

Spontaneous Volunteering During Natural Disasters

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1.0 Executive Summary

The recent spate of natural disasters across Australia has led to an outpouring of spontaneous volunteering, both formally through nonprofit and government agencies and informally through local community and online networks. Relatively little is understood about the motivations and characteristics of spontaneous volunteers.

The aims of this project were to:

- Examine the characteristics and motivations of spontaneous volunteers who respond to a crisis event;
- Illuminate the effects of spontaneous volunteering on personal, social and civic networks;
- Explicate the conditions under which sustained volunteering and other forms of civic engagement arise from spontaneous volunteering and;
- Consider the practical implications of these findings for organisations involved in coordinating volunteers both with and beyond disaster events.

Drawing on the literature and anecdotal experience of our research partner, Volunteering Qld, our specific research questions were:

1. What are the individual and network characteristics of spontaneous volunteers?
2. What motivates people's intentions to spontaneously volunteer during a disaster?
3. What personal, systemic and organisational conditions facilitate the transition from spontaneous to sustained volunteering amongst those who volunteer during a disaster?
4. What types of volunteering do spontaneous volunteers take up during a disaster and what influences these choices?
5. What is the role of social networking technologies in facilitating associational and ephemeral volunteering during a disaster?

The research was based on a mixed methods study of a sample drawn from a database of approximately 80,000 people who contacted Volunteering Qld in response to the natural disasters of 2010/11. Data collection involved surveys (N=712), semi-structured interviews (N=11) and network mapping of individual experiences (N=4). Descriptive, thematic and network analyses were applied to each data set, and comparisons between data sets were drawn to identify commonalities and contradictions in our findings.

Our research finds that, while the majority of spontaneous volunteers were volunteering for the first time, those with past experience of volunteering are likely to volunteer for longer during the disaster response and more likely to sustain their volunteering activities more after the event. While our research identifies a number of demographic characteristics of spontaneous volunteers that are consistent with the volunteering literature, it emphasises the importance of relational characteristics – including relationships to people and place – in motivating spontaneous volunteerism in response to natural disasters. Our network analysis finds that different kinds of network brokers play different roles in facilitating spontaneous volunteering. Specifically, we find that individual brokers play a more important role in facilitating first contact to volunteering opportunities, while organisational brokers are more significant in translating emergent volunteer responses to sustained civic engagement. Further, our study suggests that volunteering plays an important psycho-social role in individual and collective resilience during and after natural disasters. This finding points to the need

for volunteering organisations and those managing volunteers, particularly in response to disaster conditions, to be informed about the different factors that drive spontaneous volunteerism in order to be able to better respond to these when coordinating volunteer activity.

The study particularly illuminates the influence of the way(s) in which people are asked to help, the importance of relationships to people and place, and the therapeutic function of spontaneous volunteering as factors that both shape and motivate spontaneous volunteering experiences. Greater recognition of these factors could enhance the work of institutions and organisations that are involved in volunteer coordination, public health and health promotion aimed at community resilience.

2.0 Introduction and background

The recent spate of natural disasters across Australia has led to an outpouring of spontaneous volunteering, both formally through nonprofit and government agencies and informally through local community and online networks. Relatively little is understood about the motivations and characteristics of spontaneous volunteers. This gap in knowledge constrains the way volunteering opportunities and systems are designed both to anticipate and effectively engage with spontaneous volunteerism when it arises. Even less is known about if and how spontaneous volunteering is converted into longer term volunteering and civic engagement.

The aims of this project were to:

- Examine the characteristics and motivations of spontaneous volunteers who respond to a crisis event;
- Illuminate the effects of spontaneous volunteering on personal, social and civic networks;
- Explicate the conditions under which sustained volunteering and other forms of civic engagement arise from spontaneous volunteering and;
- Consider the practical implications of these findings for organisations involved in coordinating volunteers both with and beyond disaster events.

From November 2010-February 2011, Queensland experienced a series of floods and cyclones that directly affected more than 200, 000 people and indirectly affected a great many more. During this period, many community and government organisations were contacted by individuals and groups wanting to help their communities. Volunteering Queensland Inc. (Volunteering Qld) was contacted by more than 100, 000 people inquiring about how to get involved in helping their communities, as well as opportunities to volunteer, and registered more than 80, 000 potential volunteers as a result. It is this series of natural disasters and the unprecedented volunteer response that we focus on in this research.

2.1 Post-disaster convergence in a consensus crisis

Our focus in this study is on volunteer responses during a consensus crisis. Quarantelli and Dynes (1977) were among the first in the literature to distinguish between what they term “consensus crises” and “dissensus crises” (Quarantelli & Dynes, 1977, p. 23). A dissensus crisis is one where “there are sharply contrasting views of the nature of the situation, what brought it about, and what should be done to resolve it” (Quarantelli & Dynes, 1977, p. 23). A civil conflict is an example of a dissensus crisis, and a response is likely to contain conflict and further social fragmentation (Argoathy, 2003). In contrast, a consensus crisis – such as a natural disaster – is one where there is “agreement on the meaning of the situation, the norms and values that are appropriate, and priorities that should be followed” (Quarantelli & Dynes, 1977). The mass convergence of citizens at the site of a disaster in its aftermath is a well-documented phenomenon (Argoathy, 2003; Drabek & McEntire, 2003; Fritz & Mathewson, 1957; Kendra & Watchtendorf, 2001; Michel, 2007; Quarantelli, 1992; Rodríguez, Trainor, & Quarantelli, 2006; Stallings & Quarantelli, 1985; Thomas & David, 2003; Tierney, 2001). The bulk of available research evidence suggests that, counter to popular depictions of antisocial activity occurring in these circumstances, such convergence typically produces pro-social behaviour (Perry & Lindell, 2003; Thomas & David, 2003).

2.2 Spontaneous volunteerism during a natural disaster

The spontaneous outpourings of assistance which occur in the aftermath of a disaster thus form a significant – and generally inevitable - component of post-disaster convergence (Argoathy, 2003; Drabek & McEntire, 2003; Helsloot & Ruitenbergh, 2004; Michel, 2007; Perry & Lindell, 2003; Quarantelli, 1992; Rodríguez, et al., 2006; Stallings & Quarantelli, 1985). Natural disasters across the globe spark high levels of spontaneous assistance. For example, during Hurricane Katrina in the USA, the Red Cross alone attracted 50,000 spontaneous volunteers (Australian Red Cross, 2010). Ten per cent of the local population - an estimated two million people - provided assistance in the aftermath of the 1985 Mexico City earthquake (Quarantelli, 1992). During the 2009 Black Saturday bushfires in Victoria, Australia, over 22,000 individuals registered their interest with emergency organisations (Australian Red Cross, 2010). Yet only a fraction of these potential volunteers were utilised, with most receiving little information about the crisis or acknowledgement of their offer (Australian Red Cross, 2010). This latter example demonstrates how the sometimes overwhelming number of spontaneous volunteers following a disaster - from both within the affected community and outside of it - can pose challenges for disaster relief and recovery services.

According to Stallings & Quarantelli, (1985, p. 94) it is important to distinguish between people who volunteer individually in response to a crisis, and those who form part of “emergent citizen groups, emergent organisations, impromptu groups... ad hoc and temporary groups” that respond to perceived gaps in emergency response. There is extensive documentation of such groups (Green & Ireland, 1982; Majchrzak, Jarvenpaa, & Hollingshead, 2007; Muralidharan, Rasmussen, Patterson, & Shin, 2011; Stallings & Quarantelli, 1985; Voorhees, 2008). A local example is that of Baked Relief, which began during the Brisbane floods with one person bringing baked goods to local emergency service volunteers, and evolved into a co-ordinated movement of hundreds (Crismani, 2011). Whilst emergent groups such as these are of interest for further study, our focus in this research is particularly on individual, spontaneous volunteering following the 2010-11 natural disasters in Queensland.

There are numerous and conflicting definitions of spontaneous volunteers. With relatively little academic research currently available on the phenomenon, much of what is known about spontaneous volunteering (SV) has been written by emergency service organisations in the form of industry reports and handbooks. Two differing definitions of spontaneous volunteering in Australasia are provided by the Civil Defence Emergency Management (CDEM) in New Zealand and the Australian Red Cross (ARC) for the Australian Government. CDEM defines spontaneous volunteers as:

“unaffiliated – not a member of an organised or recognised group, untrained in CDEM relevant skills, not responsible or accountable to any given organisation, an unknown quantity, possibly a ‘previous’ volunteer (no longer involved)” (Civil Defence Emergency Management, 2006; Volunteering and the CDEM Sector) .

This definition includes 'emergent volunteers', and 'convergent volunteers', in which individuals either 'converge' on an emergency area, or 'emerge' to assist. In contrast, the Australian Government (2010) definition of spontaneous volunteering does not include people who provide assistance on the scene under their own initiative. Rather, this report distinguishes spontaneous volunteers into two separate categories: 'potential spontaneous volunteers' and 'casual volunteers'. Potential spontaneous volunteers are people who express an interest in volunteering following a disaster, have not previously been affiliated with an emergency organisation, and may or may not have the required skills for relief work (Drabek & McEntire 2003). Casual volunteers are defined as those who have been inducted and screened, though they remain unaffiliated with the emergency service.

Thus, in contrast to the CDEM utilisation of the term, 'spontaneous volunteering' as defined by the Australian Red Cross in their report for the Australian Government (2010) refers primarily to people who have *contacted an emergency organisation to offer assistance* – regardless of whether or not the organisation was able to accept this offer. For the purposes of this research, we have used this definition as our starting point.

2.3 Volunteering: new trends, changing definitions

Nationally and worldwide, there are numerous and differing definitions of volunteering. A 1996 study reviewed 300 different articles and definitions of volunteering and posited that definitions are generally comprised of four common dimensions, within which there were a variety of possible categories (Cnaan, Handy, & Wadsworth, 1996). These are; the extent to which an act is voluntary (ranging from free will to obligation); the nature of the reward (if any); the structure within which volunteer activities take place (informal to formal); and the beneficiaries of volunteering (ranging from strangers to the volunteer themselves).

In a recent report, Volunteering Australia (VA) has explored the shifts in volunteering behaviour and the challenges these pose for current definitions of volunteering, including their own (Volunteering Australia, 2012). They note that informal volunteering, for example, is not currently recognised in the VA definition. In relation to this issue, the State of Volunteering in Australia 2012 report recognises that the processes of formal volunteering can be "onerous and intimidating" for some community organisations, and acknowledges the current invisibility of "more agile and intangible forms of volunteering through new and emergent groups" (Volunteering Australia, 2012).

Growth in both informal and episodic volunteering is especially pertinent considering the changing trends in volunteering, both within Australia and internationally. Although the number of *people* volunteering in Australia has risen steadily in recent decades, the number of *hours* individuals spend volunteering each year is declining. People are also less likely to commit to one particular organisation (Australian Red Cross, 2010). As median volunteer hours decline internationally, it has

become more difficult to attract and retain volunteers, a topic covered widely in the literature (Service, 2006; United Nations Volunteers, 2011).

These changes in patterns of volunteering pose new challenges for emergency services and other third-sector organisations, which traditionally rely on the on-going commitment of volunteers for their effective functioning. Some authors have suggested that societal trends towards secularisation and individualisation, are mirrored in shifts from collective to reflexive modes of volunteering (Hustinx & Lammertyn, 2003; Macduff, 2006). Collective volunteering is seen to be part of a civic generation grounded in a service ethic and sense of obligation to community (regardless of enjoyment, doing what needs to be done). Conversely, reflexive volunteering reflects volunteers' personal interests and needs, and is more likely to be sporadic and temporary (Bryen & Madden, 2006; Hustinx & Lammertyn, 2003).

3.0 Conceptual approach and research questions

We take as our theoretical starting point, Wilson and Musick's (1997) integrated theory of volunteer work. This approach, which focuses on volunteering in daily life, suggests that volunteer work is productive work that draws on human capital, collective behaviour that utilises social capital and ethically guided work that draws on cultural capital (Wilson & Musick, 1997). The significance of Wilson and Musick's (1997) framework is that it conceptualises the motivations of volunteering as a combination of individual characteristics and access to network resources.

Empirical analyses of volunteering in response to disasters have partially affirmed the applicability of Wilson and Musick's framework. For example, St. John and Fuchs (2002) found that individuals connected to a religious denomination were more likely to donate blood and/or donate goods and services, which they theorised was related to access to networks (St. John & Fuchs, 2002). However, a number of studies have noted that access to cultural capital, which is typically operationalised as a religious affiliation, is less prevalent amongst volunteers responding to disasters than it is amongst everyday volunteers. While the literature describes a 'typical volunteer' in everyday situations, it is suggested that there is increased heterogeneity in disaster situations and an increase in prosocial behaviour across the board (Fritz & Mathewson, 1957; Michel, 2007). One proffered explanation for this is that a prosocial response to disasters is morally self-evident and does not require additional moral guidance such as that offered through religious teachings (Michel, 2007). Rotolo and Berg's 2011 analysis of US population data found that, compared to general volunteers, volunteers for emergency preparedness and disaster relief (EPR) were generally younger with a lower level of educational attainment. Yet Michel's (2007) study of volunteers following Hurricane Katrina still found that people on a higher income and/or educational level were more likely to donate their time. The same was true for individuals with positive health status, high levels of self-efficacy (assessment of own impact on a given situation), those who were married and/or cared for children, and people who were employed, attended religious gatherings and/or were members of organisations (Michel, 2007).

Rotolo and Berg also found that emergency volunteers were more likely to be asked to assist directly by a member of the organisations, or by a family member or friend affiliated with the organisation (Rotolo & Berg, 2011). Echoing the importance of social networks in recruitment, Baxter-Tomkins and Wallace's (2009) study of Australian emergency service volunteers found that 70% of volunteers had close relations with someone in the service when they joined. Participants in this study reported that the qualities of strong relationships - such as connectedness, friendships and a sense of family - outweighed the impositions of volunteer tasks (Baxter-Tomkins & Wallace, 2009).

A motivation which, given its focus on everyday volunteering, Wilson and Musick's (1997) framework does not account for is the psychological motivations of an individual offering to volunteer during times of extreme stress. A study of the Oklahoma City bombing found that individuals who knew "a greater number" of victims were more likely to volunteer their time, services and goods to assist in the recovery process; however – and perhaps reflecting degrees of distress - this was not true for residents' whose family members were killed or injured in the bombing (Beyerlein & Sikkink, 2008).

In a seminal study by Fritz and Mathewson (1957), five key roles for individuals were identified, where individuals may play several roles simultaneously, or move between roles as they acquire new information or encounter different scenarios. These roles are:

- (1) the returnees; survivors of the incident, who are thus first on the scene and often initially responsible for saving others;
- (2) the anxious; looking to be empowered through action;
- (3) the helpers;
- (4) the curious; and
- (5) the exploiters.

A study of Ground Zero following the 9/11 terrorist attacks led researchers to suggest a sixth category; 'the supporters', or cheerleaders of emergency workers and volunteers (Kendra & Watchtendorf, 2001).

Statistics collected by Volunteering Qld phone support staff during the Queensland Floods suggest that around 20% of those people who called Volunteering Qld to offer assistance during the 2010/11 disasters did so to seek emotional support rather than to contribute as volunteers (Volunteering Qld, 2011). This group may correspond with Fritz and Mathewson's (1957) category of "the anxious" as those motivated by anxiety to converge following a disaster. Disaster psychiatrists Raphael and Ma (2011) echo this idea, suggesting that people's capacity to act is critical to both physical and psychological recovery, while Steffen and Fothergill (2009) assert that emergency services need to recognise that for victims of disaster, helping can be part of the healing process for individuals and build community resilience. This raises interesting questions for emergency agencies who may

already be overwhelmed with offers for help and dealing with the crisis at hand, who then need to find work for volunteers in the name of building community resilience.

“the act of volunteering in response to September 11 depended on levels of identification with victims of the tragedy. One of the strongest factors was personal identification with victims, which was built through personal networks such as knowing someone who was killed or in danger during the attacks, and through personal feelings of responsibility to help others in need. Identification was also constructed through involvement in social events such as community candlelight vigils that reflected on, framed, and reinforced the significance of the disaster in a communal setting”. (Beyerlein & Sikkink, 2008, p. 190)

Wilson and Musick’s (1997) framework and the available research evidence on volunteer roles and motivations in response to disasters thus drive our first two research questions:

1. What are the individual and network characteristics of spontaneous volunteers?
2. What motivates people’s intentions to spontaneously volunteer during a disaster?

Whilst our initial aim was to understand the motivations and characteristics of spontaneous volunteers, the research team also sought to understand if – and if so, how – spontaneous volunteering translates to sustained volunteerism and other forms of civic engagement. As well as identifying the overall practice and experience of volunteering, this study thus sought to determine if there was a relationship between volunteering and respondents’ social networks and how these network connections facilitated or constrained ongoing volunteering activity and greater civic engagement. That is, we wanted to understand whether or not people become involved in volunteering through their networks and if and how these networks lead to other volunteering experiences or deeper engagement within civic life. In so doing, the study seeks to trace the nature and characteristics of the networks, emerging patterns of interaction or engagement, key roles and critical (tipping) points amongst a select sample of our respondents.

This is an area in which there is very little available research evidence. In their study of the members of New South Wales State Emergency Services, Baxter-Tomkins and Wallace (2009) highlight that times of disaster produce an opportunity to recruit, and that sourcing volunteers in emergency services is strongly based on mobilising personal relationships. Internationally, in a longitudinal qualitative study of volunteers who responded to the September 2011 terrorist attacks in New York City, Steffen and Fothergill (2009) examined the effects of spontaneous volunteering on community engagement behaviours. They found that spontaneous volunteering facilitated long term personal healing for volunteers after this traumatic event, had a positive effect on their self-concept, and stimulated greater community involvement over time amongst their sample. This community engagement included both extended involvement in volunteerism and other forms of civic engagement (Steffen & Fothergill, 2009). Similarly, a study of 105 volunteers who responded to Hurricane Katrina found that the experience of spontaneous volunteering in Louisiana led to participants being more widely engaged in their local communities when they returned home (Dass-Brailsford, Thomley, & Hurtado de Mendoza, 2011). While these studies describe the effects of spontaneous volunteering on the longer term civic engagement of their participants, they do not explicate what personal, systemic or organisational conditions facilitated research participants’

continued volunteer efforts. This strategic/operational knowledge could be applied in the event of a disaster, when the need for assistance frequently remains after individual interest in volunteering has dissipated (Volunteering Qld, 2011). This gap in knowledge leads us to our third research question:

3. What personal, systemic and organisational conditions facilitate the transition from spontaneous to sustained volunteering amongst those who volunteer during a disaster?

While our first three research questions seek to understand the characteristics and drivers of spontaneous volunteering and sustained civic engagement arising from it, we are also interested in exploring the types of volunteering undertaken by spontaneous volunteers. As (Britton, 1991) observes, volunteering in response to disasters can include both institutionalised and non-institutionalised activities, based on formal associations or ephemeral non-associational action. The growing literature on emergent civic groups suggests that better understanding of emergence is required to both harness and manage civic engagement in response to natural and human made disasters (Cottrell, 2010; Drabek & McEntire, 2003).

In popular debates, grey literature and a small but growing body of scholarly research (Huang, Chan, & Hyder, 2010; Majchrzak & More, 2011), the role of social networking technologies in facilitating new forms of citizen-led disaster-response is also gaining increasing attention.

These two bodies of literature lead us to our final research questions:

4. What types of volunteering do spontaneous volunteers take up during a disaster and what influences these choices?
5. What is the role of social networking technologies in facilitating associational and ephemeral volunteering during a disaster?

With regard to our final research question, specialist research is currently being undertaken by colleagues at QUT on social media in times of crisis⁶. Rather than duplicate this work, we have concentrated our attention primarily on Research Questions 1-4.

4.0 Methodology

4.1 Overview of Methodology

The research utilised a mixed methods approach, located within a critical realist epistemology (Clark, 2008; Groff, 2010). The mixed methods approach generated data through the concurrent implementation of both a quantitative survey and qualitative interviews and different analytical treatments of these data sets allowed us to view the results from multiple angles (See Figure 1,

⁶ See <http://mappingonlinepublics.net/category/crisis-2/>

below). This methodology allowed us to collect both narrative and numerical data on the same research questions to ensure both breadth and depth of information (Tashakkori & Newman, 2010).

Research was conducted in five phases, with some phases occurring concurrently to ensure timely completion of the research and formative project outputs:

1. Project formation and steering
2. Literature review
3. Design and administration of
 - a) survey instrument
 - b) volunteer interviews
4. Analysis of data
5. Development of project outputs

Figure 1 summarises the methodology.

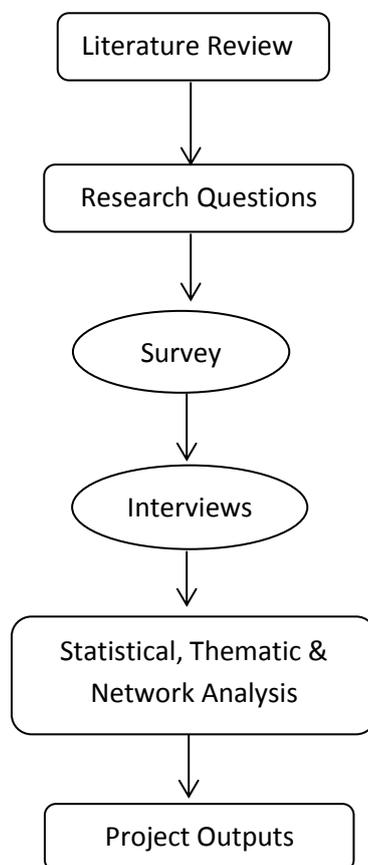


Figure 1: The project's mixed methods approach

4.2 Literature review

A comprehensive scan was conducted of both local and international literature in relation to spontaneous volunteering. Of particular interest to our research were existing definitions and typologies of spontaneous volunteering, studies of volunteer motivation, and case studies of other

natural and human-made disasters. The literature review allowed us to identify gaps and thus generate our research questions. It also provided insight into how best to operationalize our concepts based on previous studies.

4.3 Data sample, collection and analysis

Participants for both the survey and interview research were drawn from the database of our partner organisation, Volunteering Qld. At the time of research, this database contained the contact details of approximately 80,000 people who contacted Volunteering Qld in response to the natural disasters of 2010/11, and who had subsequently elected to remain on the database in case of future emergency. A stratified random sample of 2,200 people was generated from this database, and this group was contacted via email by Volunteering Queensland and informed of the research study. The email invited recipients to indicate their willingness to be interviewed, and notified them that they may be telephoned and asked to participate in a survey. This strategy was sufficient to meet our target number of responses - 712 individuals completed the survey, while 11 people participated in interviews.

4.3.1 Quantitative Survey

In order to obtain the research team's goal of 700 valid surveys, a stratified random sample of 2200 potential participants was generated, based on a projected 30% response rate. 712 responses were received, representing a response rate of 35.6%. The survey was administered by an external surveying company – the Institute for Social Science Research - who worked with the research team to program the survey and build the sample. The survey was quota-based so that 70% of people interviewed were casual volunteers, (i.e. referred by Volunteering Qld to volunteer with an organisation in relation to disaster recovery and relief), while the remaining 30% were selected from the pool of potential spontaneous volunteers (i.e. people who registered with Volunteering Qld but were not referred to volunteer). This quota was designed to ensure that we gathered sufficient data on the experiences of people who were casual volunteers – the key focus of our research questions - whilst also documenting the experiences of potential spontaneous volunteers.

The survey utilised close-ended questions to elicit information about individuals' motivation, characteristics, volunteering work, experience of organisational conditions, and use of social network technologies (See Appendix 9.1). The survey data was collated by the surveying company. Survey analysis was undertaken by the research team.

4.3.2 Qualitative Interviews

From a purposive sample of 17 individuals who responded to our initial recruitment email, 11 participants were available to complete interviews of up to one hour in duration. Two interviews were conducted face-to-face and nine were conducted by telephone. Interviews were semi-structured to elicit in-depth information about participants' experience of volunteering in relation to the natural disasters in Queensland 2010/11 (See Appendix 9.2).

4.4 Analysis of Data

In keeping with our mixed methods approach, several modes of analysis were undertaken. Survey data were analysed descriptively and inferentially using SPSS data analysis software. Interview data were analysed thematically. To ensure analytic rigour, two researchers separately coded the data in response to each of the research questions. The researchers then compared their analyses for contradictory findings; no such contradictions emerged.

Social Network Analysis (SNA) is used to study network structures to identify local and global patterns, locate influential entities, and examine network dynamics. In essence, SNA is the mapping and measuring of relationships and flows between people groups, and organizations as well as computers and other connected information/knowledge entities. The nodes in the network are the people and groups while the links show relationships or flows between the nodes, which can include for example information, personal affect, money etc. Features of SNA were applied to the interview responses of a selection of four participants in the study. To understand the impact of networks on people, their location and ties within the specified network are identified and evaluated. These measures provide insights into the various roles and groupings in a network, for example, who are the connectors (brokers) or bridges between groups and what are the factors or events around which people cluster?

While these maps use many of the techniques of social network analysis, the interviews did not include the rigorous approach to mapping respondents' networks necessary for the analysis of the quantitative data, such as network density, centrality or average path distance. Instead the maps provide a longitudinal perspective on the volunteering experiences of selected interviewees, split vertically across time periods and horizontally between ongoing and temporary engagement. The focus of the study was on the volunteering experiences around the January 2011 floods in Brisbane, the three vertical segments are split into the connections formed before January 2011 (left), during the floods (centre), and after the floods (right). This allows us to display the timeline of connections to people, organisations and places as they adapted/responded to the needs of the moment. The horizontal divide distinguishes those connections that were formed temporarily from the lasting connections that endured beyond the floods. The connections located in the top half are those that were still current at the time of interview, while those in the bottom half had ceased at some point before the interview. Together, this innovative presentation of longitudinal data provides comprehensive insights into the experiences of volunteers over a period of time and space as well as the patterns of connection and disconnection.

Following the individual analysis of each data set, quantitative, qualitative and network findings were compared to identify themes, contradictions and potential silences in the data.

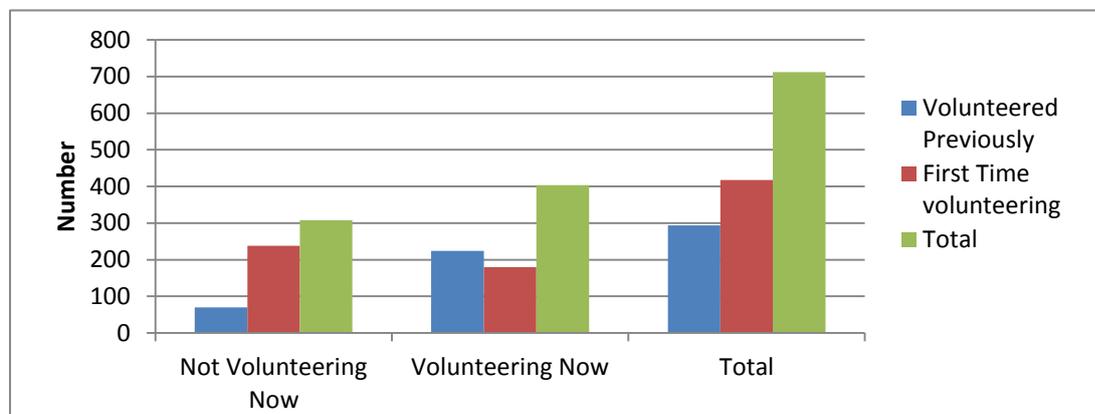
5.0 Findings

Findings are presented in response to the research questions.

5.1 Individual and network characteristics of spontaneous volunteers

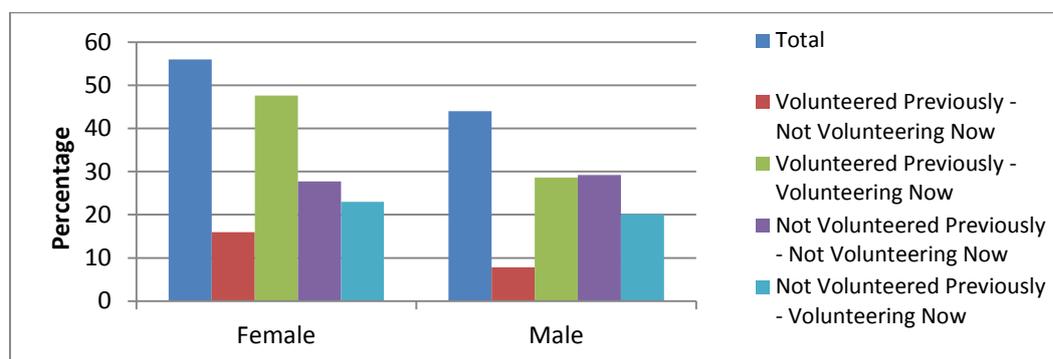
5.1.1 Individual characteristics

A total of 712 people participated in the survey; with 418 being recorded as first time volunteers, of which 308 were recorded as *not volunteering now* and 404 recorded as *currently volunteering* (Graph 1). 294 of the 712 participants surveyed responded to have had previously volunteered (70 'not volunteering now' and the remaining 224 'currently volunteering'). More people are 'volunteering now' (n=404) than 'not volunteering now' (n=308). Of those *not volunteering now*, the majority were first time volunteers (n=238 of 308), whereas of those who *are volunteering now*, just over half had volunteered previously (n=224 of 404).



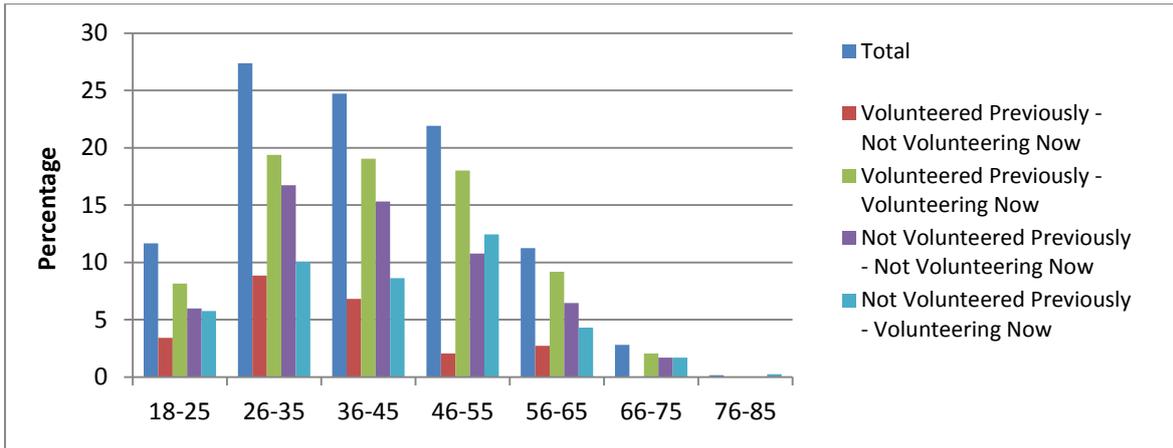
Graph 1: Volunteering status of respondents

In the survey sample of 712 people, 56% were female and 44% were male. The largest gender difference was between those who had volunteered previously and were currently volunteering, with women at 47% and men at 28% (Graph 2).



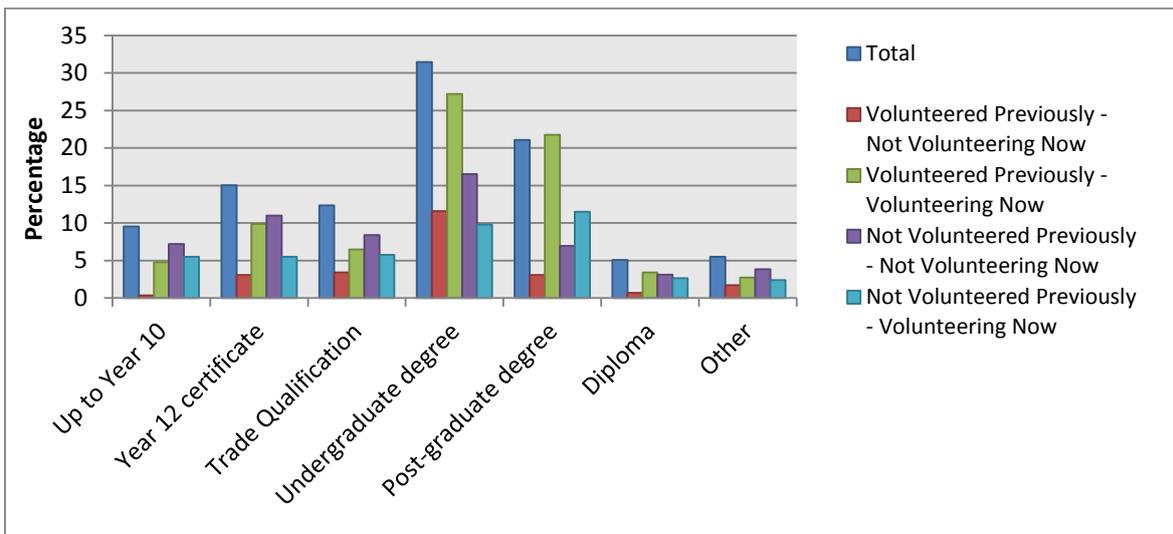
Graph 2: Volunteering status by gender

The ages of volunteers were fairly evenly distributed, with 27% aged 26-35, 25% aged 46-45, and 22% aged 46-55 (Graph 3). Based on Queensland population demographics, people aged 26-35 are somewhat overrepresented in the sample.



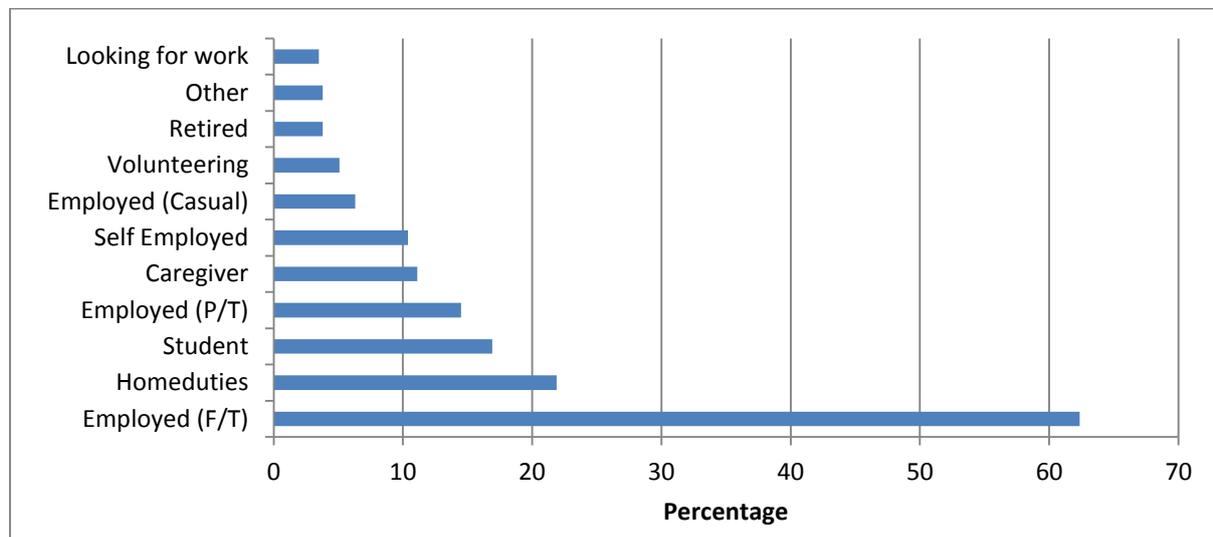
Graph 3: Age of Respondents

Over 62% of the sample had a tertiary qualification, 12% report a trade qualification, and 24% had completed year 10 or 12 of senior high school. Interestingly, out of those who had not volunteered previously, the only category which had more respondents who are now volunteering was those with a post-graduate level of education.



Graph 4: Respondents' highest levels of education

The majority of respondents (62%) had full time work commitments at the time of the natural disasters; this is reflective of the current demographic profile of Queenslanders. Respondents with home duties commitments or students were the next largest groups to volunteer during the natural disaster at 21% and 17% respectively.



Graph 5: Respondents' primary commitments at the time of natural disaster

5.1.2 Network Characteristics

Drawing from the qualitative interview data, a set of four network maps was created. Each of these graphically tracks and illustrates the patterns of connection between the interviewee, their social circle, the organisations they contribute through and the areas in which they volunteer. In keeping with research ethics, each person whose networks have been presented has been allocated a pseudonym.

The network maps provide a longitudinal perspective on the volunteering experiences of selected interviewees, split vertically across time periods and horizontally between ongoing and temporary engagement. The focus of the study was on the volunteering experiences around the January 2011 floods in Brisbane, the three vertical segments are split into the connections formed before January 2011 (left), during the floods (centre), and after the floods (right). This allows us to display the timeline of connections to people, organisations and places as they adapted/responded to the needs of the moment. The horizontal divide distinguishes those connections that were formed temporarily from the lasting connections that endured beyond the floods. The connections located in the top half are those that were still current at the time of interview, while those in the bottom half had ceased at some point before the interview. Together, this innovative presentation of longitudinal data provides comprehensive insights into the experiences of volunteers over a period of time and space as well as the patterns of connection and disconnection.

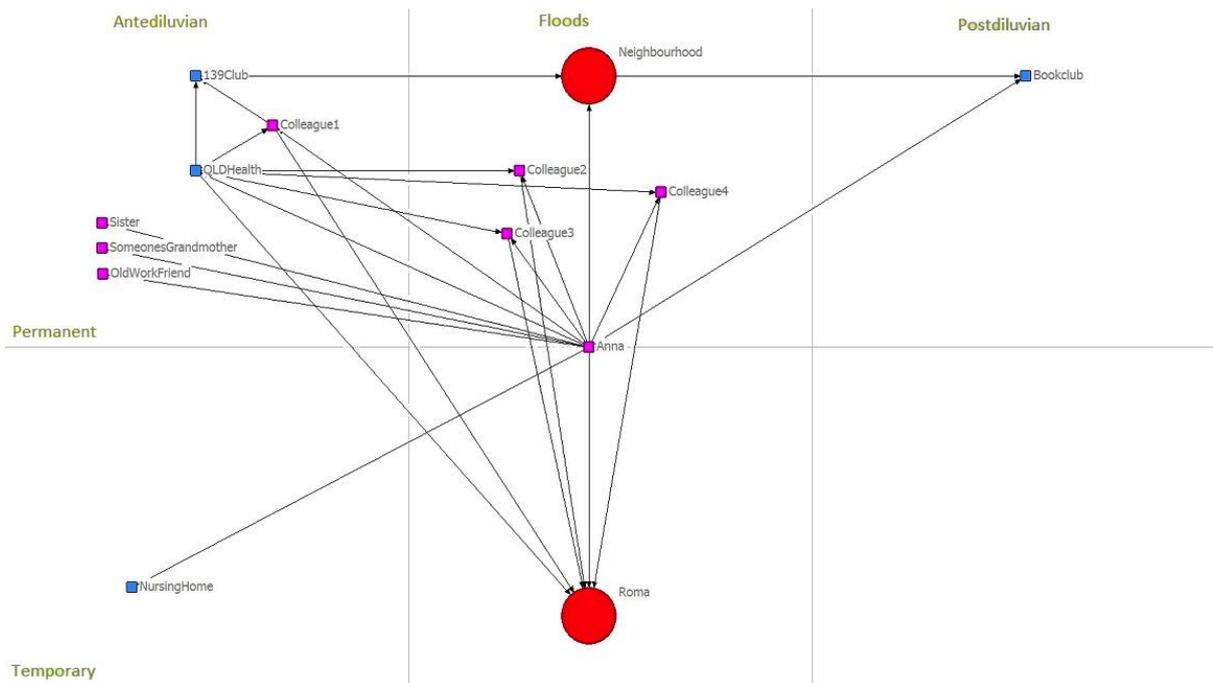


Figure 2: Anna's Volunteering Network Connections

Anna: Description and network analysis

Anna¹ is a nurse in the public healthcare system, with a background in long term volunteer efforts, including for example, helping out at a nursing home, though this ceased sometime before the 2011 floods (bottom left). Through her work, Anna supports the 139 Club, an organisation situated within her local neighbourhood, prompted by a colleague, whom Anna attributes as being responsible for introducing the initiative (top left and top centre). Anna's neighbourhood was affected by the floods and she volunteered in a small informal way, for example, helping out a neighbour with sandbagging. Though not necessarily related to Anna's volunteer work, there were three people that she knows who also volunteer in one way or another, her sister, a friend from a former workplace and 'some-one's' grandmother (top left).

Time constraints (working and teaching) meant that any current or future volunteering by Anna had to be brokered through her work (a state based healthcare agency) as Anna lacks the resources to see this through herself. However, she has joined a local neighbourhood book club (although the membership is drawn from further afield), which has led to continuing contact with people she met while volunteering. This would suggest a proclivity and willingness towards active engagement.

The longitudinal network maps suggests that Anna would be open to future volunteering, if facilitated by her workplace, as would a number of her colleagues. Given Anna's previous volunteering experience it would be reasonable to assume that volunteering her time and training is based on her values, but her experience during the 2011 floods increased the number of people she knows who share that value and may increase Anna's willingness to participate in volunteering activities.

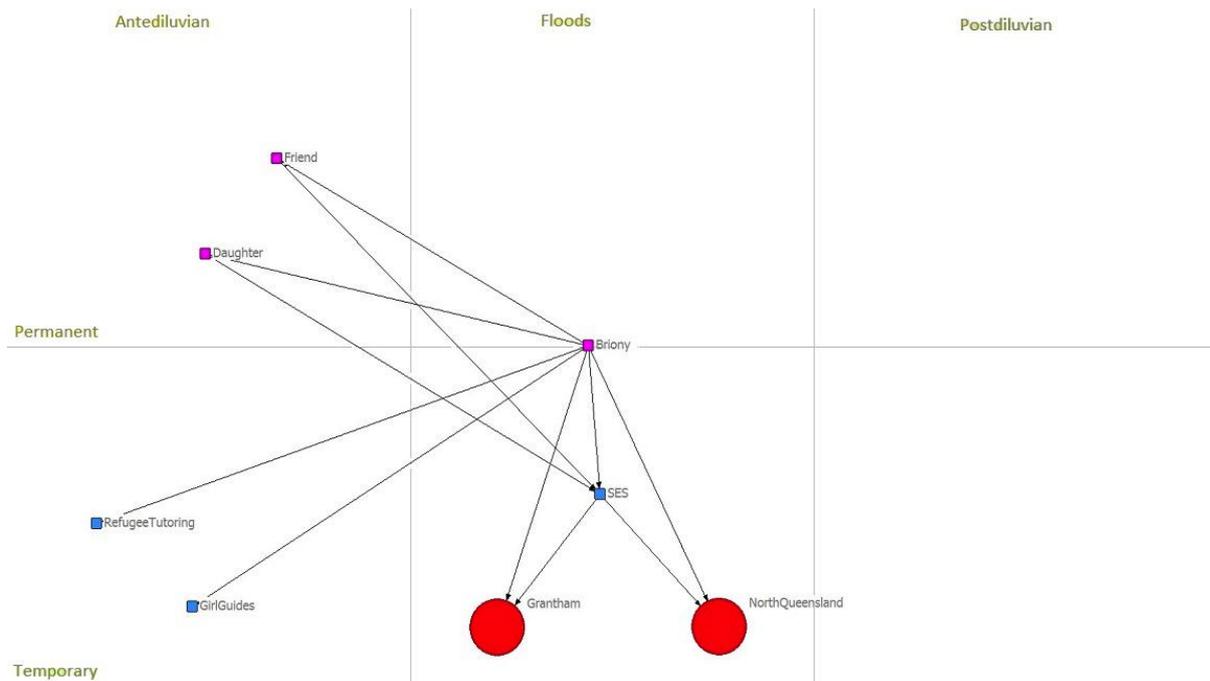


Figure 3: Briony's Volunteering Network Connections

Briony had experience working in emergency situations, having been a member of the Army Reserve, and worked for an energy company. She had been a volunteer at Girl Guides and Brownies for 17 years prior to the floods, and had worked tutoring a refugee family, assisting them with English and acculturation, which ceased in June (2012) (bottom left). Briony joined the State Emergency Services when her daughter expressed an interest, and joined with a friend that she had known for 16 years (top left). Through the State Emergency Services, Briony went to Grantham during the Floods and almost immediately after to North Queensland to assist with the clean-up from Cyclone Yasi (bottom centre).

Briony expressed dissatisfaction with her State Emergency Service experience, stating it was “uncoordinated and poorly managed”. Briony had recently stopped volunteering with the State Emergency Services, and did not maintain any contacts with volunteers, as she “did not actually find the SES that friendly”.

Briony has a long history of volunteering, spurred in part by significant connections to others who volunteer. Further to this, she voiced her future intention to volunteer with the local chapter of a national volunteer-run community service, inspired by late husband's involvement and was also considering joining the Red Cross, because of the “really good job that they do in the community”

From a network perspective the social aspects of volunteering do have significance for Briony, and can influence her experience both positively and negatively. The findings here also point to the crucial role of broker agencies in acquiring and maintaining volunteers.

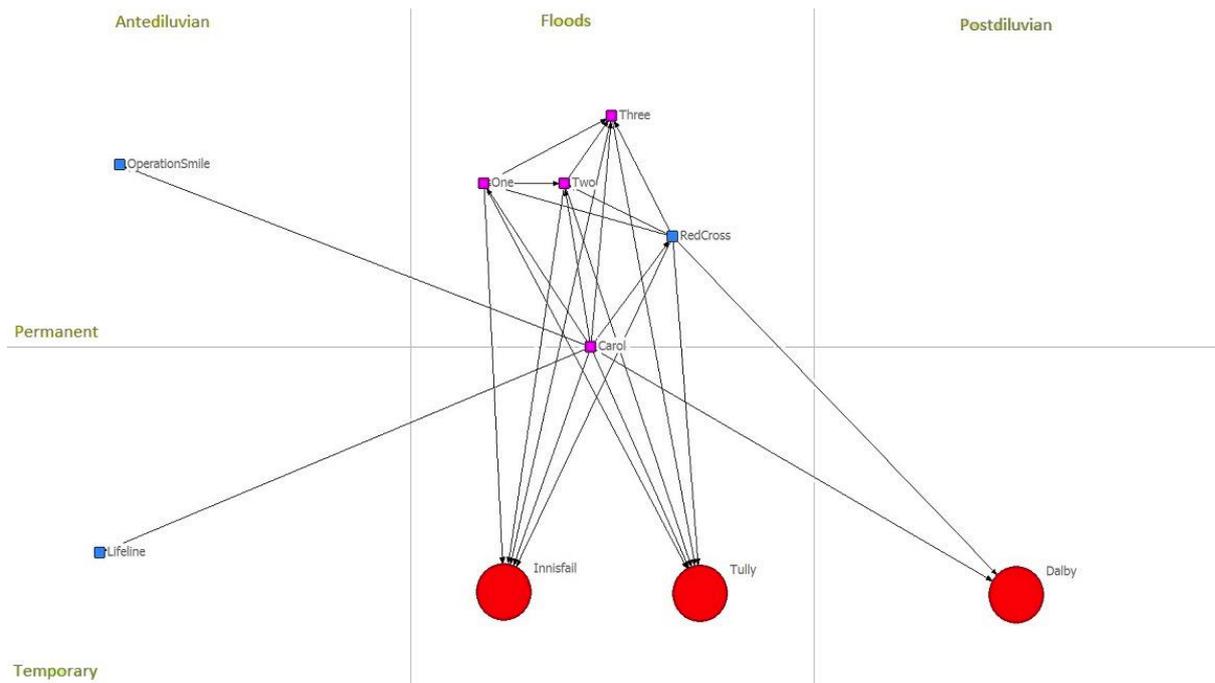


Figure 4: Carol's Volunteering Network Connections

Carol has previous work experience with a volunteer telephone counselling service and continues to volunteer for Operation Smile in a limited capacity (top left). At the time of the Queensland floods Carol joined the Red Cross (top centre) and despite being located in Brisbane and having no experience with the organisation was sent to Tully and Innisfail (far north Queensland) to assist (bottom centre). While with the Red Cross in North Queensland, Carol met several people from her local neighbourhood, with whom she has maintained contact (top centre). Several months after the January floods, Carol was sent by the Red Cross to two affected towns in South-Western Queensland (bottom right).

Though Carol remains an active member of the Red Cross, she expresses a considerable amount of disappointment with her experiences, particularly the lack of leadership experience held by the broker organisations and their under-utilisation of peoples' skills. (Not shown on the map are the numbers of other people in Carol's circle that also work in charities).

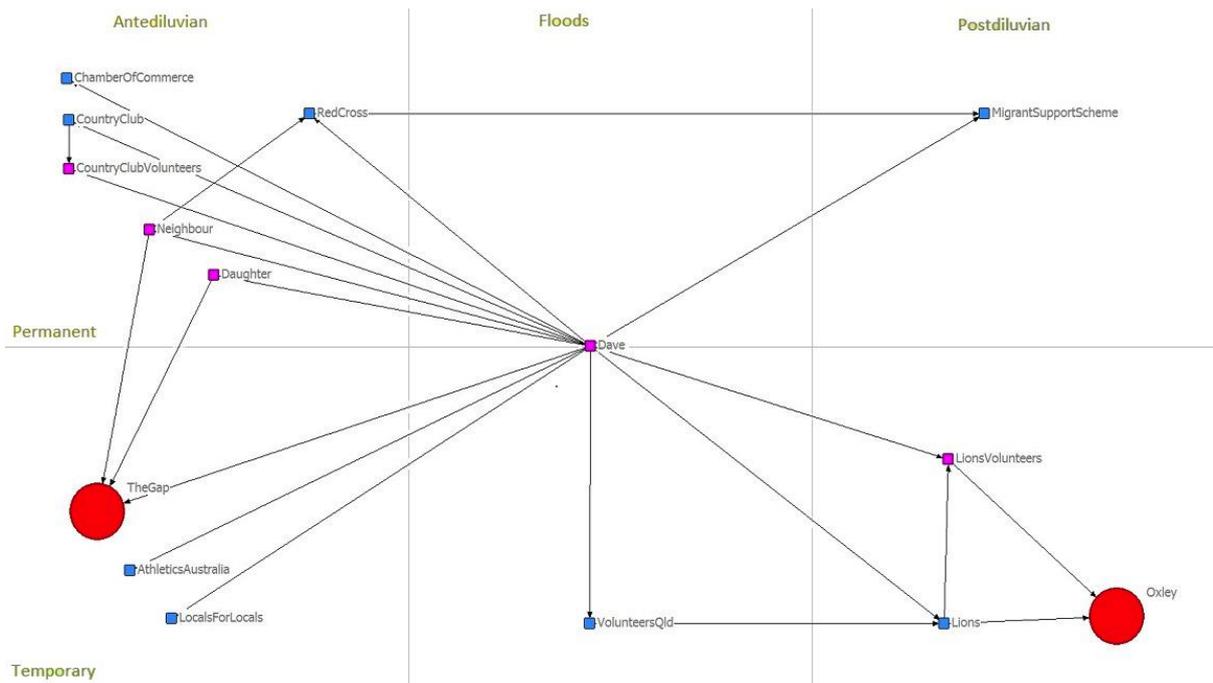


Figure 5: Dave's Volunteering Network Connections

Dave Network Description and Analysis

Dave has a strong history of volunteering having been involved in sporting bodies and administration since 1982 at both the local and national level, is a member of several local community associations and groups, including for example, the local Chamber of Business. Dave had been a member of his local Country Club board for many years, and had a number of friends who had also been involved for an extended period.

In 2010 a violent storm passed through Dave's suburb in Western Brisbane. Although Dave was not directly affected by this storm, his daughter and several other neighbours were and he volunteered to help these people (bottom left). His experience of this storm, couple with the proximity of a Red Cross Coordinator as a close neighbour, led to Dave becoming a member of the Red Cross, where he continues to be on their emergency list (top left) and attend training courses. More recently Dave's engagement with his community has expanded to include his involvement with a migrant support scheme which includes a couple of days a month contribution (top right).

Dave was not in Brisbane during the 2011 floods and was not directly affected by them. However, on his return he signed up with Volunteering Qld, but was not asked to assist at the time. Several months later he was asked to assist around the Oxley area (bottom right) through a local community group. He assisted on weekends for several months, but has not remained in contact with the organisation or anyone involved with the experience. As with other respondents included in this study, Dave also expressed dissatisfaction with the way the broker organisation was run, presumably their volunteering processes.

The network analysis indicates that, although this respondent was already heavily engaged in volunteering, a major storm in his own area (particularly via the experience of daughter and neighbours) became a tipping point to Red Cross where his volunteering was formalised and this provided the link to flood volunteering experience. This respondent continues to be involved in volunteering initiatives commenced prior to the 2011 floods and has not pursued further volunteering experience with the volunteer agencies (bottom right).

Although the nature of the data collected only allowed for the production of descriptive network maps and not more sophisticated statistical analysis (using network metrics), interrogation of the four maps revealed two key findings:

1. The network maps highlight an existing predisposition or proclivity toward volunteering in the four respondents, possibly positively reinforced by having people around them with strong ties to volunteering; and related to this
 - a. The importance of existing relationships or the experience of the event as catalysts to volunteering
2. The role of 'brokers' (both individual and organisations) was identified as important in getting people involved in volunteering, and maintaining their continued presence.

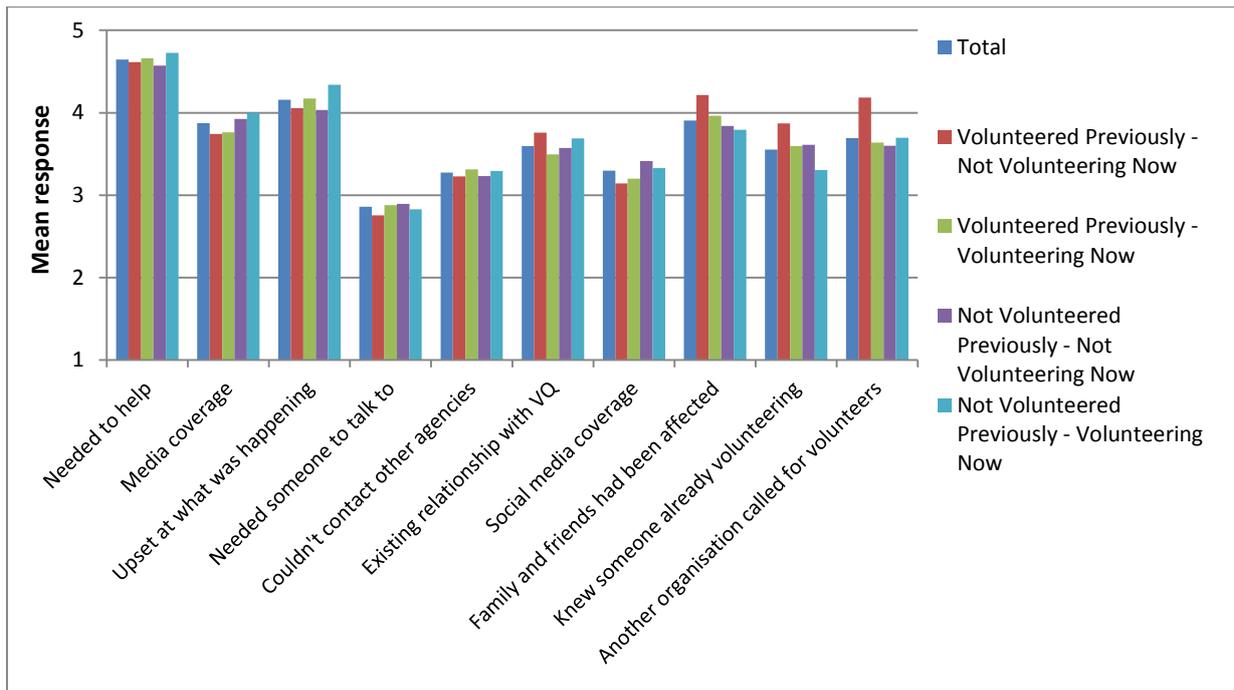
These findings are discussed further in the Discussion and Conclusions section of the report.

5.2 Motivations for spontaneously volunteering during a disaster

Survey respondents were asked to rate the importance on a scale of 1 (Not important at all) to 5 (Extremely important) that each factor played in prompting them to register as an emergency volunteer with Volunteering Queensland (Graphs 6 and 7). Helping and supporting others were rated as the most important factors for people when they were deciding to volunteer.

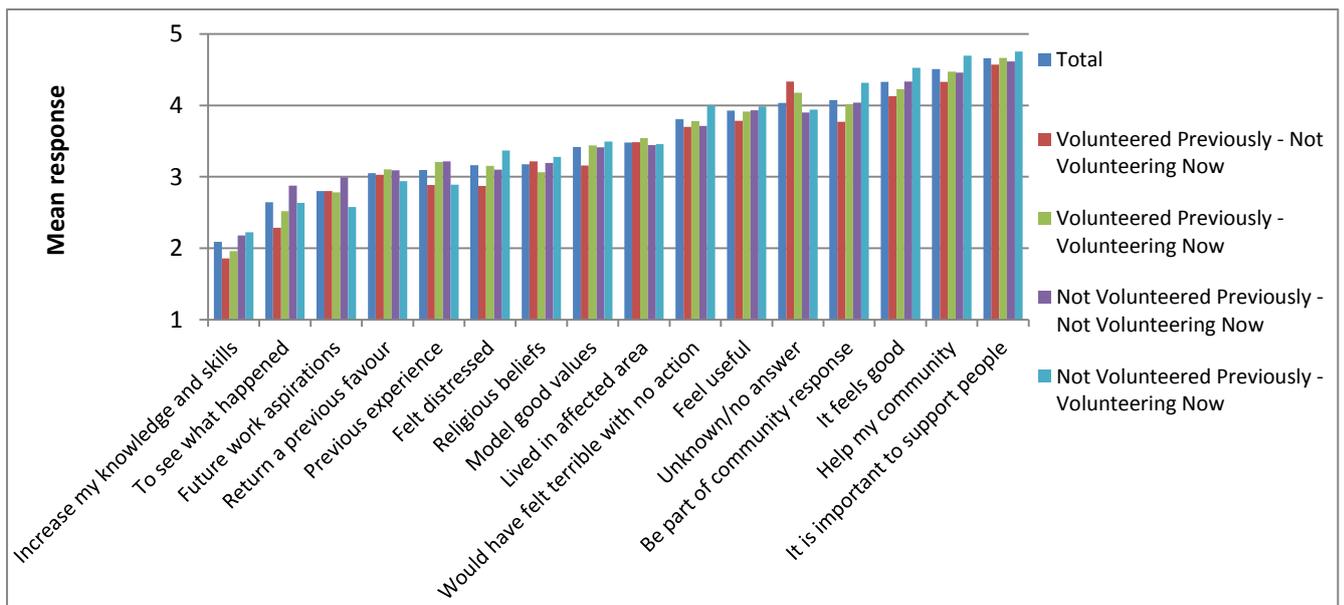
The most important factors in prompting respondents to register as an emergency volunteer were that respondents felt the need to help (M=4.64), were upset at what was happening (M=4.16) and had family or friends affected in the disaster (M=3.90). The biggest differences were seen with the group who had volunteered previously but are not volunteering now. They rated "Another organisation called for volunteers", "Family and Friends had been affected" and "Knew someone already volunteers" as significantly more important than the other groups did. There is no clear explanation for this.

Those who had not volunteered previously but who are volunteering now rated "Upset at what was happening" higher than the other groups, suggesting this was a factor that motivated them to continue volunteering.



Graph 6: Factors that prompted respondents to register as an Emergency Volunteer with Volunteering Q1d

Graph 7 shows what influenced respondents to volunteer during the natural disaster. The most important factors can be categorised into internal and external factors. Externally, the highest rated factors were “It is important to support people” (M = 4.66), “Help my community” (M = 4.51), and “Be a part of community response” (M=4.08). Internally, the highest rated factors were “It feels good” (M = 4.33), “Feel useful” (M = 3.93) and “Would have felt terrible without actions” (M = 3.81). Extrinsic motivators such as “Increase my knowledge and skill,” (M = 2.09), “To see what happened” (M = 2.64) and “Future work aspirations” (M = 2.80) were rated as not very important or not important.



Graph 7: Influences on respondents' decision to volunteer during the natural disaster

Qualitative data from interviews was largely consistent with the survey results. Thematic analysis revealed a series of individual, relational and external factors that motivated people to volunteer during the flood crises.

The strongest individual factor cited (10 out of 11 respondents) was an emotional response to the unfolding crisis. This included a general desire to help, as well as gaining the good feelings that arose from helping and being useful:

“ It can be traumatic but it’s wonderful to make a little bit of a difference and nice to work shoulder to shoulder with like-minded people “

“ It made me feel good to help out “

Other emotional responses that motivated people to volunteer included feeling lucky or guilty about not being directly affected personally by the crisis taking place.

“ I guess it was hearing the stories and hearing – this is your community. This is your city. How can you not do something?”

Three interview respondents described their emotional responses in terms of a sense of civic or moral duty to help out:

“ Probably an overdeveloped social conscience. I just couldn’t – I just went for as long as they were doing things because I could see that some of these people were in quite dire straits at this point “

“It was very hard not to (help) “

Two interviewees discussed their moral responsibilities to volunteer in terms of modelling good civic behaviour for their own children and/or younger people in the community.

Experiential factors also emerged as a relatively strong theme in interviewees’ reflections on what motivated them to volunteer during the crises. These included:

- Being a survivor of a past disaster or being personally affected by the current disaster

“ We were involved in the Gap storm ... although we looked after ourselves at the time, I was very conscious of what everybody else has done for our community here.”

- Past experience of and familiarity with volunteering;
- Exposure to people who were directly affected by the current crisis;
- Having relevant professional skills and/or professional exposure to disaster situations; and
- Wanting to give differently (to financial forms of charitable giving):

“ I sort of have donor fatigue and when you give money to people you actually never see where it goes to. So I prefer to give time and effort, because it’s – you can actually have control of what you’re giving.”

Two interviewees identified cultural influences, including religious affiliation and family norms of giving and helping as factors that motivated their desire to volunteer during the crises.

“ My mother was constantly in the kitchen baking things for people who needed food. That kind of thing. That’s just what you do. I guess we try to encourage our boys to think the same way.”

Also similarly to the survey data, interview respondents identified a variety of relational factors that informed their desires to volunteer during the flood crises. Somewhat differently to the survey data, however, being asked or encouraged to help emerged as the strongest theme in relation to relational factors, with six of 11 respondents discussing this. This included being asked to help by:

- someone involved with or coordinating an existing volunteering activity;
- institutions (such as Queensland Health) and authorities (such as Brisbane City Council) via the media and/or directly through workplaces; and
- someone directly affected by the disaster.

Consistent with our analysis of the network characteristics of spontaneous volunteers, a number of interviewees stressed the importance of their personal networks in gaining access to particular volunteer opportunities:

“ I think it was good having a friend, someone who could just tell me, here is a mobile number, call this person and they’ll put you in touch with this person.”

Three interviewees reflected on the significance of the sense of community or common purpose created by the crisis in motivating them in their volunteering efforts. While this is clearly an emotional response, it was also discussed in terms of the value of (re)connecting with neighbours and forming new relationships:

“...it was absolutely magnificent. The way that they – people – came out and forgot about themselves for a while and gave their neighbour a helping hand.”

“ the universe had made up its mind that we a, had too much crap, pardon the language, and b, we didn’t know enough of our neighbours. That’s really what we got out of it.”

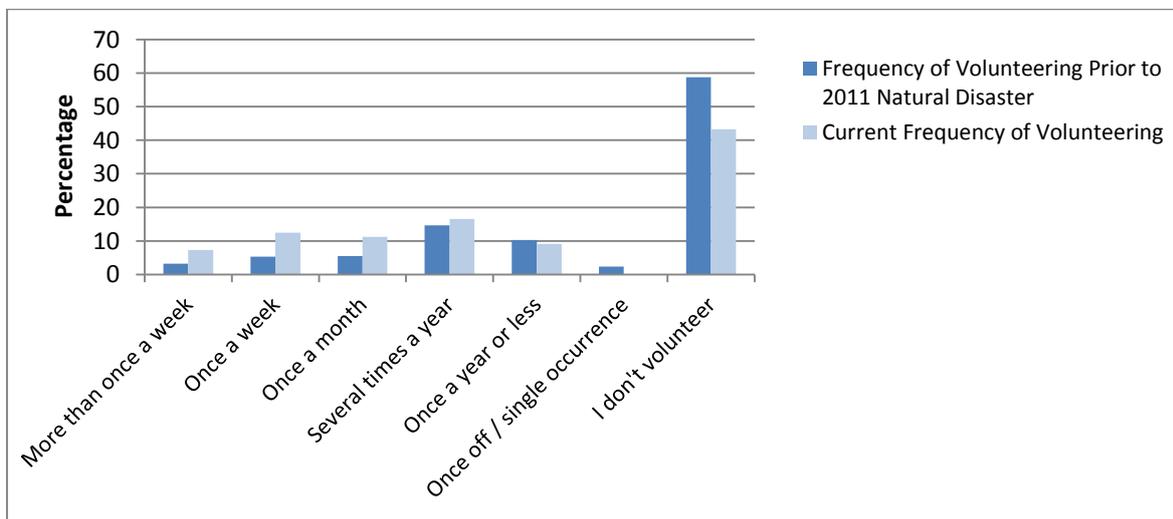
As well as connecting with people in their local areas, two interviewees identified that the chance to connect with new people through volunteering in other locales was a motivator and benefit of volunteering during the flood crises.

“ Yeah. Getting to meet people that you’d never sort of run into. So, yeah, that was- yeah, just meeting and talking with new people. [Don’t know] that you remain friends with them or anything. But just there was some lovely people out doing that sort of work. “

Similarly to the survey results, the majority of interviewees identified external factors that motivated or influenced their intentions to volunteer during the crises. These themes, ranked from stronger to weaker, included:

- The individual’s geographic proximity to where help was needed;
- Having time available, either due to the individual’s stage of life and/or temporary closures of workplaces due to the natural disaster;
- Exposure to stories of flood survivors’ experiences through the mainstream media;
- Coordination of opportunities to help made available through social and mainstream media; and
- Availability of transport and geographic accessibility of areas where help was needed;

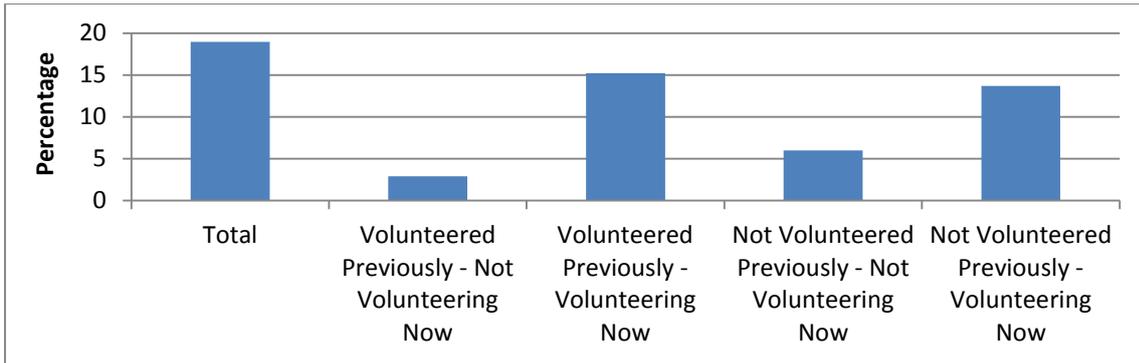
Graph 8 compares the frequency of volunteering prior to the natural disaster in 2011 to current frequency of volunteering. Overall, the number of people who volunteer has increased, with the biggest increase in those that volunteer once a week – from 5% to 13%. The number of people who do not volunteer has reduced from 59% to 43%.



Graph 8: Past and current frequency of volunteering

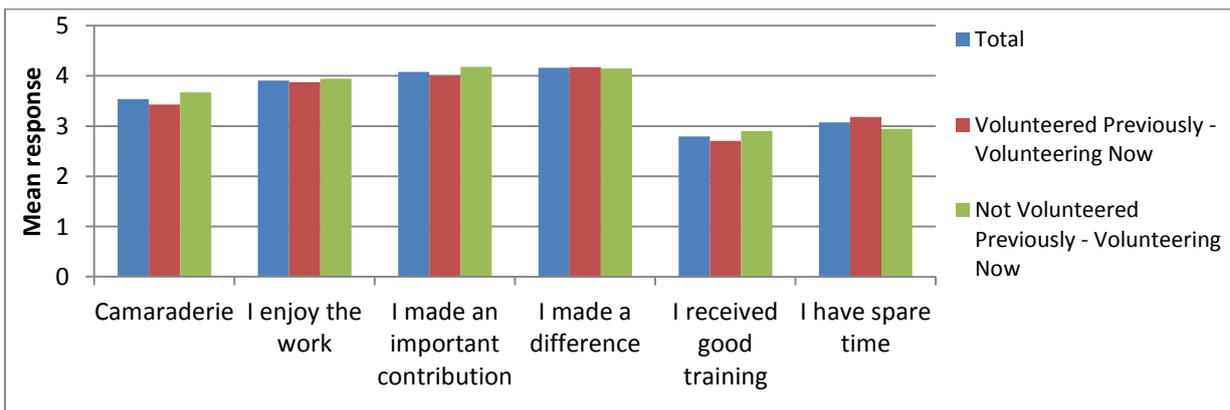
5.3 Personal, systemic and organisational conditions that facilitate the transition from spontaneous to sustained volunteering amongst those who volunteer during a disaster

One fifth of the respondents decided to become more involved in their community after volunteering during the disaster (Graph 9) with the most important reasons for this decision due to feeling like they made a difference and feeling that they made an important contribution (Graph 10).



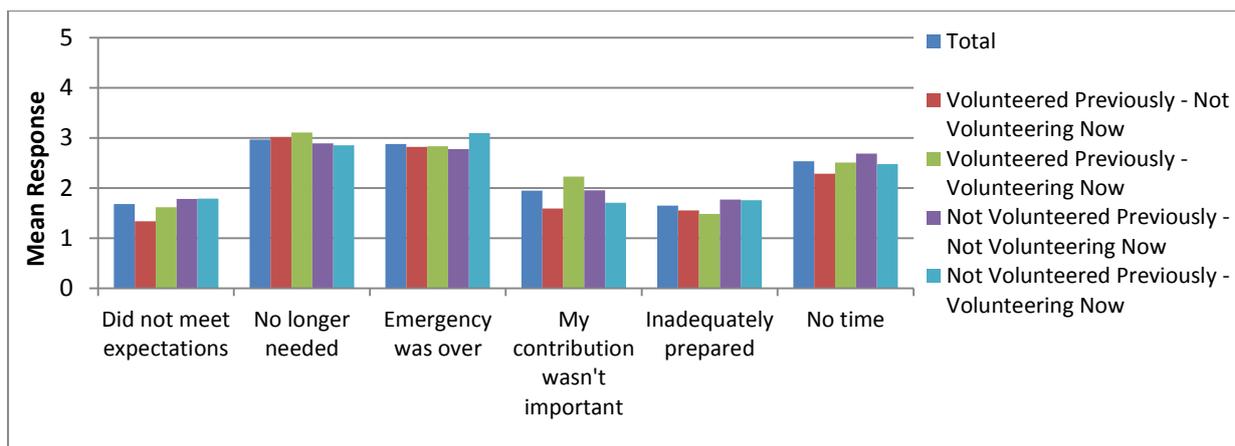
Graph 9: Proportion of respondents that became more involved in their community after volunteering during the disaster

Intrinsic motivation drove respondents to continue volunteering relating to impact or positive feelings (Graph 10). “I made a difference” and “I make an important contribution” were rated four on the five point scale (5=Extremely Important), showing that volunteers are likely to continue volunteering if they feel like they are having an impact. In terms of positive feelings, respondents rated “I enjoy the work” as important (M = 3.91), as well as the feeling of “camaraderie” (M = 3.54). These factors were rated similarly across both groups.



Graph 10: Factors influencing respondents' decision to continue volunteering after the natural disaster

Mostly respondents ceased to volunteer when they were no longer needed or felt the emergency was over (Graph 11).



Graph 11: Factors influencing respondents' decision to cease volunteering for the natural disaster

Five out of the eleven interview respondents reported having volunteered since the 2011 disasters. Personal factors that influenced their decision to continue volunteering or take up a new volunteering opportunity included:

- Being approached at times that suited them;
- Having had positive experiences in previous volunteer roles;
- A general desire to help;
- Feeling valued as a volunteer; and
- Seeking new opportunities for participation and personal development after retiring from the workforce.

Systemic factors that interviewees identified as informing their decisions to continue or take up a new volunteering opportunity included:

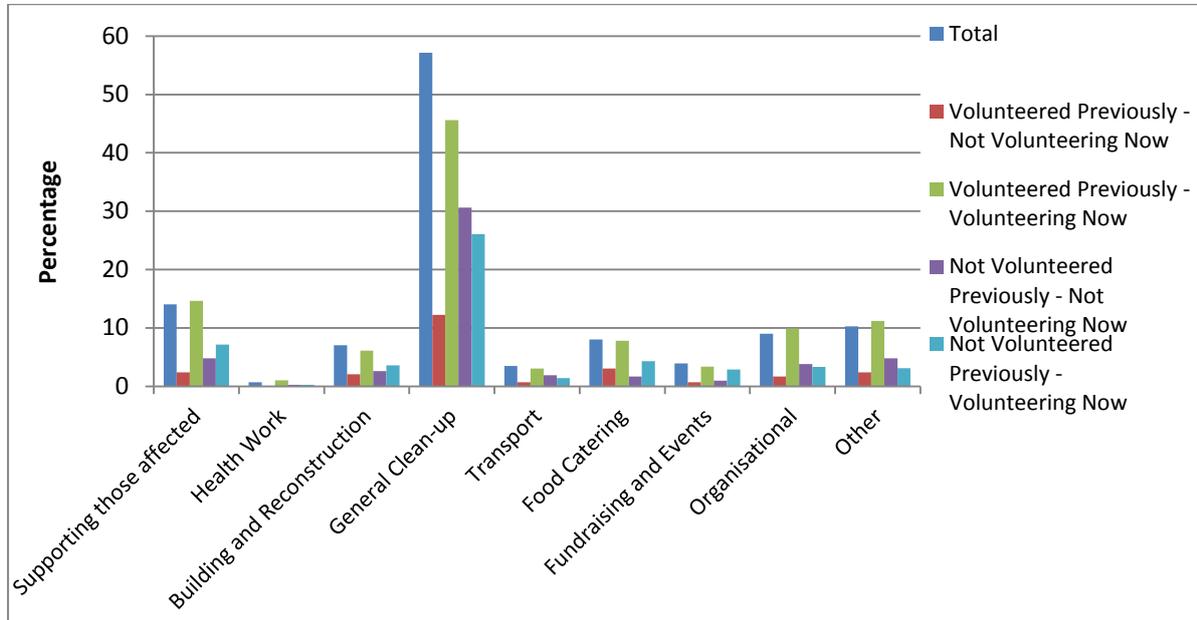
- Programs that include hands on activities;
- Existence of an organisational strategy that the volunteer effort clearly fits into; and
- Organisational culture of community support

As noted in the analysis of network characteristics of our participants, the nature and quality of interactions with volunteer-based organisations influenced people's volunteering experiences and their motivations to continue or take up new volunteering opportunities. On balance, feedback about these interactions suggested negative experiences. However, respondents also identified the following as positive experiences:

- Organisational contact in modes that allowed current or potential volunteers to respond at times that suited them;
- Having friends already volunteering within the contact organisation;
- Effective organisational management of volunteers and activities;
- Strong leadership of volunteer programs and activities; and
- The availability of volunteering opportunities suitable to people with differing abilities & skills

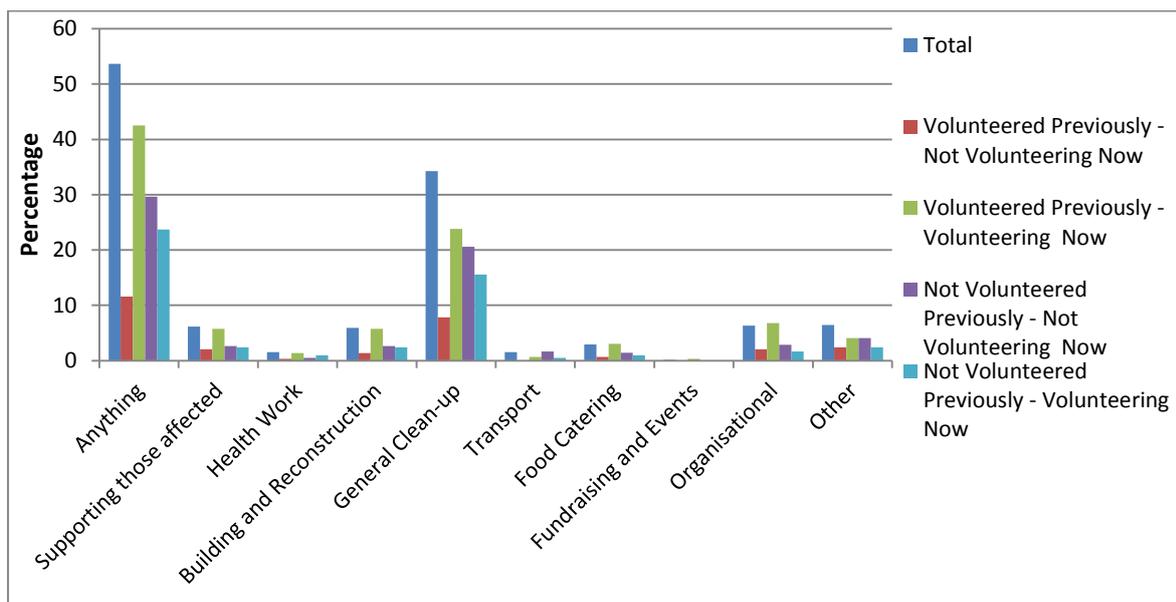
5.4 Types of volunteering undertaken by spontaneous volunteers during a disaster

Over half the respondents were involved with general clean-up (Graph 12). Long-term volunteers, those who volunteered before and after the disaster, undertook more specific tasks possibly because of their experience.



Graph 12: Types of volunteering respondent did during the disaster and recovery period

Graphs 12 and 13 compare volunteers' actual and desired volunteering roles. 54% of volunteers reported being happy to perform any role, followed by 34% who wanted to participate in general clean-up. This indicates the majority of volunteers are willing to help during times of disaster are not concerned about the tasks they are asked to do. This willingness to help where ever needed was also reflected in the interview data.

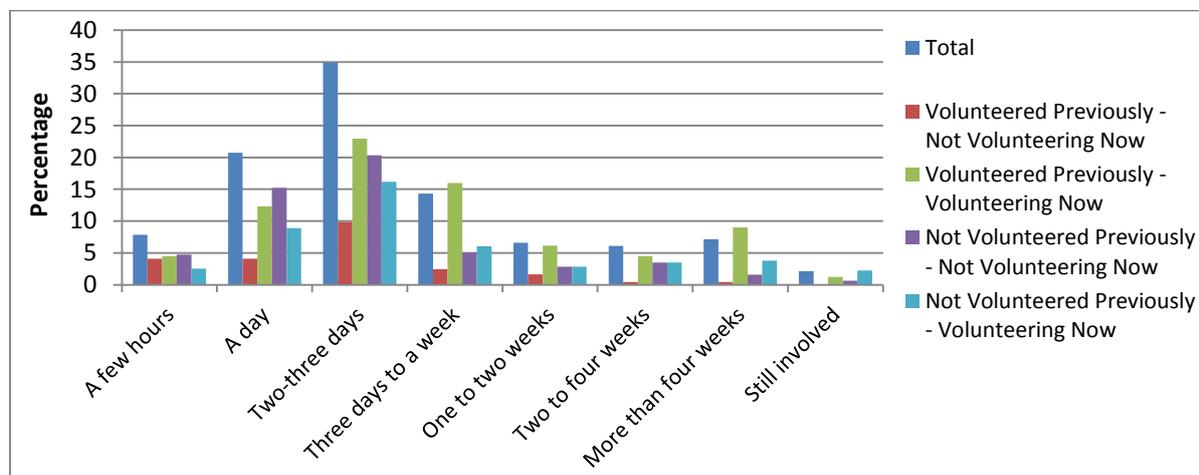


Graph 13: Desired volunteering role for disaster and recovery period

Graph 13 shows that the roles volunteers were actually doing were distributed similarly to what they desired to do. Most volunteers were involved in general clean-up (57%). This was followed by supporting those affected (14%), organisational (9%) and food catering (8%). Those who were frequent volunteers (had volunteered previously and were currently volunteers), were over-represented in the more specialised areas.

The majority of respondents (68.4%) reported helping in ways other than by volunteering directly with Volunteering Queensland. Those respondents who were currently volunteering and had experience volunteering prior to the disaster were most likely to report volunteering in ways other than through Volunteering Qld.

Just over a third of respondents (35%) volunteered for 2 to 3 days (Graph 14), while 21% volunteered for a day. Long term volunteers, those who had volunteered both previously and currently, typically volunteered for longer periods of time.



Graph 14: Length of time respondents volunteered

Interview respondents reported that a range of personal, relational and external factors influenced the types of volunteering activities they took up.

Personal factors included:

- Physical capabilities to undertake certain tasks;
- Having relevant skills (eg counselling and nursing experience); and
- A desire to have a hands on volunteering experience

Relational factors included:

- Activities that generated or created opportunities for camaraderie:

“There was such a good sense of community at the time that everyone was wanting to help out in some way... the sense of connectedness.”

“When they saw us all cleaning they all (tenant from the apartment building) came down and helped.”

- Activities that were actively co-ordinated (either formally, by volunteer or government agencies, or informally, by organised residents)
- Personal connections through friends, family and neighbours, and civic connections through, for example, church groups

A strong relational factor that interviewees identified was simply being asked to help. This included being asked by personal connections, by government (particularly local government leaders), and/or by their workplace or professional associations:

“it was the lord mayor calling for help from the public because prior to that what do you do?”

In terms of external factors, interview respondents identified time availability, transport and access to areas where help was needed and their physical proximity to volunteering sites as issues that influenced their decisions regarding if and, if so, how, to volunteer.

5.5 The role of social networking technologies in facilitating associational and ephemeral volunteering during a disaster

As discussed in Section 3.0, considerable research efforts are underway to understand the role of social networking technologies during crisis events. Because of this, our research only touched lightly on this issue.

Interview respondents identified social networking technologies as an important source of raising their awareness of the crises and keeping them up to date in a rapidly moving environment. In terms of volunteering as a result of exposure to social networking technologies, both newer and older technologies appeared to be significant for a small proportion of our interviewees. One respondent reported that use of contemporary social networking technologies allowed her to provide a targeted response to need:

“ Well when the floods were happening, obviously I got Facebook and stuff like that. One of my friends, I was wondering where she was living...so I contacted her and she said she was alright. But one of her friends had been affected...So we went over there [for] about 12 hours.”

6.0 Discussion and Conclusions

Definitions of spontaneous volunteering have to date been largely developed by specific emergency service organisations that define these volunteers in relation to their organisation. By more widely examining the characteristics of spontaneous volunteers in relation to the crises they sought to respond to, we are able to draw a number of conclusions that more organisationally prescriptive definitions of spontaneous volunteers do not allow for. First, while the literature suggests that spontaneous volunteering may be characterised as either convergent or emergent activity (see Beagrie, 2009; Stallings & Quarantelli, 1985), we find a mix of both across our sample and co-present

amongst individuals within our sample. Consistent with Britton (1991), spontaneous volunteers in our study were engaged in both structured activities through organisations and informal convergent activity that was often ephemeral and not related to formal organisations. Second, because existing definitions of spontaneous volunteering are generally prescribed by volunteers' relationships with the organisation defining them, they tend to characterise spontaneous volunteers as 'emergent' in their civic action more broadly. Consistent with this idea, our research found that the majority of spontaneous volunteers in our sample were first time volunteers; however, those in our sample that had past volunteering experiences were more likely to participate in the volunteer response to the disasters for a longer period of time. These findings suggest a more nuanced understanding of just who spontaneous volunteers are than has been suggested in the industry literature to date.

Our findings also illuminate a number of significant issues with regard to the question of what motivates volunteers to participate. As discussed in Section 2.3, recent writing on trends in volunteering suggest that we are experiencing shifts away from collective volunteering characterised by a sense of obligation to community towards reflexive volunteering characterised by the pursuit of personal interests and needs (see Hustinx & Lammertyn, 2003; Macduff, 2006; Bryen & Madden, 2006). Our findings suggest that the overwhelming initial motivation for spontaneous volunteering in response to natural disasters is a desire to help the community, which is consistent with the collective mode of volunteering. Yet, for those who are new (or newly returned) to volunteering through such events, opportunities for more reflexive modes of volunteering beyond the immediate crisis appear to be important in translating initial enthusiasm into sustained civic engagement.

Further, while the collective mode of volunteering clearly informs spontaneous volunteerism in response to natural disasters, our research suggests that we need to better unpack the interplay between collective and individual benefits of volunteering, which such categories tend to obscure. While it was beyond the scope of this study to test the health impacts of spontaneous volunteering, it was clear from our results that psycho-social factors play a role in motivating people to offer help during periods of natural disaster. Both our quantitative and qualitative findings suggest that, for many people, helping (or offering to help) the community is an important factor in regulating their personal stress and anxiety associated with the disaster event. Similar trends have been identified in relation to natural and terrorist-related disasters internationally (see Kendra & Watchendorf, 2001). While our study suggests this is an important driver of spontaneous volunteering, further research is required to better understand the health and wellbeing effects of volunteering during natural disaster events.

Beyond collective motivations, there were also personal, relational and external factors that informed our respondents' spontaneous volunteerism. While the demographic characteristics of volunteers has been a wide source of interest in past volunteer research (see, for example, Michel, 2007), it is the importance of relational characteristics – including relationships both to people and place - that stood out in our study.

Taken together, our network maps indicate a pattern of volunteering behaviour that was often well established prior to the 2010-2011 Queensland natural disasters. Those who volunteered to help in the disasters had a history of long term engagement with volunteer work, and connections to people who did the same. Kollmuss and Agyeman (2002) have suggested that normative influences (e.g.

social norms, prior behaviour and how individuals identify themselves) likely play a role in individuals' decision to volunteer for specific causes such as for disasters.

As well as a personal predisposition toward volunteering, proximity, both in relation to people directly affected by the event and to the event itself, was also found to play an important role in attracting and, to some extent, retaining volunteers. That is, people who had either a close relationship, via familial or community ties, or were situated in event locales are more likely to engage in volunteering activity. Kinsbergen, Tolmal and Ruiter (2013), discussing volunteering in Dutch private development institutions, corroborate the proximity thesis, indicating that volunteers perceiving a smaller distance to beneficiaries are likely to engage in and spend more time in volunteering activities. The importance of proximity to people is consistent with findings from emergency services volunteering research, which stresses the significance of family relationships in particular in motivating this kind of volunteering activity (see Rotolo & Berg, 2011; Baxter-Tomkins & Wallace, 2009).

In Social Networking Analysis approaches, there is recognition that actors (people or organisations) occupy positions within a network that function as facilitator (or adversely bottleneck) in the diffusion of information, affect and influence (Borgatti & Cross, 2003; Wasserman & Faust, 1994). These actors are called 'brokers' (Borgatti & Cross, 2003; Burt, 2003) or 'bridging organizations' (Olsson, Folke, Galaz, Hahn, & Schultz, 2007) and they have the unique capacity and power, with their in-between positions within the networks, to create bridges between actors and understand how to connect organisations and individuals with each other (Manring, 2007; Olsson, et al., 2007). Thus, from a network perspective brokers are defined as people or other entities that create connections and relationships within and across different groups of people. This study found that there were two types of brokers. First, there is the connector who makes connections among people within a cluster or sub-cluster (Anklam, 2007). These individuals draw on either their personal relationship with potential volunteers or their status as localised recruitment agents to encourage broader engagement and participation in community initiatives, which often translates to more formalised volunteering roles.

The second broker type refers to those organisations tasked with either linking volunteers to site based volunteering groups, i.e. Volunteering Qld, and/or the set of organisations/entities providing the onsite direction and management of voluntary actions. Despite the key and important role that these broker agencies, particularly those linking volunteers to activities in local areas and those directly linking volunteers to on-site tasks, most of the 'stories' arising from this study involved respondents expressing considerable dissatisfaction in the way in which volunteering organisations are run and especially their perceived lack of capacity to manage people and organisational capability. This seems to impact negatively of the willingness of emergent volunteers to stay engaged or even 'ramp-up' to higher levels of volunteering commitment.

By contrast the findings from this study suggest that the individual network brokers, or connectors as they are sometimes termed (Koch & Lockwood, 2010) seem to be more effective in making initial connection with potential volunteers, and through their closer relations/deeper knowledge of the person, are often able to convince them into expanded voluntary activity. The study indicates that this transition is in part made possible by the possession of strong local knowledge and their good

connections within and across the neighbourhood. As a consequence local brokers know what's going on and how best to help people to get in touch with others to make a difference.

There are three main areas in which both broker types can help in relation to volunteering:

- Connecting people to others, making them more aware of what's happening the local area;
- Linking potential volunteers to volunteering involving organisations;
- Managing and supporting volunteer projects.

Many of the respondents in our study who were not previously active as volunteers do not seem to have tipped over to active citizenship as a result of their actual or desired efforts to spontaneously volunteer; yet, the majority were already active. In the instance of a crisis such as the 2010-2011 flood and cyclone events, our findings suggest that individuals with an existing predisposition for volunteering their services and time will find ways to participate. However, the quality and accessibility of services responsible for organising and facilitating volunteering are vitally important in ensuring continued participation beyond the timeframe of the event.

7.0 Practical Implications

Our research findings suggest that much of the motivation and many of the opportunities to engage meaningfully in spontaneous volunteering in response to a disaster are predicated on personal factors and relationships that are outside the remit of institutions or organisations. We focus here on those practical implications of the research where organisational or policy responses may be beneficial, while recognising that carefully engineered responses to 'managing' or 'capturing' spontaneous volunteerism are neither entirely possible nor entirely desirable.

The power of asking – the results from this research send a loud message that the way in which people are asked to participate has a powerful effect on their actions with regard to volunteering. The most powerful 'askers' that emerged from this study were: people who were personally or professionally close to potential volunteers; governmental and nonprofit institutions that were recognised as 'being in charge'; individual political leaders who were viewed as 'being in charge'; and professional associations and institutions with expertise and networks needed to broker skilled volunteer responses. These findings suggest that improved identification of (different types of) network brokers, and targeted marketing and messaging of requests for volunteer contributions are important in both mobilising and managing effective volunteer efforts in response to disasters, and in ensuring sustained engagement of emergent volunteers beyond the crisis period.

The effects of past experience – in this study, people's past experiences, both of disasters and volunteering, motivated their initial and sustained involvement in volunteer efforts in different ways. In terms of sustaining people's involvements in volunteer efforts beyond the immediate aftermath of a disaster, and/or redirecting volunteer efforts to longer term forms of civic engagement, our study suggests that it might be important for volunteer and government agencies to distinguish

'emergent' spontaneous volunteers from 'experienced' spontaneous volunteers. While the latter group requires less targeted support to remain involved, more tailored responses that take into account individual needs are required to ensure that the former group engage and remain engaged, if this is a desired outcome. Our research also suggests that there are a great many latent networks present in communities that may be relatively easily mobilised in response to certain needs or events. Over-utilising these networks is not advisable, but it may be useful to periodically check in on volunteers to make sure that they are still there and connected and that their 'connectors' are also still in place and able to mobilise.

The therapeutic effects of spontaneous volunteering -similarly to other studies, our research suggests that the act of volunteering can have important therapeutic effects for people directly and indirectly affected by crisis events. Yet, like any unguided therapeutic process, its effects on individuals are likely to be inconsistent. Better understanding these effects –through targeted research and through dialogue between professionals and organisations with relevant expertise in mental health and volunteer coordination - is important both to effective volunteer management and to population health and health promotion in the aftermath of natural disasters. Recognising that an offer *to* help is sometimes a cry *for* help is important in ensuring that appropriate referral systems and service coordination are in place during and after these events.

The power of storytelling – our findings suggest that stories – conveyed through personal relationships, mainstream and social networking media are powerful motivators for spontaneous volunteering and important mechanisms by which healing associated with collective volunteerism is disseminated. While the stories of recovery from the 2010-2011 Queensland flood and cyclone crises are still unfolding, more could be done to share and disseminate these stories, and to link these stories with the wider communities affected by these and future disasters.

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9.0 Appendices

9.1 Appendix One - Survey instrument

1. Were the natural disasters the first time you volunteered for a cause or activity?
 - Yes -> go to Q4
 - No

2. On average, how often did you volunteer before the natural disasters occurred?
(Note to interviewer: **READ OUT – SINGLE RESPONSE**)
 - More than once a week
 - Once a week
 - Once a month
 - Several times a year
 - Once a year or less
 - Once off / single occurrence.

3. Prior to the natural disasters, had you volunteered with any of the following organisations?
 - a) sporting organisations and/or events
 Yes No

 - b) welfare organisations for example meals on wheels, op shops, refugee support groups.
 Yes No

 - c) schools for example tuckshop, Parents & Citizens
 Yes No

 - d) interest groups for example gardening, environmental or animal welfare groups
 Yes No

 - e) religious organisations
 Yes No

f) state emergency services

Yes No

4. What were your existing commitments at the time of the disaster? (Interview: Please tick all that apply).

(Note to interviewer: **READ OUT – MULTI RESPONSE**)

- Full-time work
- Part-time work
- Casual work
- Looking for work
- Self-employed
- Student
- Primary caregiver
- Home duties
- Can't remember – *Nb. Exclusive response*

5. We're curious about what prompted you to register as an Emergency Volunteer with Volunteering Qld following the natural disasters. Please rate the following statements on a scale of 1 to 5, with 1 being 'not at all important' and 5 being 'extremely important' in your decision to contact Volunteering QLD. If any of the following statements do not apply to you then please say 'not applicable'.

ROTATION ADDED

	Not at all important				Extremely important
a) I felt I needed do something to help	1	2	3	4	5
b) Media coverage of the scale of the disaster/s	1	2	3	4	5
c) I felt upset about what was happening to my community	1	2	3	4	5

d) I needed someone to talk to about what was happening		1	2	3	4	5
e) Social media coverage of the disaster/s (for example Facebook, Twitter)		1	2	3	4	5
f) Learning that family and friends had been affected	N/A	1	2	3	4	5
g) Knowing someone else who was volunteering	N/A	1	2	3	4	5
h) I'm a member of another organisation which put out a call for volunteers	N/A	1	2	3	4	5
i) I couldn't get through to other emergency support agencies	N/A	1	2	3	4	5
j) I had an existing relationship with Volunteering Queensland	N/A	1	2	3	4	5

6. How important were each of the following to your decision to volunteer during the disaster? Please rate the following statements on a scale of 1 to 5, with 1 being 'not at all important' and 5 being 'extremely important' in your decision to volunteer.

ROTATION ADDED

		Not at all important				Extremely important	
a) I had previous experience in emergency work and felt I had something to offer	N/A	1	2	3	4	5	
b) I lived/have lived in an area affected by the disasters	N/A	1	2	3	4	5	
c) I wanted to see/understand what had happened		1	2	3	4	5	

d) I believe that it is important to support people in need		1	2	3	4	5
e) I would have felt terrible if I had not done anything to help		1	2	3	4	5
f) I wanted to increase my knowledge and skills in some way		1	2	3	4	5
g) I wanted to be part of the community response to the disasters		1	2	3	4	5
h) It was relevant to my future work aspirations	N/A	1	2	3	4	5
i) I wanted to return the favour after being helped in the past	N/A	1	2	3	4	5
j) It feels good to help people out		1	2	3	4	5
k) I wanted to model good values to my family	N/A	1	2	3	4	5
l) I wanted to help my community		1	2	3	4	5
m) I wanted to feel useful		1	2	3	4	5
n) I felt distressed and I wanted to do something		1	2	3	4	5
o) My religious beliefs on support and helping out	N/A	1	2	3	4	5

7. Please think back to your feelings during the natural disaster/s. Rate the following statements in terms of how you felt during the disaster/s before you contacted VQ, with one being 'not at all' and 5 being 'a lot':

ROTATION ADDED

Not at all	A lot
------------	-------

a) I found the disaster to be stressful	1	2	3	4	5
b) I did not know what to do when the disaster/s were happening	1	2	3	4	5
c) I felt confident that I could help if I contacted VQ	1	2	3	4	5
d) I did not know how to help	1	2	3	4	5
e) I felt determined to help	1	2	3	4	5
f) I felt useless	1	2	3	4	5
g) I felt depressed and nothing could cheer me up	1	2	3	4	5
h) I felt hopeless	1	2	3	4	5
i) I felt nervous	1	2	3	4	5
j) I felt restless or fidgety	1	2	3	4	5

8. At what point did you contact VQ to volunteer in response to the natural disaster/s?

(Note to interviewer: **READ OUT – SINGLE RESPONSE**)

- As soon as I knew the disaster/s were coming (before it actually started)
- In the days when the disaster/s happened
- In the week after the disaster/s happened
- About 1-2 weeks after the disaster/s happened
- More than 2 weeks after the disaster/s happened

9. What type of volunteering did you want to do during the disaster and recovery period?

(Note to interviewer: select response(s) that best corresponds. Do not read response options)

(Note to interviewer: **DO NOT READ – MULTI RESPONSE – PROBE**)

- Anything – *Nb. Exclusive response*

- Supporting those affected for example counselling or distributing donations
- Health work for example medic, massage
- Building and reconstruction
- General Clean-up
- Transport for example driving a vehicle or boat
- Food catering
- Fundraising and events
- Organisational for example call centre, translation or IT
- Other (please specify)

10. Please think back to your feelings during the disaster but after you contacted VQ. With 1 being, 'not at all' and 5 being 'a lot', please rate the following statements in terms of how you felt immediately after you contacted VQ:

ROTATION ADDED

	Not at all				A lot
a) I found the disaster to be stressful	1	2	3	4	5
b) I did not know what to do when the disaster/s were happening	1	2	3	4	5
c) I felt confident that I could help through my contact with VQ	1	2	3	4	5
d) I did not know how to help	1	2	3	4	5
e) I felt determined to help	1	2	3	4	5
f) I felt useless	1	2	3	4	5
g) I felt depressed and nothing could cheer me up	1	2	3	4	5
h) I felt hopeless	1	2	3	4	5

i) I felt nervous	1	2	3	4	5
j) I felt restless or fidgety	1	2	3	4	5

11. Once you registered, when did you expect to be called upon as a volunteer?

(Note to interviewer: - **DO NOT READ OUT - SINGLE RESPONSE – PROBE BEST ANSWER**)

- Same day
- Next day
- Within the week
- Within a fortnight
- Within a month
- Within six months
- More than six months after the event
- I had no particular expectation

12. Were you called upon by VQ to volunteer during the disaster and recovery period?

- a) Yes -> go to Q13
- b) No -> go to Q12(i)

12(i) How did you feel about not being called upon as a volunteer for the natural disasters?

- (Note to interviewer: **READ OUT - SINGLE RESPONSE**)Frustrated that I wasn't used
- Unconcerned
- Positive that I wasn't needed

12(ii) Did you volunteer in other ways – that is, outside registering with VQ – to help with the natural disaster/s?

- a) Yes -> Q15
- b) No -> Q20

13. From the time that you first registered, when were you called upon to volunteer for the disaster? (Note to interviewer: **DO NOT READ OUT - SINGLE RESPONSE**)

- Same day
- Next day
- Within a week
- Within a fortnight
- Within a month
- Within six months
- More than six months later

14. At what times were you asked to volunteer?

(Note to interviewer: **READ OUT - SINGLE RESPONSE**)

- During the times you said you were available
- Outside of the times you said you were available
- Both during and outside the times you said you were available
- Don't know/ don't remember

15. What type of volunteering work did you *actually* do during the disaster and recovery period?

(Note to interviewer: **DO NOT READ OUT – MULTI RESPONSE – PROBE**)

- Supporting those affected for example counselling, distributing donations
- Health work for example medic, massage
- Building and reconstruction
- General Clean-up
- Transport for example driving a vehicle or boat
- Food catering
- Fundraising and events
- Organisational for example call centre, translation, IT
- Other (please specify)

16. In total, how long did you volunteer?

(Note to interviewer: **DO NOT READ OUT- SINGLE RESPONSE – PROBE BEST ANSWER**)

- A few hours
- A day
- Two-three days
- More than three days to a week
- More than a week to two weeks
- More than two weeks to four weeks
- More than four weeks
- I am still involved with volunteer activities related to the 2010-11 disaster recovery (go to q18)

17. Please rate the following statements on a scale of 1 to 5, with 1 being 'not at all significant' and 5 being 'extremely significant'. How significant were each of the following to you ceasing volunteering in relation to the natural disasters?

ROTATION ADDED

1 = Not at all significant, 5 = Extremely significant

a) The experience did not meet my expectations	1	2	3	4	5
b) I was no longer needed	1	2	3	4	5
c) The period of emergency seemed over	1	2	3	4	5
d) My contribution didn't seem important	1	2	3	4	5
e) I felt inadequately prepared to volunteer	1	2	3	4	5
f) I no longer had time to volunteer	1	2	3	4	5

18. I'm going to read you 4 statements. Please select the one that you feel best describes how well you felt your skills and experience were utilised during your volunteer work.

(Note to interviewer: **READ OUT – SINGLE RESPONSE**)

- I felt under-utilised
- I felt utilised but not as well as I could have been
- I felt well utilised
- I felt very well utilised

19. Have you become more involved with your community as a result of your volunteering experience during the natural disaster/s?

Yes No

20. How often do you volunteer at the moment, for any cause or activity? (Interviewer: select the option that most closely applies)

(Note to interviewer: **DO NOT READ OUT – SINGLE RESPONSE**)

- More than once a week
- Once a week
- Once a month
- Several times a year
- Once a year or less
- I don't volunteer (go to Q23)

21. In the time since the natural disasters, have you helped out with any of the following

a) sporting organisations and/or events

Yes No

b) welfare organisations for example meals on wheels, op shops, refugee support groups.

Yes No

c) schools for example tuckshop or Parents and citizens

Yes No

d) interest groups for example gardening, environmental or animal welfare groups

Yes No

e) religious organisations for example, church groups

Yes No

f) through state emergency services

Yes No

22. Please rate each of the following statements on a scale of 1 to 5, with 1 being 'not at all important' and 5 being 'extremely important'. How important are each of the following in your decision to volunteer at the current time?

ROTATION ADDED

1 = Not at all important, 5 = Extremely important

a) The camaraderie and sense of belonging	1	2	3	4	5
b) I enjoy the work	1	2	3	4	5
c) My contribution seems important	1	2	3	4	5
d) I feel that I'm making a difference	1	2	3	4	5
e) I receive good training / learn new things	1	2	3	4	5
f) I have spare time	1	2	3	4	5

23. We just want to ask a few details about you now. What is your highest level of education?
(please select one)

(Note to interviewer: **READ OUT – SINGLE RESPONSE**)

- 01 - Up to Year 10 04 - Undergraduate degree
 02 - Year 12 certificate 05 - Post-graduate degree
 03 - Trade Qualification 06 - Other _____

24. What is your gender?

(Note to interviewer: **DO NOT READ OUT**)

- Female
 Male
 Other ____ (please specify)

25. Which of the following age groups do you fall into?

(Note to interviewer: **READ OUT – SINGLE RESPONSE**)

18-25

26-35

36-45

46-55

56-65

66- 75

76-85

85+

Refused

26. What is your postcode?

(Note to interviewer: Use 9999 as 'Refused')

9.2 Appendix Two - Interview schedule

1. Before your involvement with disaster recovery related to the 2010/11 disasters, had you done any volunteering?

[If yes] What types of volunteering had you been involved with?

2. Please tell me little about why you decided to volunteer during the disaster/s?

At what point did you decide to volunteer?

How did you feel as the disaster unfolded?

Did you know people who were affected? Was your area affected?

3. Please tell me about your volunteering experience during the 2012/11 natural disaster?

What type of work did you do? Where?

How long did you volunteer for?

Can you tell me about a memorable moment?

4. Who did you volunteer with?

Did friends or family volunteer with you?

Did you volunteer as part of an organised group of people you didn't already know?

5. Did you experience any barriers to participating during your volunteering experience?

[If yes] What were these?

6. What aspects of your volunteering experience would inspire you - or not - to volunteer in the future?

7. Did you develop any new connections or friendships through your volunteering experience?

[If yes] Please describe these?

8. Since volunteering for 2010/11 disaster recovery, have you become involved with any other community events or groups?

[If yes] Which ones? E.g. welfare organisations, SES, schools.
And why did you get involved?

[If no] What are some of the factors which have affected your decision not to volunteer further? **[Go to question 12]**

9. How are you involved with these organisations?

10. How often do you volunteer with each of these groups?

- More than once a week
- Once a week
- Once a month
- Several times a year
- Once a year or less

11. Do (or did) you know anyone in the organisation/s where you're volunteering?

[If yes] Please provide names of people and their organisation [please note, we are asking you for this information in order to map networks only. We will not share this information in an identifiable way or contact the people you mention].

How did you meet them?

Do you see them outside of volunteering?

Did you know them before you volunteered? **[If yes]** How?

Have they been influential in your choice to continue volunteering? **[If yes]** How?

12. Do you have any family or friends who regularly volunteer with a volunteer organisation?

[If yes] Please indicate which organisations.

Are any of these friends or acquaintances you made during your disaster volunteering experience?

13. Is there anything else you would like to tell us about your volunteering experience?