbal and/or written communication. Work support includes the exchange of physical labor for monetary compensation, i.e., giving of finding someone a job whether short-term or long-term. I developed a questionnaire (see Appendix A) and asked people whether they received each of these kinds of support, from whom, and how often. I also included a hypothetical situation at the end of the interview to give the respondent a chance to give an example of a non-relative that they could rely on for day to day support (for males—borrowing work tools; and for females—seeking child care).

Nature of the sample: The sampling frame consisted of an already existing random sample of 150 households taken from the several hundred pre-existing and resettled households in Penipe. Requirements for participation were as follows:

1. Must be 18 years of age or older

2. Must have already completed the survey interview from the on-going NSF project in Penipe (Collaborative Research: Social Networks in Chronic Disasters – Exposure, Evacuation, and Resettlement; PIs-Eric Jones, Linda Whiteford, Arthur Murphy,
Graham Tobin), and must have reported receiving at least one type of informal support from non-kin

3. Must agree to be tape recorded for the interview, because my Spanish is an intermediate level and also because data may be lost in interviews due to speed of speech.

Once I had conducted pilot tests, it was clear that lack of trust in non-family a major hurdle in receiving non-familial support, which suggested it might by difficult to obtain sufficient cases for this study. Many of the respondents admitted they don’t receive nor welcome help from anyone whom they are not related. I decided to eliminate from the sample people whom had received no informal help from non-kin. This information was available from the on-going project already underway in the same area. Thus, I reviewed the survey interviews from the larger research project and selected only people that had received some form of support from non-relatives in their post-eruption recovery process. My next complication dealt with trust yet again. Often times, informants were not comfortable relying on their current neighbors for support in a time of need. In most cases, the resettled part of Penipe from which I drew my sample had complete strangers moving in next door to each other. Because trust is such an important aspect of these people’s lives, I decided to allow neighbors reported living in other areas (i.e., previous neighbors before resettlement) to be listed the same as those living within Penipe. This approach worked well and the rest of my interviews produced sufficient variation in types of informal support from non-kin.

Because I had available only one month in the field, my goal was to interview 25 people out of the 150 people previously interviewed by the larger project. I randomly selected 30 individuals that had already completed their survey with the larger project and that had also reported at least one instance of support from someone other than a relative from the overall sample of 150. Overall, I was successful in completing 26 interviews; for 25 of them, I noted one or more cases in which informal support from non-relatives following the eruptions of Mt. Tungurahua was received. One interviewee denied having receiving any type of non-familial support, despite answers given for the previous survey, thus this survey was omitted. Twelve of the 26 respondents were males and 14 were females. Ages varied from 19 to 84 years old. All of the respondents lived in Penipe, and all but one of them lived in a resettled section of the town occupied by families whose housing near the volcano put them at risk and/or families that have suffered various property losses due to eruptions and ash fall from Mt. Tungurahua in 1999 or 2006.

Conduct of interviews: Once in the field, I spent my first two weeks exploring Penipe, with special attention paid to the resettled area of the community, or New Penipe. Due to the lack of trust and relationships between neighbors in New Penipe, it was important to develop a
questionnaire that addressed this unique situation. To make-up for the probable lack of responses citing current neighbors as sources of support, I allowed for previous neighbors (neighbors from before the disaster and resettlement) to be classified the same as ‘neighbor’. Following the initial two week period, I finalized the interview questions (see Appendix A) by doing a few practice sessions of questioning three other project field workers. Although each question asked for specific information, there was flexibility to record unstructured responses that would add ethnographic understanding of the results. For each type of support I included in my questions a brief description for the interviewees including some generic examples in order to lessen the chance that a participant would confuse one type of support with another (e.g., emotional for informational).

Results

Relationship Type

New Penipe is comprised of people originating from a number of smaller villages within the Tungurahua region and, because of this, direct neighbors in New Penipe do not necessarily have strong bonds and, in some cases, actually lack mutual trust. Out of the 42 instances of support from neighbors, only 22 were from neighbors currently living in Penipe. Of those 22, six had resided in the same community from which the respondent relocated. Therefore a possible 26 of the total 42 cases of support from neighbors were more likely due to trust and the relationship itself, rather than locality.

Table 1 shows that informational and emotional support were the most common forms of support for the relationship category ‘Mix’. This mix category was composed of people who had been described as both work-mate and friend, or, more commonly, both friend and neighbor. Because every mix categorization included a friend, this exemplified the notion that relationships throughout New Penipe are dependent upon trust. In other words, as shown in Table 1, friends alone are very important sources of emotional support; however, when that strong bond with a friend is further strengthened by close proximity (neighbor) or constant interaction (work-mate), friends become even more dependable- not only for emotional but also informational support.

Table 2 presents the results of the chi square analysis of the data considering relationship type and support type. For each analysis, one relationship was compared to the collective of the rest of the relationships, and one type of support was differentiated from the all the rest of the types of support together. The differences are significant for friends vs. others (other categories all lumped together) as well as mix vs. others as being a greater source of emotional support. The mix category also provided more information vs. other kinds of support than did other relations, and workmates provided more job opportunities (as opposed to other kinds of support) than did the other relationship categories. Other categories of potential importance, but not significant at the .05 level, are tangible support from neighbors or friends and emotional support from workmates. Interestingly, the neighbor category by itself, when compared to the other
relationships together (neighbors vs. others), did not provide more of any type of informal support \( (p = .090) \), as shown in Table 2.
<table>
<thead>
<tr>
<th>Relationship Type</th>
<th>Tangible (n=12)</th>
<th>Informational (n=33)</th>
<th>Emotional (n=49)</th>
<th>Work (n=27)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neighbors</td>
<td>42%</td>
<td>15%</td>
<td>24%</td>
<td>19%</td>
</tr>
<tr>
<td>Friends</td>
<td>26%</td>
<td>45%</td>
<td>57%</td>
<td>41%</td>
</tr>
<tr>
<td>Work-mates</td>
<td>16%</td>
<td>15%</td>
<td>10%</td>
<td>37%</td>
</tr>
<tr>
<td>Mix</td>
<td>16%</td>
<td>24%</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>Other</td>
<td>0%</td>
<td>0%</td>
<td>4%</td>
<td>0%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>
TABLE 2: Chi-Square values for relationship type and support type

<table>
<thead>
<tr>
<th>Type of support vs. Relationship type</th>
<th>Friend vs. other relations</th>
<th>Neighbor vs. other relations</th>
<th>Work-mates vs. other relations</th>
<th>Mix vs. other relations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tangible vs other support</td>
<td>3.010</td>
<td>2.878</td>
<td>.004</td>
<td>.338.561</td>
</tr>
<tr>
<td>Informational vs other support</td>
<td>.198</td>
<td>1.343</td>
<td>.154</td>
<td>7.122*</td>
</tr>
<tr>
<td>Emotional vs other support</td>
<td>5.120*</td>
<td>.225</td>
<td>2.936</td>
<td>4.513</td>
</tr>
<tr>
<td>Job Opportunity vs other support</td>
<td>.895</td>
<td>.289</td>
<td>6.186*</td>
<td>.589</td>
</tr>
</tbody>
</table>

* = significant at the .05 level
Types of Support

The four types of support (job opportunity, emotional, informational, and tangible) yielded both expected and unexpected results in relation to support and relationship type. Out of the 26 interviewees, emotional support was most often reported (Table 3), as predicted by my hypothesis. Informational was the second most common form of support received, followed closely by work-related support. Tangible support was received by less than half as many interviewees as were the other three support types.
TABLE 3: Percentage who reported having received different types of support

<table>
<thead>
<tr>
<th>Type of Support</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tangible</td>
<td>27</td>
</tr>
<tr>
<td>Information</td>
<td>62</td>
</tr>
<tr>
<td>Emotional</td>
<td>81</td>
</tr>
<tr>
<td>Work</td>
<td>54</td>
</tr>
</tbody>
</table>
Frequency of Support Received

Responses were first categorized into: ‘high,’ ‘medium,’ or ‘low’ levels of support based on the reported frequencies of each type of support. If respondents answered yes to having received support, they were then asked how frequently they had received that support. Specifically, high frequency was defined as receiving support ranging anywhere between daily and weekly. Anything reported as every weekend or monthly (and everything between that time-range) was scored as medium. The response ‘when needed’ was included in the medium category. Low frequency was defined as support occurring less than once per month. These responses were graphed to better understand the relationship between type of relationship and the frequency of support. In comparing/contrasting the frequencies of instances in which support had been offered to respondent (Figure 1), emotional support rated highest.

Figure 1: Proportions of people receiving high, medium, and low frequencies of support
Emotional support was the most common type of support received by those resettled in Penipe since the volcanic eruptions. The other three types of support were most commonly offered in medium frequencies, i.e., between every weekend to every month. Percentages can be viewed below in Table 4. I further investigated the gap between frequencies of support by grouping all instances into “High” and “Low” categories. High was defined as any instance falling into a daily to monthly occurrence, and all else was considered low. As Table 5 shows, high frequencies of emotional support are much more common than are low frequencies of emotional support; high frequencies of tangible support are much less common than are low frequencies of tangible support; and reporting of both informational and work support cannot be predicted by recency of last support received.
Table 4: Proportions of people receiving high, medium and low frequencies according to type of support

<table>
<thead>
<tr>
<th>Level of Support</th>
<th>Tangible (n=12)</th>
<th>Informational (n=29)</th>
<th>Emotional (n=51)</th>
<th>Work (n=27)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIGH</td>
<td>25%</td>
<td>41%</td>
<td>59%</td>
<td>22%</td>
</tr>
<tr>
<td>MEDIUM</td>
<td>58%</td>
<td>52%</td>
<td>35%</td>
<td>48%</td>
</tr>
<tr>
<td>LOW</td>
<td>17%</td>
<td>7%</td>
<td>6%</td>
<td>30%</td>
</tr>
<tr>
<td>TOTAL:</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 5: Rates of support grouped into high and low frequencies

<table>
<thead>
<tr>
<th>Type of Support</th>
<th>HIGH</th>
<th>LOW</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tangible (n=12)</td>
<td>33%</td>
<td>67%</td>
<td>100%</td>
</tr>
<tr>
<td>Informational (n=29)</td>
<td>45%</td>
<td>55%</td>
<td>100%</td>
</tr>
<tr>
<td>Emotional (n=51)</td>
<td>75%</td>
<td>25%</td>
<td>100%</td>
</tr>
<tr>
<td>Work (n=27)</td>
<td>48%</td>
<td>52%</td>
<td>100%</td>
</tr>
</tbody>
</table>
Gender

Contrary to my hypothesis, women were actually less likely to receive support in this study. Women made up the larger part of the sample (54%), though they reported less instances of having given or received support, thus reporting lower per capita support (Table 6). In descriptive analysis of the data, men reported higher frequencies of actually having received support from people named as part of their support network. To determine the reasoning for this unexpected finding, I removed the ‘work’ column from Table 1. Perhaps males experience many more opportunities for job opportunity than women? Even with this revised analysis, men received more overall support than women. In fact, for every type of support, men experienced more aid. However, as predicted, males were also noted as offering support more frequently than females.
<table>
<thead>
<tr>
<th>Interviewee Gender</th>
<th>% of times that support was received from non-family males</th>
<th>% of times that support was received from non-family females</th>
<th>TOTAL %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men (n=12)</td>
<td>81%</td>
<td>19%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>(n=61)</td>
<td>(n=14)</td>
<td></td>
</tr>
<tr>
<td>Women (n=14)</td>
<td>40%</td>
<td>60%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>(n=18)</td>
<td>(n=27)</td>
<td></td>
</tr>
<tr>
<td>TOTAL N</td>
<td>79</td>
<td>45</td>
<td>124</td>
</tr>
</tbody>
</table>
Discussion and Conclusion

Access to informal social support varies from case to case depending on a number of different factors. Every person in this sample had been affected in one way or another by the disaster, though some were theoretically better equipped to manage an unexpected event. This was due to their social networks consisting of not only family, but also non-kin. Persons, especially men, with a variety of friends, neighbors and work-mates appeared most able to deal with the aftermath of this emergency situation.

By researching the aspects of social support—typical of peasant farmers, it may be possible to craft a more effective plan to assist communities similar to Penipe following a natural disaster. More importantly, by understanding the relationship types of those in need, we can better predict the types of support that will already be available from citizen to citizen. The lack of trust between citizens of New Penipe can be expected, for instance, as it is predicted in Asthana’s (1996) research. By creating a disaster management program that is prepared to handle obstacles such as these, formal support can be utilizing more effectively.

According to my hypothesis, I expected to see proportionately more instances of support coming from men and proportionately more instances being received by women. However, men were the overall most common receivers of support following the eruptions of Mt. Tungurahua. Though this pattern supports Drabek’s (1986) claim that help would be received most from men, it does not follow predictions that women would be the most common receivers of disaster support (Taylor et al. 1988). The other prediction, that men were the more likely venues of support, was supported. This might be because of the nature of the resettlement and/or the social norms common the the area. Men have many more opportunities than women to meet, bond, and just hang-out. Child raising is considered the job of the women of the household, as well as cooking. Throughout my experience in the field, I noticed men out of the house after dark and interacting with one another in various bars and open shops while women were expected to stay indoors. Following dinner, it is expected that women stay inside while men are more often walking about the community, visiting the local pool hall or drinking in small gathering places. I would suggest the possibility that the higher instance of support offered to men is directly related to their ability to build and maintain more social connections particularly in this resettlement setting since previous ties have been disrupted.

Also, I proposed that emotional support would be the most common type of support witnessed, as it was common in the literature. This prediction was supported. Distance as well seemed to play a role in this study, as alternate types named were rarely situated more than a comfortable day’s travel from the interviewee. Faust et al. (2000) conducted a similar study in a small village in Thailand and found that certain institutional facilities led to the relationships of individuals living more than a comfortable day’s travel apart. Most of the inhabitants of Penipe are of meager financial means and do not have private transportation. Instead, the only transportation available for a relatively low expense is the buses. They make interval runs to many of the local
villages on a daily basis, though constant stops along the way even make short distance travel quite an effort.

Although the relocation process solved the lack of housing issue, it failed to ease stresses in other areas. The lives of the relocated people were much improved due to the efforts of housing projects and various formal organizations, but it seems other aspects of the relocation have been less positive. Specifically, lack of trust was a major consequence of the relocation process. Neighbors of New Penipe were often from different communities throughout the Chimborazo province. Property loss was yet another negative effect that stemmed from not only the eruptions themselves, but from relocation as well. Transportation was necessary to get to one’s property, which presented a new expense should farmers decide to continue working what land was still productive. General dissatisfaction was also a common comment of respondents. Most interviewees stressed their desire to return back to their native communities.

Possible interventions, based on my analysis:

- A strong emphasis on increasing access of a broad range of help to females would also benefit the whole community.
- Regularly scheduled neighborhood meetings/celebrations could be a start to compensate for the lack of communication and/or trust between relocated households in new communities.

Some respondents have free time on their hands—now having no land to work or having no means of securing transportation to get to their land. Village projects could provide monetary income to those willing to work, as well as help to strengthen relationships, and even improve quality of life in newly relocated locations. These building projects would also likely help with the issue of dissatisfaction among resettled families and instill a sense of pride and belonging to the community they now live. Many communities in the Tungurahua area already meet to perform labor projects in their communities. I believe the best example of this is the traditional mingas—community projects organized by male leaders in some villages—which are so prevalent throughout the Andean region (Korovkin, 1992; Thurner, 1993; Whitten, 1969). Programs such as these can be used as models for resettlement and disaster management.

Results from this project might be useful for generating models for post-disaster relocation sites, but generalization from the data is not warranted due to the small sample size. It would also be important to note that this study was conducted using a sample that had been offered, accepted, and received the above mentioned types of aid, so overall rates of support are exaggerated—I attempted only to interview people I knew had reported in another study having received social support. Further research would be necessary to compare these results with those of the entire town of Penipe (or elsewhere), as well as add support by family members into the study to understand the relative importance of non-kin aid for each of the four types of support.
Acknowledgements

This research was supported by a Research Experience for Undergraduates supplement to NSF BCS-0751265 (EC Jones-PI, AD Murphy CoPI). I am thankful for the support in the field I received from Fabiola Juarez Guevara and AJ Faas, as well as my fellow REU researcher Audrey Schuyler. AJ Faas, Adam Boseman, and six anonymous reviewers provided invaluable comments helping clarify the meaning of the results and improving the presentation of the manuscript. Most of all, I am indebted to several dozen people in Penipe who extended themselves to me as I asked them about their struggles and their help-seeking strategies.
References Cited


Appendix A: Interview

Questionnaire used in Penipe:

Brittany Burke’s interview

INTRODUCTION TO INTERVIEWEE: Greetings, I’m a student and I’m working with AJ, Fabiola, and Eric on their study involving the social effects of the volcano. I’m studying for a smaller project for my university. I know that sometimes the family is best for helping with whatever necessity, but sometimes it’s not possible to ask family members, and I’m interested in knowing more about the moments in which other people are asked for assistance and why. Would you be able to answer a few questions for me? The interview is short, about 10 or 15 minutes long, it’s not as long as the last interview you answered.

Is it okay if I tape record this conversation? Name: ______________________________________

ASK:

A1: I see that you’ve received support (like tangible/information/emotional/work) from people whom are not relatives of yours, correct?

○ Yes  ○ No

Tangible: Loaned items, money, food, gifts, etc…

Information: That can help to better or ease your situation (Like information about organizations that can help).

Emotional: Like sharing emotions, worries, sadnesses, experiences, etc…

Work: Have offered chores of some sort to you in exchange for monetary compensation.

________________________

A2: Tangible: Has there been a time that you’ve received tangible support from someone that is not a relative of yours?

○ Yes  ○ No

A3: What was/were their name(s)? (Up to 3 names)

A4: Who is _________ to you? And where do they live? _________________________________

A5: What tangible support did ____________ give to you? And when was the last time? ________________

A6: With what frequency did ____________ give this support? And how much did they give?

A7: Have you also given tangible support to _________________? And what was it?

________________________

A8: Information: Has there been a time that you’ve received informational support from someone that is not a relative of yours?

○ Yes  ○ No

A9: What was/were their name(s)? (Up to 3 names)
A10: Who is ____________ to you? And where do they live? _______________________________
A11: What information did _______________ give to you? And when was the last time? ________________
A12: With what frequency did _____________ give this support?
A13: Have you also given informational support to ______________? And what type of information was it?
_________________________________________________________________________________________
A14: Emotion: Has there been a time that you’ve received emotional support from someone that is not a relative of yours?
  ○Yes  ○ No
A15: What was/were their name(s)? (Up to 3 names)
A16: Who is ___________ to you? And where do they live? __________________________________
A17: What emotional support did they share? ________ And when was the last time? ________________
A18: With what frequency did _______________ give this support? ________________________________
A19: Have you also given emotional support to _____________? And what was it?
_________________________________________________________________________________________
A20: Work: Has there been a time that you’ve received a job opportunity from someone that is not a relative of yours?
  ○ Yes  ○ No
A21: What was/were their name(s)? (Up to 3 names)
A22: Who is ________________ to you? And where do they live? ____________________________
A23: What type of work did they offer you? ___________________ And with what frequency did they offer you work? ______________________________________________
A24: Have you also offered a job to ______________? What type of work was it?
_________________________________________________________________________________________

Now I’m going to read a hypothetical situation…

For Males: A25: Say your family members cannot help you, from whom would you ask to borrow a pickax and/or hoe and why?
For Females: A25: Say your family members cannot help you, to whom would you go to watch your children and why?
A26: Who is ______________ to you? And where do they live? _______________________________
A27: Have you already received some things like this from ________? Like what? ___________________
A28: When was the last time? ________________________________

Observations: