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This portfolio includes a thesis entitled:

**The Possibility of Over the Phone Traumatization: A
Repertory Grid Study Investigating Secondary
Traumatic Stress in Samaritan Crisis Line Volunteers.**

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THESIS:

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ABSTRACT

Background: The literature suggests a consensus that individuals can become traumatised through listening to another's trauma. Much of this research, however, has focused on individuals who have had direct, face-to-face contact with the primary victims of trauma. It therefore appears that there is a paucity of research looking at contact which is less direct, such as telephone contact.

Aims: The current research aimed to explore the levels of secondary traumatic stress and posttraumatic stress disorder in a sample of Samaritan telephone volunteers, with a view to understanding some of the correlates of trauma. It also aimed to explore the personal construct systems of a sub-sample of Samaritan telephone volunteers, and explore any relationships between personal construct systems and trauma.

Method: A cross-sectional design was employed. Questionnaires were used to assess levels of secondary traumatic stress and posttraumatic stress in Samaritan telephone volunteers spread across the United Kingdom. Repertory grid technique was used with a sub-sample of Samaritan telephone volunteers to elicit bipolar constructs comparing themselves and others.

Results: 299 Samaritan telephone volunteers completed or partially completed the questionnaires, and of these 50 volunteers completed the repertory grids. Levels of secondary trauma (as determined by the Modified Secondary Trauma Scale) correlated with discrepancy in construing of the current and ideal self, levels of posttraumatic stress and exposure to potentially traumatic events. The Samaritans were not found to be suffering with secondary trauma. Degree of elaboration of self-construing reduced after the named traumatic event, and there was a significant difference in degree of elaboration for 'self after traumatic event' on the emergent poles of constructs.

Conclusions: This research appears to be the first dedicated to assessing secondary trauma in telephone crisis line volunteers, lending some support to Sewell and Cromwell's (1990) personal construct model of posttraumatic stress. The findings of this study challenge crisis lines to think about secondary trauma, and to

implement some teaching and training around this area. Additionally, it reinforces that further research in the area is needed, and highlights the relative merits of employing a repertory grid methodology alongside questionnaires in understanding trauma.

CHAPTER ONE: INTRODUCTION

This chapter will begin by considering the background to the research, which will involve looking at telephone crisis line volunteers. It will then define the different terms used to describe trauma (including when an individual is exposed to another's trauma), before looking at the contribution Personal Construct Theory (PCT) has made to this area. The wider literature will then be summarised, which will include a model of risk factors for developing trauma symptoms, and the known mediators of trauma. The focus will then switch to consider the Samaritans, before presenting the research aims and hypotheses.

For the search strategy employed in this research, please see Appendix 1.

1.1 Background to Research

Telephone crisis lines offer an important service to individuals in crisis. Their accessibility at times when individuals may have limited means of support results in many people calling the various help lines. For many of the crisis lines, the role of the volunteer is to listen and support the caller, in a non-judgemental way, being encouraged to connect with any distress (Arthur, McNeil and Russell Small, 2009). Robinson and Mitchell, 1993 (cited in Kinzel and Nanson, 2000) argue that the ability to identify with the caller may be useful in understanding and supporting them, but it may also interfere with the volunteer's ability to be effective if it highlights their own vulnerability.

Through the very nature of crisis line work, volunteers are often exposed to horrific and detailed accounts of human pain and suffering, which may influence the volunteers' thoughts and feelings. In turn, this may affect the way they see the world, themselves and others around them (Kinzel and Nanson, 2000). However, the singular nature of this intervention, combined with caller anonymity, prevents the outcome of the call from ever being known (Jaffe, 1984), possibly leaving the volunteer with unanswered questions (Cyr and Dowrick, 1991) and a feeling of impotence and frustration at not being able to protect a vulnerable caller (Arthur, McNeil and Russell Small, 2009).

When looking at crisis work, there is evidence that it can elicit negative emotions for the volunteer, which arguably is a direct result of exposure to traumatic material (Stamm, 1995). In their research, Cyr and Dowrick (1991) reported that several crisis line volunteers from a sexual assault agency mentioned distressing feelings and experiences derived from their crisis line work. For example, participants disclosed that they were having nightmares or bad dreams, and intrusive thoughts, felt inadequate and had fears for their own children. Additionally, Capner and Caltabiano (1993) reported that 82 per cent of non-professional volunteer counsellors found working with clients to be emotionally demanding, and Kehoe and Grant (1997) found that 79 per cent of crisis volunteers experienced negative emotions as a result of a crisis call. However, it is important to note that all three of these studies (Capner and Caltabiano, 1993; Cyr and Dowrick, 1991; Kehoe and Grant, 1997) had very small sample sizes (39, 32 and 41 volunteers respectively), which raises questions regarding how much the findings can be generalised. It is also important to consider whether there was a self-selecting bias in the research, since many of the selected participants did not return the questionnaires. Therefore, the individuals who responded may somehow be different from the individuals who chose not to respond.

Due to the factors already considered, it could be proposed that it is difficult for the volunteer not to be affected by what they hear, with Figley (1995) arguing that this may actually be necessary if we are to engage sufficiently with others and understand their pain. Additionally, Rosenfeld (1997) suggests that the lack of visual cues and clues when working on the telephone can enhance the transference relationship. The emotional response of transference is said to be frequently unconscious, very frightening, and potentially interferes with the communication and support provided to a crisis line caller (Friedman, 1996). This highlights the need to further investigate the impact of listening to traumatic calls on crisis line volunteers.

1.2 Posttraumatic Stress Disorder (PTSD) and Secondary Traumatization

The literature describes a number of factors that may result in a person being more likely to suffer with the effects of trauma (which will be discussed later), illustrating that no one is exempt. Indeed, it has been argued that anyone who is involved in a traumatic event where actual or threatened injury to one's self or others occurs, and where feelings of fear, helplessness or horror are present (Baldwin, 1995), may be susceptible to developing symptoms of posttraumatic stress disorder (PTSD) (Hesse,

2002). In his doctoral research, Quaiter (2004) reports that 86.5 per cent of humanitarian aid workers displayed symptoms of PTSD, with 40.5 per cent meeting the DSM-IV diagnostic criteria for PTSD.

PTSD derives from a traumatic event, which may include things like war, natural disasters, accidents, and physical or sexual assault, to list a few. This experience can result in an individual re-experiencing the event through *intrusive thoughts*, often in the form of flashbacks or nightmares; the person may *avoid* exposure to people or things that may elicit painful feelings; or become *hyper-aroused*, which includes the physiological signs of hyper-vigilance or an increased startle response (Baldwin, 1995). However, for an individual to be diagnosed with PTSD, these symptoms need to have been present for at least one month, and have to be causing significant impairment to daily functioning.

According to the DSM-IV (APA, 1994), people can be traumatised either directly or indirectly:

“The essential feature of Posttraumatic Stress Disorder is the development of characteristic symptoms following exposure to an extreme traumatic stressor involving direct personal experience of an event that involves threatened death, actual or threatened serious injury, or other threat to one’s physical integrity; or witnessing an event that involves death, injury, or a threat to the physical integrity of another person; *or learning about unexpected or violent death, serious harm, or threat of death or injury experienced by a family member or other close associates*” (APA, 1994, p.425) [italics added to demonstrate the point].

Stamm (1995) argues that this demonstrates that individuals can be traumatised without actually being physically harmed or threatened with harm (which has been linked to the symptoms of PTSD). However, the DSM-IV does not state whether PTSD symptoms can occur if an individual listens to traumatic material that is not connected to a family member or other close associate.

Despite not being included in the DSM-IV, Stamm (1995) states that the potential cost of caring for others (who do not need to be family or close associates) has now been acknowledged, and that individuals can sometimes experience pain as a direct

result of exposure to others' traumatic material. This has been distinguished from more general concepts, such as burnout, in that it is an individual's response to a disclosed traumatic event(s) that they themselves have not directly experienced (Danieli, 1985). Indeed, there has been a growing base of literature which has investigated the effects of listening to or witnessing another's trauma on an individual. For example, Motta, Newman, Lombardo and Silverman (2004a) found that 33 per cent of a university sample who reported having had close and continued exposure to a person or persons who had been traumatised reached the cut off score for secondary traumatic stress (STS) on the Modified Secondary Trauma Scale (MSTS; Motta, Hafeez, Sciancalepore and Diaz, 2001). Although most are agreed that there can be long lasting effects on the listener, there is no consensus on what this phenomenon should be called, or how it should be defined (Hesse, 2002).

Secondary traumatic stress (STS), vicarious trauma (VT) and compassion fatigue (CF) are terms that are used within the literature, albeit in slightly different contexts. Secondary trauma, or secondary traumatic stress, corresponds to the diagnostic category for posttraumatic stress disorder (PTSD) in the *Diagnostic and Statistical Manual (4th Edition; DSM-IV)* of the American Psychiatric Association (APA, 2004). In this case, Figley (1995) argues that the symptoms for secondary trauma are almost identical to those of PTSD, except they rarely reach the same levels (Motta, Kefer, Hertz and Hafeez, 1999). To illustrate the close connection between secondary trauma and PTSD, Quaitie (2004) reports that humanitarian aid workers who met the DSM-IV criteria for PTSD also reported significantly higher levels of secondary trauma.

However, PTSD and secondary trauma differ in that exposure to knowledge about a traumatic event can be associated with the secondary trauma symptoms, whereas PTSD symptoms are connected to the person who directly experienced or witnessed the trauma. The symptoms of secondary trauma include unwanted recollections of the traumatic event, sudden re-experiencing of the event, detachment, difficulty concentrating, and sleep disturbances (Figley, 1995), which are said to result from exposure to a single trauma (Conrad and Perry, 2000).

Vicarious trauma refers more specifically to cognitive schemas, core beliefs and basic life assumptions, which can be altered when an individual has extensive (cumulative)

contact with others who have experienced a traumatic event(s). For example, Motta (2008) argues that an individual's assumptions about their safety, environmental stability, and a secure sense of self can be changed after engaging in a therapeutic relationship with those who have experienced trauma.

Compassion fatigue appears to be an overarching term which refers to trauma reactions which are displayed by individuals who work in a therapeutic way with those who have been traumatised (Figley, 1995).

It has, however, been recognised that vicarious trauma, secondary trauma and compassion fatigue are not wholly distinct concepts (Motta et al, 2004a) since they all involve trauma symptoms being passed from one individual to another (Motta, 2008). For this reason, literature on 'secondary trauma', 'vicarious trauma' and 'compassion fatigue' will be considered during this thesis. However, in line with the definitions presented, when considering DSM-IV symptoms of trauma this thesis will employ the term secondary traumatic stress. When considering individual meaning and changes in one's beliefs (for example, when looking at the repertory grids), the term vicarious trauma will be utilised.

1.3 Personal Construct Theory (PCT) and Trauma

Personal construct theory (PCT; Kelly, 1955) offers a perspective from which the meaning an individual attributes to an event may be discovered and understood. According to the theory, individuals categorise and understand events by assigning them to poles of dichotomous scales known as constructs. This helps a person to summarise and describe current experiences and anticipate forthcoming events (Cason, Resick and Weaver, 2002). A person's construing of events provides the basis for their predictions about the world and their actions. If their predictions are validated, the individual's constructs will usually remain the same. If predictions are invalidated, however, their constructs will usually be revised in some way. Kelly argued that psychological distress (e.g. fear, anxiety) is the result of prediction failures, an idea closely aligned to that of Janoff-Bulman (1992), where it has been suggested that PTSD is a result of shattered assumptions (Cason, Resick and Weaver, 2002).

Based on these ideas, PCT was employed by Sewell and Cromwell (1990), to develop a personal construct model of PTSD. This model was developed and applied to the integration of traumatic events, founded on the premise that all events are processed through a type of categorisation, based on pre-existing constructs; re-organising pre-existing constructs; or the creation of new ones. Sewell and Cromwell (1990) propose that victims of a trauma may initially only be able to construe traumatic events in simplistic terms, which does not allow for the integration of the event into the individual's larger construct system (Sewell and Cromwell, 1990). More specifically, they hypothesised that a dissociated (unelaborated) construct or construct subsystem may develop in response to traumas, and that it is within this subsystem that some aspects of the trauma are construed. This means that if the trauma related subsystem is isolated, it is largely unstable and therefore some elements (such as the 'self') may shift from the positive to negative (or vice versa) poles along a construct dimension. This then enables the individual to incorporate new information without developing new constructs.

The constructivist PTSD model was later refined based upon a variety of research findings by Sewell (Sewell, Cromwell, Farrell-Higgins, Palmer, Ohlde and Patterson, 1996; Sewell, 1996). Here it is argued that individuals who persist with PTSD view their lives in extreme, negative and unelaborated ways, thus PTSD results from unelaborated and isolated construals of traumatic events (Sewell, 2003). However, it is noteworthy that the research used in support of this model (much of which Sewell carried out himself), is not without weaknesses. For example, Sewell et al (1996) completed a repertory grid study (the repertory grid methodology will be explained later), which investigated the hierarchical structure of construct systems in 60 Vietnam veterans (30 with a diagnosis of PTSD and 30 with no PTSD or psychiatric problems). They reported that traumatic events were less elaborated and more isolated in veterans with PTSD than other events. However, on closer inspection, just how much the findings of the research can be generalised is questionable since all the participants were male and the findings were based only on combat trauma. Additionally, a number of confounding variables may have influenced the results. First, the PTSD veterans were all inpatients on a stress treatment unit and the non-PTSD volunteers were all outpatients at that time. Second, the research participants were all self-selecting, possibly introducing a bias. Sewell (1996) acknowledged that there were sampling problems in his research (the non-PTSD participants tended to

have less combat experience), but he argued that due to the 20 year time lapse between the end of the war and the research, it was not feasible to continue sampling until comparability was achieved.

In response to some of these criticisms, Sewell decided to study more recent traumatic events. He therefore turned his attention to the role of elaboration of trauma in 82 people exposed to a mass murder (Sewell, 1996). In this research, the participants consisted of individuals who had been directly involved in the incident, emergency service personnel, and people involved in a less direct manner, such as relatives of a survivor or off duty employees. Using life event repertory grids (where the participants state salient life experiences), he reported that the extent to which the traumatic experience had been elaborately processed was the best predictor in recovery from posttraumatic stress. Sewell claimed that this provided further support for his PTSD model (Sewell, 1996). It could be argued, however, that as Sewell started interviewing the participants only one week after the event, he would not have been able to determine whether the individual reached a diagnosis of PTSD, given that the symptoms need to be present for more than 30 days (as stated in the DSM-IV).

Despite Sewell's support for the PCT PTSD model, Quaitte (2004) failed to find any reliable differences in the degree of elaboration of the personal construct systems of humanitarian aid workers. However, Quaitte (2004) notes that there were very low numbers of participants that made up the three groups he completed repertory grids with (clinical, sub-clinical and asymptomatic groups). Indeed, it appears there were only 10, 7 and 6 participants respectively, thus there may not have been enough statistical power to detect potential significant differences. It is also important to note that Quaitte (2004) used variability of intensity scores to assess the degree of elaboration within the repertory grids, a less sophisticated indicator than the hierarchical cluster analysis employed by Sewell.

More recent research by Sermpezis and Winter (2009) (which had greater statistical power than that of Quaitte (2004), and which used hierarchical cluster analysis) has argued that within PTSD, the traumatic event is in fact overelaborated. They proposed that the results from the two Sewell studies (Sewell, 1996; Sewell et al, 1996) had used the implicit poles of the construct (as opposed to the emergent poles

of the construct) to cluster the data when it was entered into the HICLAS repertory grid package (de Boeck, van Damme and van Mechelen, 1992). The emergent pole of a construct is one which embraces most of the immediately perceived context. The implicit pole of a construct is one which embraces the contrasting context of the emergent pole (Fransella, 2003). At the time, this was thought to be irrelevant; however, later it was demonstrated that this is not the case. Sermpezis and Winter (2009) cite research by Moes (1997), who re-analysed data from three different studies concerning Vietnam combat veterans (Sewell et al, 1996), mass murder victims (Sewell, 1996) and victims of sexual assault (Moes and Sewell, 1994). Moes (1997) found that with the Vietnam veterans and mass murder studies, clustering the emergent poles (as opposed to the implicit poles which was originally used), provided evidence that the PTSD group actually had a more elaborated (rather than underelaborated) construct subsystem. This, however, did not reach statistical significance.

Cason, Resick and Weaver (2002) argue that there are a number of areas of continuity between construct focused models of trauma (such as PCT) and process and content focused perspectives (such as cognitive behavioural therapy). From a cognitive behavioural perspective, Brewin, Dalgleish and Joseph (1996) argue that PTSD can arise when an individual has too many unelaborated and isolated types of sensory memory (known as SAMS). Therefore, to treat PTSD, more verbal memories (known as VAMS) need to be developed, which involves both elaborating and contextualising the memory and making sense of the traumatic event. It could be argued that this corresponds to Sewell and Cromwell's 1990 assertion that in order to reduce the symptoms of PTSD an individual's constructs of the traumatic event need to be integrated and elaborated into their larger construct system.

For the purpose of this research, any hypotheses relating to degree of elaboration will be formed on the basis of Sewell and Cromwell's 1990 model. This model was chosen over alternative models, such as that by Sermpezis and Winter (2009), due to its larger number of citations in the existing literature, and greater theoretical support.

1.3.1 PCT and 'The Self'

Within the PCT literature, there is evidence that trauma can lead to a discrepancy in the construing of the different selves, and self-in-relation-to-others (Sewell, 2005).

For example, Freshwater, Leach and Aldridge (2001) employed repertory grid methodology to compare re-victimised and non re-victimised child sexual abuse survivors with a non-clinical group. They found survivors were more likely to report depression, low self-esteem, and a higher 'self'/ideal self' discrepancy than the non-clinical group. In further studies by Harter (2000) and Harter and Neimeyer (1995), it has also been found that survivors of childhood sexual abuse can construe the 'self' as different from parents and others.

Sewell and Williams (2002) argue that traumatic events can create a 'current self'/past self' discrepancy and a 'current self'/future self' discrepancy. Sewell (1997) utilised a double-mirror metaphor to relate the idea of selves to the understanding of trauma. He argues that if placed in a room where there is a mirror in front and behind, traumatised individuals look into the mirror and see an image that is different from anything before it. He relates this image to the experience of living with an unresolved traumatic experience, where the self seems different from the image in the back mirror (the past). Thus, predicting what will appear in the front mirror (the future) is too difficult.

Empirically, Button (1990) reported that individuals seeking psychological help from either a clinical psychology service or a psychiatric day hospital had a greater 'current self'-'past self' discrepancy than their matched normal controls. Regarding a 'current-self'-'future self' discrepancy, Dzamonja-Ignjatovic (1997) evidenced that suicidal people can be constricted in their view of themselves in the future, and research looking at individuals who deliberately self harm suggests that they do not have a clear view of their future self (Winter, Bhandari, Metcalfe, Riley, Sireling, Watson and Lutwyche, 2000).

1.3.2 Conflict

Conflict is a technique developed by Bell (2004a), which indicates inconsistencies and contradictions in repertory grids. For example, the element 'ideal self' may have a conflicting relationship with the constructs 'volunteering for night shifts' and 'tiring'. This might be expressed in the statement 'I like volunteering for night shifts, I do not like being tired, but I associate volunteering for night shifts with being tired'.

The concept of conflict has previously been considered within the field of trauma. For example, Sporle (2007) investigated trauma and psychosis, and found that conflict in the self-concept is greater when an individual has experienced childhood sexual abuse. It is of note, however, that this result did not quite reach significance, perhaps due to the small sample size employed (21 participants). This highlights the need for further research in this area.

1.4 A Model of who may Develop Traumatic Symptoms

Lerias and Byrne (2003) argue that not every person who is vicariously exposed to a traumatic event develops secondary traumatisation. For example, they cite that only 10 per cent (approximately) of emergency service personnel (police, firefighters, paramedics and emergency medical technicians) had difficulties psychologically adjusting after an interstate road collapsed, killing many individuals (Weiss, Marmar, Metzler and Ronfeldt, 1995). However, this finding was based on the participants' reactions to one specific event.

Davidson and Foa (1993) proposed a model under which the risk of developing PTSD (which could equally apply to STS) is seen as both a function of the trauma ('external factors'), and a function of the victim ('internal factors'). They argue that certain extreme events that rise above a given severity threshold are likely to induce trauma symptoms (at least initially) in most individuals, regardless of any predisposition. They also propose that events that would not be stressful to most people could prove to be traumatic and induce PTSD symptoms in the presence of multiple predisposing factors. Such predisposing factors are frequently described within the trauma literature and are thought by some researchers to mediate the effects of secondary trauma. However, how many of these factors need to be present before an individual reaches the trauma threshold is unclear.

1.5 Mediators of Trauma Symptoms

Munroe (1995) argues that people are not usually aware of when they are being drawn into re-enactments and are becoming secondarily traumatised. Therefore, it could be argued that as with Davidson and Foa's (1993) model, it is important to identify any predisposing factors that might play a role within secondary trauma. This would then allow for a greater awareness of an individual's risk of developing

secondary trauma, should they be exposed to traumatic material. These are discussed in the following section.

1.5.1 *Personal Trauma History*

Personal trauma history is a particularly pertinent theme to consider within the area of secondary traumatisation given that it has been argued that in some instances, individuals attempt to work out their personal issues through the lives of others (Williams and Sommer, 1995). This can then result in people with a trauma history finding it difficult to adjust to traumatic situations or events they hear if they are having their own recurrent, distressing memories (Adams, Matto, and Harrington, 2001; Pearlman and Maclan, 1995). For example, Pearlman and Maclan (1995) surveyed 188 trauma therapists about their clients' trauma, and their own psychological wellbeing. They employed a stepwise multiple regression analysis to predict disruptions in cognitive schemas and found that the therapist's personal trauma history significantly contributed to the analysis. More specifically, those therapists who had a personal history of trauma had elevations on general (Symptom Checklist-90-revised; Derogatis, 1994) and specific (Traumatic Stress Institute Belief Scale; Pearlman, 1996 and the Impact of Events Scale (IES; Horowitz, Wilner and Alvarez, 1979)) measures of traumatic symptoms. However, despite this finding, it could be argued that the results are questionable since the researchers simply asked each participant to indicate whether they had a trauma history. This was then used as a means of categorising the group, despite the fact we cannot be sure of the details or level of the trauma.

In their meta-analysis of 14 PTSD studies, Brewin, Andrews and Valentine (2000) report that past trauma history is especially significant for adults who had experienced childhood trauma and abuse. Such adults were found to have more severe anxiety symptoms than those without such childhood experiences, as a result of exposure to recent trauma. They argue that individuals who have experienced childhood trauma and abuse may not have fully recovered from these incidents, and as such re-experience some of the features of their past when they come into contact with recent critical events. It was therefore concluded that features of the traumatic event, including feelings of horror, may trigger memories of past personal trauma.

However, it is worth noting that not all research investigating trauma has reported a link between a personal history of trauma and secondary or vicarious traumatisation. For example, a study by Schauben and Frazier (1995), looking at vicarious trauma in female counsellors, reported that trauma symptomatology was not related to counsellors' own history of victimisation. However, these results cannot be generalised due to the fact the sample was all female, and almost all were Caucasian.

Noble (2007) suggests that it is 'dangerous' to assume that a personal history of trauma is a risk factor for how individuals react to future distressing events. For example, Hargrave, Scott and McDowall (2006) investigated volunteer crisis workers and reported that STS was significantly higher in volunteers whose traumatic experiences had not been resolved, compared to those volunteers with resolved trauma histories. Furthermore, resolved trauma histories actually appear to protect the volunteers from STS, perhaps because they help to enhance the individual's coping skills for dealing with another's trauma (Hargrave, Scott and McDowall, 2006). Therefore, it may not be as simple as whether an individual has a trauma history or not. It may be more about whether the trauma has been recognised, processed and resolved, otherwise helpers may be sensitised to their own disrupted areas of need without even being aware of it (Rosenbloom, Pratt and Pearlman, 1995).

1.5.2 Gender

There are equivocal results as to whether gender effects are an important risk factor in trauma. On the one hand, Brewin, Andrews and Valentine (2000) and Resick (2000) suggest that being female is one of the best predictors of vicarious traumatisation. On the other hand, Hodgins, Creamer and Bell (2001), and Carlier, Lamberts and Gersons (1997) report no associations between gender and trauma.

Good (1996) investigated secondary traumatisation in 239 mental health professionals (146 art therapists and 93 other individuals including counsellors, social workers, psychologists and psychiatrists). They reported that gender was predictive of secondary traumatisation, with females reporting higher levels of secondary trauma compared to males. However, although this finding was statistically significant, the results should be interpreted with care since most of the sample were female, and thus the comparison group of males was very small. Additionally, it is

important to note that this finding may be biased towards women since it is argued that men do not tend to present with anxiety disorders as frequently as women, presenting instead with problems such as substance use (Brady, Grice, Dustan and Randall, 1993). However, this does not mean that men do not still have an underlying anxiety problem such as PTSD.

In another study of secondary traumatisation, Kassam-Adams (1995) looked at the relationship between secondary traumatisation and a variety of predictor variables amongst 100 masters or doctoral level psychotherapists. She reported that gender (along with personal trauma history and exposure to sexually traumatised clients) were predictive of the participants' scores on the IES (Horowitz, Wilner and Alvarez, 1979). Being female was correlated to higher levels of secondary trauma, but it could be argued that since women are more likely to report personal experiences of trauma, this may have acted as a confounding variable. Despite this finding, there were a number of methodological shortcomings in the research, including that three quarters of the respondents were female, and the majority of them were white. Furthermore, the participants estimated the percentage of their caseload that had presented with different clinical problems or diagnoses in therapy, introducing a potentially significant margin of error.

Other research, such as that by Hodgins, Creamer and Bell (2001), found no relationship between gender and traumatic stress symptomatology in their sample of 223 junior police officers. However, although the study was prospective and longitudinal in design, there were still methodological weaknesses. For example, Hodgins, Creamer and Bell (2001) state that some of the police officers had already been serving for as long as 20 months before the first set of data was collected, and therefore they may have already been exposed to traumatic events in their policing. Nonetheless, Carlier, Lamberts and Gersons (1997), also found no relationship between gender and PTSD in their longitudinal analysis of Dutch police officers, but it is of note that only 44 of the 262 participants were female.

1.5.3 Age

The majority of the literature reports that the way in which a stressor is perceived can vary according to the age and developmental stage of an individual (Ensel and Lin, 1998). For example, De Jong, Sonderen and Emmelkamp (1999) and Ensels and Lin

(1998) reported that younger people may have less life experience and possibly less exposure to previous distress, and thus may find a traumatic event more distressing than their older peers. Additionally, Adams, Matto and Harrington (2001) found that younger emergency personnel reported higher numbers of physical symptoms and more intrusive images surrounding the traumatic material they had been exposed to during their work, compared to their older peers.

Similar findings have also been reported for male participants. For example, one study looking at male adult fire fighters found that the younger the person was at the age of the traumatic event, the more posttraumatic stress was experienced (Beaton, Murphy, Johnson, Pike and Corneil, 1999). However, the researchers note that as they collected data at two separate time points, the traumatic event was at times different. They argue that this may have affected the post trauma symptomatology. Despite this methodological weakness, it could be argued that younger people may report more trauma symptoms as they have had less life experience and therefore may not be as well equipped to deal with stressful situations compared to their older counterparts (Marmar, Weiss, Metzler and Delucchi, 1996).

It is of note, however, that not all research has reported that age acts as a mediator to trauma. For example, Munroe reports in his 1991 research looking at therapists working with combat veterans, that age did not act as a buffer for secondary effects (Munroe, 1995). However, he also states that none of the participants was immune from the effects of their work, suggesting that some factors may play a role as to why some therapists reached self-reported levels of secondary traumatisation (Munroe, 1995).

1.5.4 Level of Education

The literature suggests that an individual's level of educational attainment may be a key variable as to whether they develop posttraumatic stress symptoms when they are indirectly victims of trauma. For example, Green, Grace and Glesser (1985) and Resick (2000) report that individuals who have lower educational attainment exhibit severe vicarious traumatisation. Consequently, it is reported that this is a good predictor of subsequent stress responses. Additionally, in a study looking at trauma therapists, Pearlman and Maclan (1995) reported that those participants who had a more formal education showed fewer psychological disruptions. However, once

again, the majority of these participants were female (135 women and 53 men). As an explanation for why level of education acts as a good predictor of stress responses, Green, Grace and Glesser (1985) report that individuals with higher levels of educational attainment make better use of support networks, may better understand why they are experiencing such stress, have better coping strategies and may better understand the use of therapy.

1.5.5 Years of Experience Working with Trauma

In the literature review, it appeared that there is inconclusive evidence as to whether years of experience working with individuals who have experienced trauma is related to STS. Intuitively, one might think that as the length of time increases, the levels of secondary trauma would also increase since the professional or volunteer's cumulative exposure to trauma would be higher. In support of this, Corneil (1995) reported a positive relationship between years of experience and rates of PTSD (based on the IES) in a sample of Canadian fire-fighters.

However, despite the findings of Corneil (1995), Hargrave, Scott and McDowall (2006) argue that for volunteers, STS is unrelated to amount of volunteer experience. As a potential explanation for this, Hytten and Hasle (1989) suggest that it is possible that as distress levels in volunteers increase, attrition will occur, resulting in the most distressed individuals leaving. Those individuals who remain may be more resilient, or may have developed their own coping strategies, resulting in them feeling more able to continue with the work. Cyr and Dowrick (1991) found that roughly 79 per cent (14) of volunteers trained by a suicide prevention agency had left within a year. It is also possible, however, that some of the experienced volunteers may avoid trauma related studies since they serve as reminders of their exposure (Rosenbloom, Pratt and Pearlman, 1995), making it appear that there is no relationship, or an inverse relationship between length of time working with traumatised individuals and levels of STS.

1.6 Summary and Conclusions

As indicated, during this literature review a wealth of research was found on 'PTSD', 'secondary traumatisation' and 'vicarious traumatisation' in clinicians, emergency workers, and volunteers working directly with distressed clients. This literature suggested a consensus that individuals can become traumatised through listening to

another individual's trauma. However, the literature review highlighted that much of the previous research has focused on individuals who have had direct, physical contact with the primary victims of trauma. It therefore appears that there is a paucity of research looking at contact other than that which is face-to-face. Given the empirical findings on VT, STS and CF, it follows that telephone operators who interact with potentially traumatised individuals are at risk of becoming traumatised themselves. However, whether helpline volunteers are traumatised by their work, and if so, what factors act as mediators is not fully understood.

1.7 Present Research

The present research considers specific traumas reported by crisis line volunteers and looks at whether variables like personal experience of trauma and level of education have any impact on the levels of trauma reported. This was deemed significant for two main reasons. First, Hargrave, Scott and McDowell (2006) contend that crisis line volunteers are a neglected group in trauma research. Second, they argue that although much of the current literature reports risk factors for individuals becoming traumatised, these may not apply to crisis volunteers.

1.7.1 Samaritans

In the United Kingdom, one voluntary crisis line agency is the Samaritans. Samaritans provide twenty-four hour, confidential, emotional support for people who are experiencing feelings of distress or despair, including those which could lead to suicide. The Samaritans have offered this service for many years, taking their first call on 2nd November 1953.

Since this time, the Samaritans have received over 63 million contacts in which people felt able to speak, type or write, with 1,265,723 contacts reported for July-September 2009. This includes 682,996 dialogue contacts (telephone, face to face, email, SMS, letter, minicom and Typetalk) and 582,727 snap contacts (calls that last for only a few seconds; Samaritans Quarterly Report, 2009). Telephone contacts accounted for 87.2 per cent of all reported dialogue contacts during July to September 2009, with each active listening volunteer/probationer responding to an average of 44 dialogue contacts (all methods) during this period (Samaritans Quarterly Report, 2009). The Samaritans report that of all the individuals who contacted them in 2008, 54.5 per cent of the dialogue contacts displayed levels of

distress, and a further 19.1 per cent said they had a suicidal plan, were feeling suicidal or a suicide attempt was in progress (Samaritans Annual Report, 2009). Together, these statistics demonstrate the potentially traumatic and distressing nature of work that each volunteer undertakes.

Potential volunteers undergo an interview with the Samaritans, which asks, amongst other things, their reasons for wanting to volunteer. If they are successful at this stage, they then complete a roughly six-month training programme (depending on the number of hours they volunteer a week and whether they feel confident to progress from the 'training phase'). The training involves modules on managing calls (amongst other things), where volunteers have the opportunity to complete role-plays of callers. They are also required to shadow an experienced Samaritan and be shadowed by an experienced Samaritan. If, after this training, they feel able to continue volunteering, and the experienced Samaritan concurs with this, they then receive their number (recognition that they have completed their training and can work independently as a Samaritan).

Samaritans are expected to volunteer for a minimum of four hours a week and work both day and night shifts. Depending on the size of the Samaritan branch, volunteers can work with between one and seventeen other volunteers; however, all volunteers are expected to phone the Samaritan shift leader at the end of every shift where they are offered a de-brief from that shift's events (which has been reported to relieve symptoms of STS (Robinson and Mitchell, 1993)). Currently, should a volunteer express distress after a call, they can contact the shift leader again or take leave. The shift leaders can also raise their concerns.

1.7.2 Research Aims

The aims of the research were to:

- a) explore the personal construct system of Samaritan telephone volunteers using a repertory grid technique (Kelly, 1955), and explore any relationships between the repertory grid measures and secondary trauma.
- b) consider how an individual's construing of a traumatic event can be used clinically, and how this may impact on the policies and working practices of voluntary telephone operators dealing with potentially traumatic callers.

- c) examine the prevalence of PTSD and STS in a sample of Samaritan telephone volunteers.
- d) assess the impact individual factors, such as previous trauma history, and level of education, have on the development and impact of STS and consider whether there is a relationship between STS and age, gender and length of time volunteering as a Samaritan.

1.7.3 Research Hypotheses

1.7.3.1 Personal Construct Hypotheses

Hypothesis 1

Dissimilarity in the construing of the current self and ideal self will be positively correlated with levels of secondary trauma.

Hypothesis 2

Dissimilarity in the construing of the current self and other Samaritans will be positively correlated with levels of secondary trauma.

Hypothesis 3

Dissimilarity in the construing of the self before being a Samaritan and the self as a Samaritan will be positively correlated with levels of secondary trauma.

Hypothesis 4

There will be a correlation between overall conflict concerning the self after a traumatic event and levels of secondary trauma.

Hypothesis 5

Secondary trauma will be inversely correlated with degree of elaboration in the construing of the self after a traumatic event on implicit construct poles, and will be positively correlated with degree of elaboration on emergent poles.

Hypothesis 6

There will be a significantly higher degree of elaboration of the self before a traumatic event compared to the self after a traumatic event on implicit construct poles, and a

significantly lower degree of elaboration of the self before a traumatic event compared to the self after a traumatic event on emergent construct poles.

1.7.3.2 Questionnaire Hypotheses

Hypothesis 7

There will be a positive correlation between level of posttraumatic stress and level of secondary traumatic stress.

Hypothesis 8

The prevalence rates of Samaritan telephone operators suffering with secondary trauma will not differ from those reported in previous studies (e.g. Motta et al, 2004a).

Hypothesis 9

There will be a positive correlation between participants' level of secondary trauma and their exposure to potentially traumatic events.

Hypothesis 10

There will be an inverse correlation between participants' level of education and their self-reported level of secondary trauma.

1.7.3.3 Further Research Questions

In addition to the hypotheses presented, this research will also consider three further research questions, due to the ambiguous literature surrounding these areas.

1. Is there a relationship between age of the Samaritan volunteer and level of STS?
2. Is there a relationship between the Samaritan volunteer's gender and levels of STS?
3. Is there a relationship between level of STS and length of time as a Samaritans telephone volunteer?

CHAPTER TWO: METHODOLOGY

2.1 Design

This research employed a non-experimental, non-randomised design using a cross-sectional approach, to assess the levels of 'secondary traumatic stress/vicarious trauma' and 'posttraumatic stress' in a sample of Samaritan telephone volunteers.

One advantage of employing a cross sectional design is the ability to determine prevalence rates of STS in Samaritan telephone volunteers. Additionally, it also allows different groups to be compared on a range of factors, thus providing an estimate of the characteristics of trauma (Mann, 2003). The disadvantages include not being able to infer causation from the results (Mann, 2003); therefore it is not possible to state which factors result in traumatisation, or whether this is a representative 'snap-shot' of Samaritan volunteers.

2.2 Participants and Recruitment

A poster advertising the research was sent to all 201 Samaritan branches (approximately 14,200 active volunteers) (Appendix 2). However, it is unknown whether the poster was actually displayed in the branch, or if it was, how many volunteers actually read it. Therefore, an exact number of potential participants cannot be identified. Later, to enhance recruitment, an email was sent to the directors of five local Samaritan branches, asking for the research to be promoted within the branch by sending an email to each volunteer. Again, it is unknown whether this occurred, and if so, how many volunteers received and read the email.

The poster and email contained details of an internet link to the questionnaires, along with the researcher's contact details, should the volunteers have any queries. This ensured that participation was voluntary.

Previous research investigating trauma has reported questionnaire response rates of between 30 per cent and 63 per cent (Cyr and Dowrick, 1991; Dominguez-Gomez and Routledge, 2009). Due to the large number of potential participants in the current research, a much lower response rate was anticipated.

2.3 Measures

2.3.1 Repertory Grid

The repertory grid is a type of structured interview devised by Kelly (1955), which explores the content and structure of an individual's construct system. It contains both elements (the objects/events which are construed) and constructs (the individual's unique system of interconnected meanings). Examples of elements include variants of the self (future, current and ideal) and significant others. Constructs are considered 'bipolar' in the sense that they have dichotomised poles, with each pole giving meaning to the entire construct (Sewell and Williams, 2001). Therefore, when someone experiences 'anxiety', at some level they are aware of the feeling of not being 'anxious' (the implicit pole), perhaps feeling 'calm' for example. Sewell and Williams (2001) argue that it is the implicit pole which anchors meaning. This is all underpinned by Kelly's Fundamental Postulate, which suggests that a person's processes are psychologically channelised by the ways (the constructs) in which he anticipates events (elements) (Bell, 2003). The technique of the repertory grid therefore involves defining a set of elements, eliciting a set of constructs that distinguish the elements, and relating elements to constructs (for example, rating them on a scale) (Bell, 2003).

2.3.1.1 Reliability and Validity of Repertory Grids

It can be problematic detailing the psychometric properties of repertory grids, given that there are a number of different ways of administering them (Bell, 2003), and that not all aspects of traditional test theory have the same meaning for repertory grid data (Bell, 1990). However, Bannister and Mair (1968) reviewed a substantial amount of research and reported test-retest correlations of around 0.80 for construct choice, element choice and grid rating. Additionally, Caputi and Keynes (2001) found substantial retest reliability (up to 0.90) for a number of grid measures.

Issues of validity have been less commonly addressed, instead being carried out with respect to the theory of personal constructs (Bell, 2003). This makes commenting on issues of validity difficult. Nonetheless, there is some limited data concerning the specific examination of grid indices by Walker, Ramsay, and Bell (1988), who demonstrated the validity of an index of dispersion of dependency derived from dependency grids (Bell, 2003).

2.3.1.2 Chosen Elements

The elements (which all relate to aspects of the participant, or other people) chosen for this research consisted of:

1. Current self (how I am)
2. Ideal self (how I would like to be)
3. Future self (how I see I will be)
4. Partner/spouse/person closest to filling this role
5. Father
6. Mother
7. Self as a Samaritan
8. Self before being a Samaritan
9. Other Samaritans
10. Supervisor
11. Self before traumatic event (at the Samaritans)
12. Self after traumatic event (at the Samaritans)
13. Most difficult client listened to on the crisis line
14. Easiest client listened to on the crisis line

These elements were chosen because of their perceived relevance to the topic being researched, from traditional elements used in repertory grids (e.g. Fransella, 2003) and from the suggestion by Cason, Resick and Weaver (2002) that repertory grids describing interpersonal relationships might be informative.

Bannister (1965) reasoned that the psychological relationship between constructs is reflected in the statistical associations between them, demonstrated in the repertory grid. There are a number of different summary measures that can be derived from the repertory grid and these are thought to provide indicators regarding mental functioning of the participant (Bell, 2003; Bell, 2004a).

2.3.1.3 Summary Measures

A number of summary measures can be obtained from the repertory grid. One such measure is 'euclidean distance' between the elements. This provides an indication of the perceived dissimilarity between two elements, for example, 'current self' and 'ideal self'. Such a measure is important since it is argued that significant discrepancies between elements may indicate a number of difficulties. For example,

a significant discrepancy between 'current self' and 'ideal self' has been associated with negative emotions, including those reaching criteria for depression (Boldero, Moretti, Bell and Francis, 2005).

A further summary measure is that of conflict (Bell, 2004a). Conflict is said to be evident when (with respect to all other elements):

- an element is at the same time rated as being similar or close to two construct poles which are themselves different or distant.
- an element is rated as being similar or close to one construct pole, whilst at the same time is rated as being different to or distant from another construct pole, where the two construct poles are similar or close (Bell, 2004a; Bell, Winter and Watson, 2004, unpublished manuscript).

Bell, Winter and Watson (2004, unpublished manuscript, cited in Noble, 2007) initially argued that the greater the number of conflicts within a repertory grid, the more stress/distress may be created within the individual. They later proposed that where there is a low level of variability of conflicts across the elements, an individual might actually experience more psychological distress. Therefore, variability of conflict across elements may be a more helpful indicator of psychological well-being than a global measure detailing the total conflict score (Bell, Winter and Watson, 2004 cited in Noble, 2007).

During the case examples (which will be presented in the results section), implicative dilemmas (Feixas, Saul and Sanchez, 2000) will be considered. Implicative dilemmas consider the relationship between two constructs, taking into account the position of the current and ideal selves on these constructs. They are said to appear when the desired change in a discrepant construct (where the 'current self' and 'ideal self' are rated at different poles, indicating areas of dissatisfaction) implies an undesired change in a congruent construct (where the 'current self' and 'ideal self' elements are rated similarly, indicating areas of satisfaction). This is measured by a correlation between these two constructs. For example, an implicative dilemma will appear if the desired change in a discrepant construct (such as becoming sociable) implies an undesired change (such as becoming arrogant). Feixas and Saul (2003) argue that although implicative dilemmas are part of tensions of 'normal' life, they are

more common and more numerous for people asking for help in psychotherapy departments (Feixas and Saul, 2005).

2.3.1.4 Analysis of Repertory Grids

IDIOGRID (Grice, 2004), GRIDSTAT (Bell, 2004b) and HICLAS (de Boeck, van Damme and van Mechelen, 1992) were used to analyse each repertory grid. This meant that the data were individually transferred into each of the three packages. The rationale for using three separate computerised packages is presented below. If a rating was missing, the participant was re-contacted to provide this information. If they did not respond to the contact, their mean value from the construct concerned was used.

2.3.1.4.1 IDIOGRID (Grice, 2004)

IDIOGRID is a computer programme used to derive various measures from repertory grid data and to carry out a mathematical procedure known as principal component analysis (PCA). By conducting a PCA, a two-dimensional graphical representation of an individual's construct system (known as a gridplot) can be created. This works by translating numerous variables (elements or constructs) into a smaller number of hypothetical variables (components or factors), which can then explain the maximum possible variance in the repertory grid. The components can then be used as axes on the graphical representation, where the constructs and elements are plotted according to their factor loadings. This ultimately means that the loadings of constructs and elements on principal component 1 are plotted against principal component 2. Examples of gridplots will be presented in the results chapter.

For the purposes of this research, the programme was used to calculate the distance within the repertory grid for some of the elements (relating to hypotheses 1, 2 and 3). The distance scores range from zero to approximately two, indicating how alike or different pairs of elements are construed by the participant. A distance of less than 0.5 implies that the elements are very similar and a distance of more than 1.5 indicates that the elements are very different (Winter, 1992). A distance of 1 is the expected value for the distance between elements.

2.3.1.4.2 GRIDSTAT (Bell, 2004b)

GRIDSTAT can be used to calculate the amount of conflict within the grid (as described in the introduction). This is measured by considering the distance between an element and two constructs. The element and constructs are said to have a 'balanced' relationship if the distances between them form a triangle (that is, the longest distance does not exceed the sum of the two smaller distances). If this does not occur, conflict (or a 'triangular inequality') is said to have arisen (Bell, 2004a). This programme was used to investigate hypothesis 4 (identifying all the conflicting triadic comparisons), using the element 'self after traumatic event' with all the constructs, and extracting the percentage of conflict in the grid accounted for by this element.

2.3.1.4.3 HICLAS (de Boeck, van Damme and van Mechelen, 1992)

HICLAS determines the degree of elaboration of an element by providing an asymmetric (hierarchical) analysis of the data. Based on mathematical set theory, overlapping and separate patterns within the elements and constructs are identified. Through this, HICLAS is then able to provide a final hierarchical solution based on subsumed (subordinate) and subsuming (superordinate) classes or clusters of elements and constructs (Sermpezis and Winter, 2009).

The HICLAS model is dependent on the user choosing a 'rank', which will determine the number of classes that appears in the hierarchical solution. The rank size can vary from one to the total number of variables; however, the choice of rank is usually determined by the optimum utility and interpretability of it. It also involves a balance between low rank and goodness of fit (which improves with increasing rank) (Sporle, 2007). Previous research investigating trauma has used HICLAS structures at rank 4 (Sewell et al, 1996) and rank 5 (Winter and Gould, 2000). This research used HICLAS structures at rank 5.

The degree of elaboration was decided by looking at the level of an element within the HICLAS graphical output (with higher figures indicating a higher level of elaboration), and by looking at the number of constructs connected to an element (more constructs indicate a higher degree of elaboration).

Since HICLAS uses binary coding for its analysis, the original six-point scale the participants used to rate their constructs is converted into zeros ('0'), and ones ('1'). Given Sermpezis and Winter's (2009) findings that the degree of elaboration can vary depending on whether the emergent or implicit pole is assigned a one or a zero, it was decided that the analysis should be run twice, to cover both scenarios.

HICLAS was used to test hypothesis 5 (elaboration of the element 'self after traumatic event') and hypothesis 6 (the difference in elaboration of the elements 'self before traumatic event' and 'self after traumatic event').

2.3.2 Questionnaires

After a comprehensive search, it was found that there are a large number of questionnaires that measure psychological well-being and trauma. Therefore, a number of factors were considered when choosing the most appropriate ones for this research. These factors were similar to those employed by Noble (2007) and Quaiter (2004).

The following factors were taken into consideration when choosing each measure:

- a) standardisation of test (including available reliability and validity data)
- b) whether an electronic version of the questionnaire was available, or whether permission for an electronic questionnaire could be obtained from the publisher
- c) whether the measure takes a minimal amount of time to complete (each questionnaire should take a maximum of 15 minutes to complete, with all the questionnaires totally no longer than 35 to 40 minutes)
- d) whether the questionnaire measured PTSD in line with DSM-IV (APA, 1994) criteria
- e) whether the questionnaire measured secondary trauma
- f) whether the questionnaire assessed psychological well-being

2.3.2.1 Demographics Questionnaire

The researcher designed a questionnaire that looked at the background and demographic information of the participants (Appendix 3). This questionnaire took into account the questions asked in previous research (Adams and Riggs 2008; Noble, 2007), but more specifically, it enquired about personal, occupational and educational factors including age, gender, marital status, length of time volunteering

as a Samaritan and amount of supervision received. It also directly considered STS and PTSD, by asking the participants whether they found listening to some of the calls traumatic, whether they had received professional support due to a call they had taken whilst volunteering and whether they had previously received a diagnosis of PTSD.

2.3.2.2 Posttraumatic Stress Disorder (PTSD)

After a comprehensive search of relevant PTSD measures, a shortlist of three was considered. These included The PTSD Screening and Diagnostic Scale (PSDS; Kubany, 2004), the Posttraumatic Stress Diagnostic Scale (PDS; Foa, 1995) and The PTSD Checklist (PCL; Weathers, Litz, Herman, Huska and Keane, 1993).

The PSDS has a sister questionnaire, the Traumatic Life Events Questionnaire (TLEQ; Kubany, 2004). It is argued that, used together, the TLEQ and PSDS constitute a quick trauma history/PTSD screen that is extremely useful in settings where clinicians have no prior knowledge of an individual's background or experiences (Kubany, 2004). For this reason, along with financial implications of using the other questionnaires, it was decided that the PSDS would be most suitable, used alongside the TLEQ.

The PSDS is a 38 item self-report inventory which looks at symptoms which might indicate posttraumatic stress, related to life event(s). It relates to the six levels of diagnostic criteria for PTSD (DSM-IV; American Psychiatric Association, 1994), specifically corresponding to the 17 core features. In addition to directly asking about PTSD symptoms, the PSDS also enquires about other areas of functioning related to impediments in recovery from PTSD. These other areas include trauma-related guilt, trauma-related anger, and unresolved grief or loss (Kubany, 2004).

2.3.2.2.1 Psychometric Qualities of the PTSD Screening and Diagnostic Scale

The PSDS (Appendix 4) has been found to have good test-retest reliability for the 20 symptom items (Cronbach's alpha for total PSDS symptom score was $=.83$) and good temporal stability (there was an 83 per cent agreement between two separate administrations of the measure; Kubany, 2004). Furthermore, an additional study indicated that there is a good correlation in total symptom scores between the pencil and paper administration, and an identical computerised version (Cronbach's alpha

for total PSDS symptom score = .81; Kubany, 2004). It has also been shown to have good convergent validity with other PTSD measures, including the Penn Inventory (Hammarberg, 1992), Clinician Administered PTSD Scale (CAPS; Blake, Weathers, Nagy, Kaloupek, Gusman, Charney and Keane, 1995) and the Modified PTSD Symptom Scale (MPSS; Falsetti, Resnick, Resnick, and Kilpatrick, 1993).

2.3.2.2.2 Scoring the PTSD Screening and Diagnostic Scale

Participants are given five response options to each symptom question, ranging from 0=Absent or did not occur, to 4=Present to an extreme or severe degree (Kubany, 2004). From these symptoms, a score can be derived to indicate the presence and severity of DSM-IV PTSD. It is argued that scores of 26 or above can usually confirm a diagnosis of PTSD. However, for women who have been physically or sexually abused, a diagnosis can usually be confirmed for those who score at least 18 on the PTSD symptoms. The participants are asked to indicate the degree to which they have experienced each of the PTSD symptoms in the past month (including the day they completed the measure). Additionally, they are asked whether they have experienced PTSD symptoms for more than 30 days (and if so, they are asked to specify how long they have lasted and when they first occurred).

Kubany (2004) suggests that if the responses to the 20 symptom items of the PSDS sum to a total of 18-39, mild to moderate symptoms of PTSD are indicated. If the sum of responses to the symptom items is 40-49, moderate to severe PTSD symptoms have been reported and sums of 50 or above indicate severe PTSD has been reported. For the purposes of this research, only the summary score for the 20 symptom items will be reported. It is also important to note that as usual, the PSDS should always be used in conjunction with an interview assessment in order to seek a diagnosis of PTSD (Kubany, 2004).

2.3.2.3 Exposure to Potentially Traumatic Events

The researcher initially considered the Traumatic Events Questionnaire (TEQ; Vrana and Lauterbach, 1994) and the Traumatic Life Events Questionnaire (TLEQ; Kubany, 2004) for this study. However, it was decided that the TLEQ (Kubany, 2004, Appendix 5) would best be suited to the research, partly due to the fact it was designed to be used in combination with the PSDS, but also due to its ability to be completed independently and its relative brevity. Furthermore, it specifically

enquires about the frequency of each of the traumatic events (Kubany, 2004) and unlike the TEQ (Vrana and Lauterbach, 1994), it assesses whether the person felt intense fear, helplessness or horror during the event, a criterion of PTSD (Norris and Hamblen, 2004).

2.3.2.3.1 Psychometric Qualities of Traumatic Life Events Questionnaire

It has been argued that although the TLEQ lists a number of life events, some of these are not traumatic, and as such are not directly related to the DSM-IV criteria for PTSD. For example, Norris and Hamblen (2004) propose that sexual harassment and abortion do not fulfil the criteria of something that can be considered as actual or threatened death or serious injury.

As with any psychological test, the TLEQ (Kubany, 2004) is reliant on the participant being open, honest and accurately remembering events when completing the measure. Participants' reports of trauma are not verified against independent sources of information, such as police reports, hospital records or significant others who may also be aware of the trauma. Considering this, it is of course unknown to what extent the participants' self reports are a valid indication of trauma (Kubany, 2004). However, it is argued that in general, the external validity for recollections of prior life experiences is good and more specifically, the external validity for traumatic events is usually accurate (Brewin, Andrews and Gottlib, 1993; Pillemer, 1998).

Despite these difficulties, the TLEQ has been shown to have good test-retest validity, where research has demonstrated that most items possess adequate to excellent temporal validity (Kubany, 2004). It has also been shown to have excellent content validity (Kubany, 2004), as well as good convergent validity when compared to a face-to-face trauma interview (mean kappa = .71, with no significant differences between the interview and the questionnaire in the number of disclosures of any of the TLEQ events) (Kubany, Haynes, Leisen, Owens, Kaplan, Watson et al, 2000).

2.3.2.3.2 Scoring the TLEQ

The TLEQ gives three scores, indicating the magnitude and severity of the traumatic event (Kubany, 2004). First, it indicates how many of the potentially traumatic events (PTEs) have occurred. Second, it indicates how many of these events evoked intense fear, helplessness or horror. Finally, the total number of discrete events

(number of occurrences) is recorded (scored between one time to more than five times: if the latter is indicated, it is conservatively estimated at six times) (Kubany, 2004). For the purpose of this research, the number of potentially traumatic events will be considered in testing hypothesis 9.

2.3.2.4 Assessing Psychological Well-being/Distress

Questionnaires that are able to assess each participant's general well being/distress were considered. A number of different questionnaires fulfilled this criterion, including the Brief Symptom Inventory-18 (BSI-18; Derogatis, 2001), the 12 item General Health Questionnaire (GHQ-12; Goldberg and Williams, 1988) and the Symptom Checklist-90-Revised (Derogatis, 1994).

The Brief Symptom Inventory-18 (BSI-18; Derogatis, 2001, Appendix 6), an 18 item self-report measure was chosen due to its brevity and permission from the publishers for it to be administered electronically.

2.3.2.4.1 Psychometric Qualities of the Brief Symptom Inventory-18

The BSI-18 is an 18-item questionnaire, which is widely used and is quickly gathering evidence of its validity (e.g. Galdón, Durá, Andreu, Ferrando, Murgui, Pérez, and Ibañez, 2008; Prelow, Weaver, Swenson and Bowman, 2005). Its internal consistency is argued to be 'quite satisfactory', with coefficient alpha estimates ranging from .74 to .89 (Derogatis, 2001). Although validation of the BSI-18 is in its early stages, it has been demonstrated to have very high convergent validity with its longer progenitor, the Symptom Checklist-90-Revised (Derogatis, 1994), which has been widely validated (Derogatis, 2001).

2.3.2.4.2 Scoring the BSI-18

The BSI-18 provides scores on three primary symptom dimensions: Somatization, Depression and Anxiety (each has an equal loading of questions). It also provides a total score, known as Global Severity Index (GSI), which summarises the participant's overall level of psychological distress. Since the BSI-18 is a newly derived instrument, cut off scores are still to be established. However, a number of studies have used a score of at least 10 for males and at least 13 for females on the GSI to indicate caseness (Jacobsen, Donovan, Trask, Fleishman, Zabora, Baker and Holland, 2005; Zabora, BrintzenhofeSzoc, Jacobsen et al, 2001; Zachariae,

Zachariae, Lei and Pedersen, 2008). It was decided that for the purposes of this research, these cut off points would also be used.

2.3.2.5 Secondary Traumatic Stress

It has been argued that one of the problems in secondary trauma research is the relative lack of psychometrically sound instruments available for measuring this form of traumatisation, compared to the number of measures available for measuring PTSD (Motta, 2008; Motta, Chirichella, Maus and Lombardo, 2004b). Motta et al (2004a) and Motta (2008) state that the measures that are available are either designed for specific populations, lack the availability of established cut off scores, or both (for example, the Compassion Fatigue Self-Test for Psychotherapists; Figley, 1995).

One measure which has been shown to be reliable and valid, is easily administered, has established cut off scores, and can be used for various types of indirect traumatic experiences is the Modified Secondary Trauma Scale (MSTS; Motta, Hafeez, Sciancalepore and Diaz, 2001). For these reasons, along with permission for the measure to be used electronically, the MSTS was chosen for this research.

The MSTS is an 18 item self-report questionnaire, which asks the participant to rate symptoms of trauma on a five point scale (the scores therefore range from 18 to 90). Scores between 38 and 44 on the MSTS are suggestive of (clinically meaningful) mild to moderate anxiety; and scores of at least 45 are indicative of moderate to severe anxiety. Similarly, scores between 38 and 48 are associated with (clinically meaningful) mild to moderate depression, while scores of at least 49 can be indicative of moderate to severe depression (Motta et al, 2004a). Motta (2008) argues that when a score on the MSTS is high, that person is likely to be experiencing significant emotional upset.

2.3.2.5.1 Psychometric Qualities of the Modified Secondary Trauma Scale

The MSTS (Appendix 7) has been validated with samples involving members of the community, students and therapists. These have demonstrated that the MSTS has a test-re-test reliability of .87 for a one to two week interval, an alpha reliability of .89, and demonstrates sound concurrent validity (Motta, 2008). Furthermore, the scale

has also been shown to correlate well with other measures of trauma, and did not correlate well with other measures not related to trauma (Motta et al, 2004a).

For the current study, the researcher contacted Professor Motta to determine whether the MSTS could be modified such that the Samaritans could be asked to complete the questionnaire based on a telephone call they had received whilst volunteering at the Samaritans. Professor Motta did not think the psychometric properties of the questionnaire would be compromised through these alterations (Personal Correspondence, 2009).

2.4 Procedure

Figure 1 provides a conceptual map of the procedure for the research. As can be seen, the research was split into two parts; questionnaires and repertory grids. To aid understanding during the rest of the methodology section and results section, the number of Samaritans who responded at each stage is coloured red in the figure.

Part One: Questionnaires

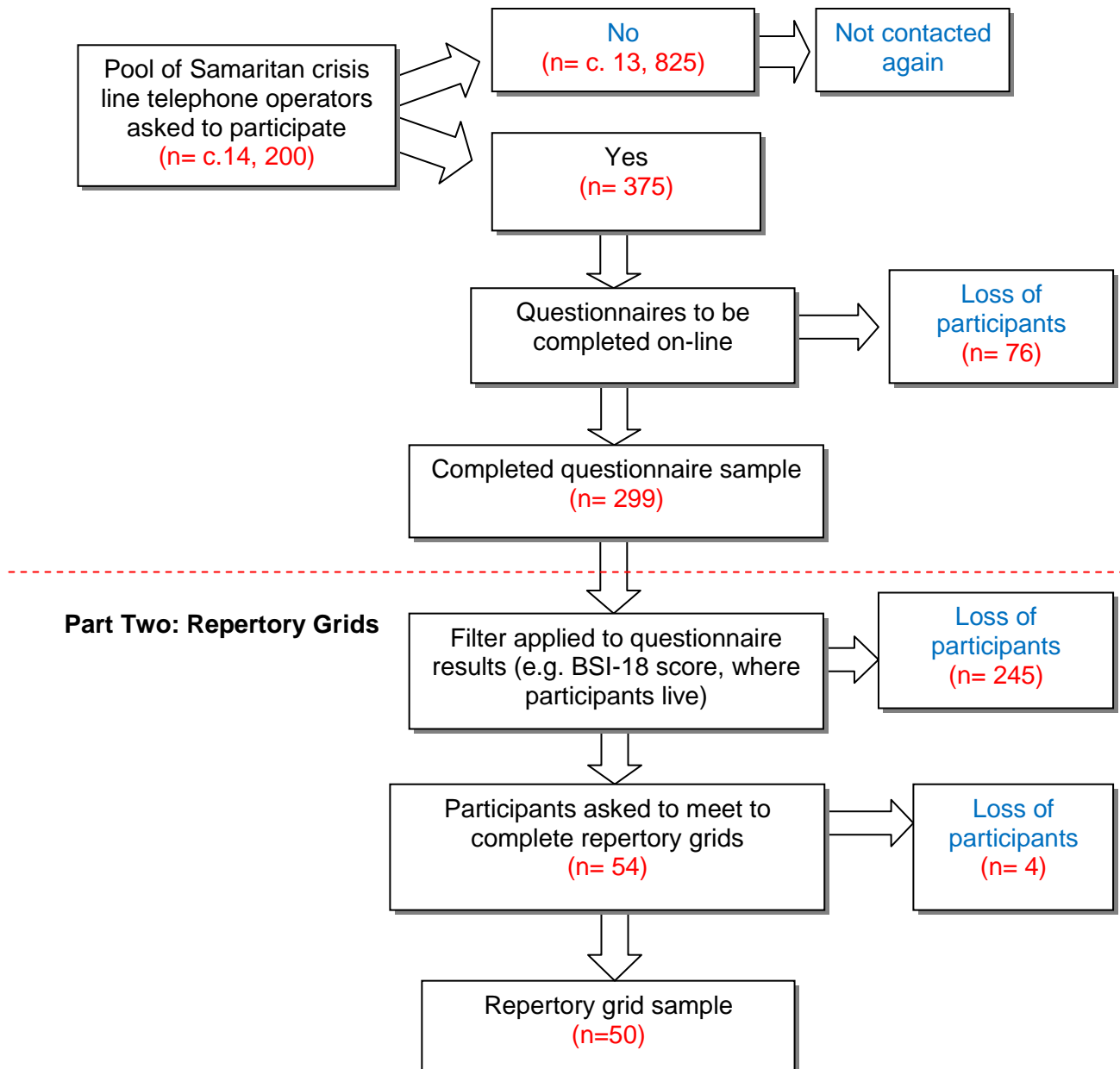


Figure 1: Conceptual Map of Research

2.4.1 Part one

Participants who clicked on the link to the research were directed to Survey Monkey, an internet based survey software. This method was advantageous due to the geographically dispersed population, and it provided anonymity, which was appropriate due to the sensitive nature of some of the questions. It also reduced the cost of postage and allowed the data to automatically be collated. According to Denscombe (2003), responses provided online are much the same as responses produced by methods that are more traditional; therefore, the quality and number of responses were not anticipated to be any higher than if paper copies were used.

Participants were asked to read the participant information sheet and consent form (Appendix 8). Each participant was also asked to create their unique identifier code, in case they wished their data to be removed from the study. In addition to completing the questionnaires, participants were de-briefed about the purpose of the research and were directed to a number of organisations that help people in distress, should the questions have stirred up a number of difficult feelings or memories for them (Appendix 9).

During the questionnaire, participants could indicate whether they agreed to be contacted for the second part of the research (the repertory grids), should they be selected.

2.4.2 Part two

Participants were selected for the second part of the research based on inclusion and exclusion criteria. These were:

Inclusion:

- a) a range of STS scores (on the MSTS ranging from 18 upwards).
- b) living in the South East of England (so a face-to-face meeting could be arranged), or agreed to be contacted by telephone to complete the repertory grid.

Exclusion:

- a) scores of 10 or above for men and 13 or above for women on the BSI-18, indicating psychological distress.

Every participant who met the inclusion criteria and did not meet the exclusion criterion was contacted (depending on their preferred means of contact) to participate in the next part of the research (this was usually via email). If there was no response within one week, follow up emails were sent.

The interviews to complete the repertory grids were conducted at the most convenient place for the Samaritans, which was usually the Samaritans branch where they volunteered. Additionally, a number of grids were conducted over the phone, when the participants were in a quiet location. Prior to starting the repertory grid, each participant was asked to read a participant information sheet and consent to the research (Appendix 10).

Participants were initially asked how they had found the process of completing the online questionnaires, and were asked whether any traumatic events had occurred at the Samaritans or in their personal life since they had completed the questionnaires (to help determine whether their questionnaire scores were still applicable).

The repertory grid (Appendix 11) was then presented to each participant (this was either presented in person, or via email). It was explained to each participant that the purpose of the repertory grid was to identify their constructs relevant to their selves and others. In PCP terms, elements are the phenomena on which participants are asked to comment, thus eliciting their personal constructs. For ease of comparison between the grids, role titles for the elements were supplied.

The constructs were elicited using the 'triadic' method where the participant was presented with three elements and for each set was asked to specify some important way in which two of the elements are alike, or one is different from the other two (the emergent pole of the construct). The participant was then asked what the opposite of that word is (eliciting the implicit pole of the bipolar construct). This method of eliciting the bipolar constructs is argued to be in harmony with Kelly's Dichotomy Corollary (Bell, 2003).

Once the emergent and implicit pole for the first triad had been elicited, a new combination of elements was presented, in line with the sequential way of presenting them (Fransella, Bell and Bannister, 2004), where one element in the triad is replaced

with a new element. For example, the elements 'current self' (how I am), 'ideal self' (how I would like to be) and 'future self' (how I see I will be) were presented. 'Current self' was then replaced by 'partner/spouse/person closest to filling this role'. This method continued until all fourteen bipolar constructs had been elicited.

As with Noble's (2007) research looking at secondary trauma, a 15th construct pole (the word 'traumatised') was added for all participants, and they were asked to give their contrast to this pole. This was chosen due to the nature of the topic under investigation; because the researcher was curious to see what the contrast to this pole would be for each of the participants; and to see how traumatised they would rate each of the elements.

Each participant was then asked to rate the 14 elements on the 15 constructs they had formulated. They were asked to do this on a six-point scale with six indicating that the emergent pole of the construct applied very much to the element and one indicating that it did not apply at all.

Each participant was then de-briefed by asking how they had found the research. They were also presented with a de-briefing sheet detailing the aims of the research, the procedure they had just participated in, and a variety of contact details should they wish to speak to anybody about any feelings which may have been evoked (Appendix 12).

2.5 Feedback

It was made clear at each point of the research that no individual feedback would be given on the questionnaire scores, or on the repertory grids. Each participant who completed the questionnaires, and/or repertory grids was able to request a copy of a report giving a summary of the results.

2.6 Ethical Considerations

The University of Hertfordshire provided ethical approval for the research in June 2009 (Appendix 13).

To adhere to ethics, each participant was advised of their rights, including their right to withdraw at any point without giving any reason, and their right to ask questions.

Furthermore, the Samaritans were not advised of which volunteers had participated, and confidentiality and anonymity were preserved throughout. To adhere to the confidentiality agreement from the Samaritans, no identifying information was discussed by the volunteers, to protect the caller's anonymity.

The researcher was aware that as the participants were asked to consider traumatic events, they may become distressed. A number of safeguards were therefore put in place for each participant, including:

- being de-briefed on the purpose and hypotheses of the research
- being given contact details of a number of help lines
- being given the contact number of the project's field supervisor, whom they were advised they could contact for support if they felt the need to

It is of note, however, that previous research has suggested that participants rated discussions of traumatic events as positive and that such discussions were well tolerated (Griffin, Resick, Waldrop and Mechanic, 2003).

2.7 Data Collation and Analysis

For correlational hypotheses, it was decided that a Pearson's product moment test would be conducted if the parametric assumptions of the data were met (such as homogeneity of variance, linearity, and normally distributed data). If the assumptions were not met, a non-parametric Spearman's rho correlation would be used to establish initial associations between variables, since this test is robust and does not assume linearity.

It was decided that a Chi-square test for independence would be employed to determine whether two categorical variables are related. Furthermore, a one-sample Chi-square would also be used to analyse any data requiring a test of proportion of cases.

For hypotheses requiring a test of group differences, it was planned that a t-test, or its non-parametric equivalent, a Mann-Whitney U test or Wilcoxon signed rank test would be employed, depending again on whether the parametric assumptions of the data were met (such as normally distributed scores and at least interval level scaling).

For the hypotheses which give a predicted direction to the results, a one-tailed test would be employed. However, if no direction is predicted, or the results are in the opposite direction to that which was predicted, a two-tailed test would be used.

Survey Monkey held and collated the questionnaire data, which was then downloaded into a spreadsheet, before being imported into the Statistical Package for the Social Sciences (SPSS; Version 16.0, 2008) to conduct the statistical analyses. All data collected were kept secure, either in a locked filing cabinet, or on a password protected computer. All raw data will be destroyed after a period of five years (in January 2015).

The questionnaires were electronically scored by means of a spreadsheet. The questionnaire results relate to hypotheses 7, 8, 9 and 10, and the three further research questions. These further research questions relate to the age and gender of the Samaritan volunteers, and the length of time they have been volunteering.

CHAPTER THREE: RESULTS

This chapter will be divided into four main sections. The first section will describe the characteristics of those who completed the questionnaires (n=299), as well as the sample characteristics for the repertory grids (n=50). The second section will present the results relating to the repertory grids. This section will therefore look at hypotheses one to six. The third section will consider the questionnaire data, which relates to hypotheses seven to ten. Finally, the fourth section will look at the further research questions, as discussed in the introduction, and will present any important or statistically significant findings. Case examples will be provided at the end of the results section for illustrative purposes. A summary of the findings will then be presented.

3.1 Section 1: Sample Characteristics

3.1.1 Overview of Sample Characteristics for the Questionnaires

A total of 375 Samaritans (from the United Kingdom; UK) responded to the invitation to participate in the research, which was a response rate of only 2.6 per cent (as there are approximately 14,200 volunteers. However, as previously stated, it is unclear how many volunteers actually accessed the posters or emails advertising the research). Of those who responded to the invitation, 226 Samaritans completed the questionnaires, and a further 73 Samaritans partially completed the questionnaires (thus some data was collected from 299 participants). This equates to a completion rate of 60.2 per cent (from the total number of Samaritans who responded), but from the approximate amount of volunteers, only 2.1 per cent contributed to the data set.

Of 299 participants who completed all or some of the questionnaires, 241 (80.6 per cent) reported that they found calls they took at the Samaritans 'traumatic'.

3.1.2 Participant Demographics for the Questionnaires

For a summary of the questionnaire demographic data, please see Table 1.

113 (38.8 per cent) of the respondents were male, and 186 (61.2 per cent) were female. The age range was between 19 and 80 years, with the mean age being 47.36 years (standard deviation (sd)=14.39). 260 (87 per cent) described their ethnicity as 'white British', followed by 16 (5.4 per cent) of participants who classified

themselves as 'white Irish'. The remaining participants described themselves as 'white other', 'Indian', 'black British', 'Chinese', 'mixed' and 'other ethnic group'. Almost two thirds (67.2 per cent, n=201) of the participants reported that they had a degree, or higher level of education. A further 26 (8.7 per cent) and 24 (8 per cent) participants reported having 5 or more GCSE's (or equivalent) and 2 or more A Levels (or equivalent) respectively. The range of time the participants had volunteered at the Samaritans for was 3 months to 414 months (approximately 34.5 years), mean time 83.17 months (approximately 7 years; sd=89.06).

These figures closely mirror the demographic information held by the Samaritans, indicating that the sample for this research is representative of the wider Samaritan population. For example, the Samaritans 2008 figures show that the majority of the Samaritans volunteers were female (67.7 per cent), compared to 30.5 per cent males. Of these volunteers, only 4 per cent were aged 17-24 years, 39.4 per cent were aged 25-40 years, 34.4 per cent were aged 41-60 years, followed by 21.9 per cent aged 61-74 years. Only 0.3% of Samaritan volunteers are aged 85 years or above.

Table 1: Demographic Information for the Questionnaire Sample

Information	Male	Female	Total sample (n)
Gender	113 (38.8%)	186 (61.2%)	299 (100%)
Age (years)			
Range	19-77	19-80	19-80
Median	51	48	50
Mean	49.41	46.09	47.36
SD	13.59	14.75	14.39
Ethnicity			
White British	100 (88.5%)	160 (86%)	260 (86.9%)
White Irish	7 (6.2%)	9 (4.8%)	16 (5.4%)
White Other	4 (3.5%)	11 (5.9%)	15 (5%)
Indian	1 (0.9%)	0	1 (0.3%)
Black British	0	1 (0.5%)	1 (0.3%)
Chinese	0	1 (0.5%)	1 (0.3%)
Mixed	1 (0.9%)	3 (1.6%)	4 (1.3%)
Other Ethnic Group	0	1 (0.5%)	1 (0.3%)
Total:	113 (100%)	186 (100%)	299 (100%)
Marital Status			
Married/Cohabiting	81 (71.7%)	106 (57%)	187 (62.5%)
Single	16 (14.2%)	43 (23.1%)	59 (19.7%)
Separated/Divorced	5 (4.4%)	21 (11.3%)	26 (8.7%)
Dating	4 (3.5%)	11 (5.9%)	15 (5%)
Widowed	3 (2.7%)	5 (2.7%)	8 (2.7%)
Other	4 (3.5%)	0	4 (1.3%)
Total:	113 (100%)	186 (100%)	299 (100%)
Time (in months) as Samaritans volunteer			
Range	6-414	3-414	3-414
Median	50	50	50
Mean	83.47	82.98	83.17
SD	88.86	89.44	89.06
Level of education			
1 or more O Levels/CSEs/GCSEs	6 (5.3%)	7 (3.8%)	13 (4.3%)
5 or more O Levels/CSEs/GCSEs	12 (10.6%)	14 (7.5%)	26 (8.7%)
2 or more A levels, 4 or more AS levels	8 (7.1%)	16 (8.6%)	24(8%)
Degree/Higher Degree	72 (63.7%)	129 (69.4%)	201 (67.2%)
Other qualifications	11 (9.7%)	15 (8.1%)	26 (8.7%)
No formal qualifications	4 (3.5%)	5 (2.7%)	9 (3%)
Total:	113 (100%)	186 (100%)	299 (100%)

Table 2 displays the MSTS scores and TLEQ scores for count of events (CE) for the questionnaire sample. It shows that the mean MSTS score was 22.50 for the sample, standard deviation 4.39. The mean score for the TLEQ (CE score) was 4.16, standard deviation 2.88.

Table 2: Overview of MSTS Scores and TLEQ (CE Score) for Questionnaire Sample

Questionnaire Sample	
MSTS Score	
Range	18-46
Median	22
Mean	22.50
SD	4.39
TLEQ (CE Score)	
Range	0-14
Median	4
Mean	4.16
SD	2.88

3.1.3 Overview of Sample Characteristics for the Repertory Grids

In total, 54 participants were contacted to complete a repertory grid. Of these, 50 responded; however, two grids were unable to be used for the hypotheses surrounding 'traumatic event'. This was because it was discovered that the traumatic event the participants had considered whilst completing the repertory grid was not Samaritans related. Nonetheless, the rest of the data from those participants could be utilised for all other hypotheses.

3.1.4 Participant Demographics for the Repertory Grids

For a summary of the participants who completed the repertory grids, please see Table 3.

21 (42 per cent) of the respondents were male, and 29 (58 per cent) were female. The age range was between 21 and 67 years, with the mean age being 42.78 years old (sd=13.5). 43 participants (86 per cent) described their ethnicity as 'white British', followed by 4 (8 per cent) participants who classified themselves as 'white other'. The majority of the participants reported they were married or cohabitating (31; 62 per cent).

38 (76 per cent) of the participants reported that they had a degree, or higher level of education, with a further 5 (10 per cent) reporting having 2 or more A Levels (or equivalent). The range of time the participants had volunteered at the Samaritans was 7 months to 316 months (approximately 26.3 years), mean time 55.52 months (approximately 4.6 years; sd =61.15).

Table 3: Demographic Information for the Repertory Grid Sample

Information	Male (n=21)	Female (n=29)	Total sample (n=50)
Gender	21 (42%)	29 (58%)	50 (100%)
Age (years)			
Range	27-67	21-43	21-67
Median	47	38	44
Mean	46.10	40.38	42.78
SD	12.43	13.94	13.50
Ethnicity			
White British	19 (90.5%)	24 (82.8%)	43 (86%)
White Irish	0	1 (3.4%)	1 (2%)
White Other	1 (4.8%)	3 (10.3%)	4 (8%)
Indian	0	0	0
Black British	0	0	0
Chinese	0	0	0
Mixed	1 (4.8%)	1 (3.4%)	2 (4%)
Other Ethnic Group	0	0	0
Total:	21 (100%)	29 (100%)	50 (100%)
Marital Status			
Married/Cohabiting	16 (76.2%)	15 (51.7%)	31 (62%)
Single	3 (14.3%)	9 (31%)	12 (24%)
Separated/Divorced	1 (4.8%)	2 (6.9%)	3 (6%)
Dating	0	3 (10.3%)	3 (6%)
Widowed	0	0	0
Other	1 (4.8%)	0	1 (2%)
Total:	21 (100%)	29 (100%)	50 (100%)
Time (in months) as Samaritans volunteer			
Range	12-168	7-316	7-316
Median	37	27	36
Mean	52.05	58.03	55.52
SD	43.71	71.86	61.15
Level of education			
1 or more O Levels/CSEs/GCSEs	1 (4.8%)	0	1 (2%)
5 or more O Levels/CSEs/GCSEs	1 (4.8%)	3 (10.3%)	4 (8%)
2 or more A levels, 4 or more AS levels	2 (9.5%)	3 (10.3%)	5 (10%)
Degree/Higher Degree	16 (76.2%)	22 (75.9%)	38 (76%)
Other qualifications	1 (4.8%)	1 (3.4%)	2 (4%)
No formal qualifications	0	0	0
Total:	21 (100%)	29 (100%)	50 (100%)

Table 4 displays the MSTS scores and TLEQ scores for count of events (CE) for the repertory grid sample. It shows that the mean MSTS score was 24.22 for the sample, standard deviation 5.17. The mean score for the TLEQ (CE score) was 4.22, standard deviation 3.23.

Table 4: Overview of MSTS Scores and TLEQ (CE Score) for Repertory Grid Sample

Repertory Grid Sample	
MSTS Score	
Range	18-38
Median	23
Mean	24.22
SD	5.17
TLEQ (CE Score)	
Range	0-14
Median	4
Mean	4.22
SD	3.23

3.1.5 Comparison of Repertory Grid Sample and Questionnaire Sample

To ensure there were no sample selection biases, further analyses were conducted to compare the questionnaire and repertory grid samples.

A Mann-Whitney test showed there were no significant differences on the TLEQ (CE score) between the individuals who completed the repertory grids and those who completed the questionnaires. There were significant differences with respect to length of time volunteering (with the repertory grid participants volunteering for fewer months) and age. It is of note, however, that the mean age of the grid sample was only four years younger.

There was also a significant difference between the repertory grid sample and questionnaire sample for MSTS score (with the repertory grid participants scoring higher on this measure) (see Table 5).

Table 5: Mann-Whitney Test Result to Assess Differences between Repertory Grid Sample and Questionnaire Sample

	Age	Months volunteering	TLEQ (CE)	MSTS
Mann-Whitney U	4853.5	4853.5	5167.0	4300.5
Significance (two-tailed)	0.01	0.01	0.97	0.01

A Chi-square test for independence (with Yates Continuity Correction) indicated no statistically significant association between gender and the questionnaire and repertory grid samples, $\chi^2(1, n=299)=0.52, p=0.47, \phi=-0.05$ (two-tailed).

The assumptions to conduct a test of Chi-square were violated for ethnicity and level of education (the minimum expected frequency cell). This meant that relevant statistics could not be conducted, but it is of note that by comparing the data it can be seen that there appears to be little difference between the questionnaire and repertory grid samples for ethnicity and level of education.

3.2 Section 2: Repertory Grid Sample

The following section will consider the STS questionnaire results for the repertory grid sample, shown by gender.

3.2.1 Modified Secondary Traumatic Stress Scale (Motta et al, 2001)

The boxplot shown below in Figure 2 displays the distribution of secondary trauma symptom scores (MSTS) for participants who completed a repertory grid. The distribution of scores is represented by the box and by protruding lines (called whiskers). The length of the box is the MSTS interquartile range, and thus it contains

50 per cent of the cases. The horizontal line inside the box indicates the median value and the whiskers go out to the smallest and largest values.

It can be seen that the male MSTS scores ranged from 18 to 33 and the female scores from 18 to 38. The median score for males was 22, mean score 23.33 and for females the median score was 24, mean score 24.86. The standard deviation was 4.56 and 5.56 respectively (Table 6). The distribution is positively skewed for both males and females (0.773 and 0.670 respectively). There were no extreme scores (scores which fall above and below the 25th and 75th percentiles).

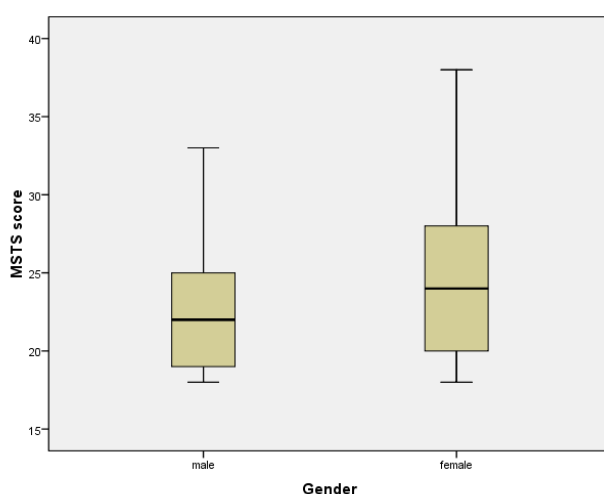


Figure 2: Boxplots Detailing the Distribution of MSTS Scores for the Male and Female Repertory Grid Participants.

Table 6: Male and Female MSTS Scores for Repertory Grid Sample

	Males	Females
MSTS Score		
Range	18-33	18-38
Median	22	24
Mean	23.33	24.86
SD	4.56	5.56

A Mann-Whitney U test indicated that there were no significant differences in the MSTS scores between males and females in the repertory grid sample; $U=257.5$, $z=-0.927$, $p=0.354$, $r=0.1$, two-tailed.

3.3 Repertory Grid Hypotheses

The following section will present the analysis and results for hypotheses one to six, all of which relate to the repertory grid sample.

Testing Hypothesis 1: Relationship between ‘current self’ - ‘ideal self’ and level of secondary trauma.

It was hypothesised that ‘current self’- ‘ideal self’ discrepancy will be positively correlated with levels of secondary trauma (as measured by the STS symptomatology score on the MSTS questionnaire).

The ‘current self’- ‘ideal self’ discrepancy is provided by the euclidean distance between these two elements in the repertory grid. Table 7 displays the descriptive statistics for this discrepancy.

Table 7: ‘Current Self’ – ‘Ideal Self’ Discrepancy

	N	Range	Mean	SD
Euclidean distance	50	0.15-1.41	0.75	0.30

Given that a distance of less than 0.5 between elements implies that they are very similar and a distance of more than 1.5 indicates that the elements are very different (Winter, 1992), the mean current self and ideal self discrepancy score can be considered to be relatively low. This suggests that the participants who completed the repertory grids are satisfied with themselves since the closer the euclidean distance is to zero, the higher an individual’s self-esteem and self-satisfaction are thought to be (Leach, Freshwater, Aldridge and Sunderland, 2001).

The distance between the participants’ ‘current’ and ‘ideal self’ was plotted against MSTS symptomatology score to see whether a relationship existed between the two (see Figure 3). The scattergram indicated that there appeared to be a small relationship between them.

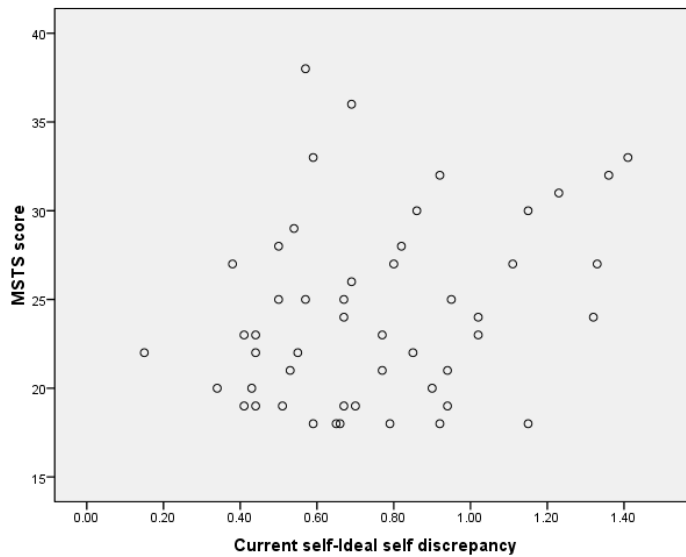


Figure 3: Scattergram Showing the Relationship between 'Current Self'-'Ideal Self' Discrepancy and MSTS Symptomatology Score

The relationship between 'current self'- 'ideal self' distance and secondary trauma was investigated using the Spearman rank order correlation (a non-parametric test). There was a small correlation between the two variables, $\rho=0.24$, $n=50$, $p<0.05$, one-tailed, with the secondary trauma score increasing as the current-ideal self distance increases. These results indicate that the hypothesis can be accepted.

Testing Hypothesis 2: Relationship between 'current self'- 'other Samaritans' and level of secondary trauma.

It was hypothesised that there will be a positive correlation between 'current self'- 'other Samaritans' discrepancy and level of secondary trauma (as determined by the STS score on the MSTS questionnaire).

The 'current self'- 'other Samaritans' discrepancy descriptives are displayed in Table 8. From this, it can be seen that the mean euclidean distance score is 0.68, $sd=0.24$. This implies that the elements are fairly similar (Winter, 1992).

Table 8: 'Current Self' – 'Other Samaritans' Discrepancy

	N	Range	Mean	SD
Euclidean distance	50	0.35-1.30	0.68	0.24

The 'current self'- 'other Samaritans' distance and secondary stress symptomatology score were plotted against one another (Figure 4). From the scattergram, it did not appear that there was an association between these two variables.

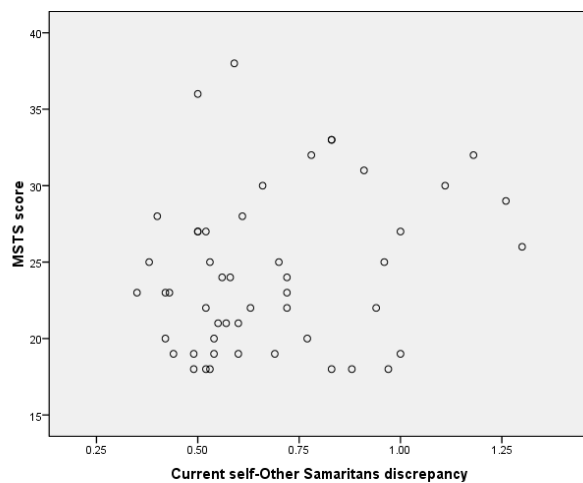


Figure 4: Scattergram Showing the Relationship between 'Current Self' – 'Other Samaritans' Discrepancy and MSTS Score

As parametric conditions did not appear to be met a Spearman rank order correlation was conducted to test for a possible association. This indicated that the hypothesis should be rejected since the correlation between 'current self' – 'other Samaritans' distance and secondary trauma symptomatology score was not statistically significant ($\rho=0.17$, $n=50$, $p=0.099$, one-tailed). There was, however, a trend in the expected direction.

Testing Hypothesis 3: Relationship between 'self before being a Samaritan'- 'self as a Samaritan' and level of secondary trauma.

It was hypothesised that the 'self before being a Samaritan'- 'self as a Samaritan' discrepancy will be positively correlated with levels of secondary trauma.

The 'self before being a Samaritan'- 'self as a Samaritan' discrepancy descriptives are displayed in Table 9.

Table 9: 'Self before being a Samaritan'- 'Self as a Samaritan' Discrepancy

	N	Range	Mean	SD
Euclidean distance	50	0.0-1.51	0.76	0.29

The distance between 'self before being a Samaritan' and 'self as a Samaritan' was plotted against the participants' MSTS symptomatology score (Figure 5). It did not appear that there was a relationship between these two variables, and this was confirmed with the correlational analysis (Spearman rank test) which indicated that the correlation was not statistically significant ($\rho=0.12$, $n=50$, $p=0.2$, one-tailed).

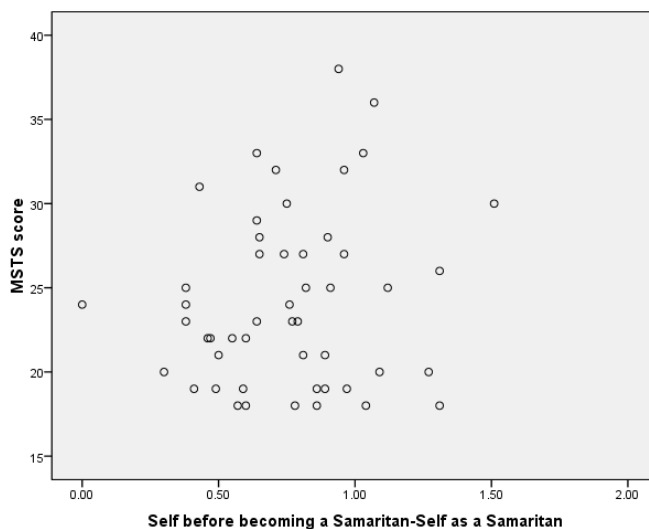


Figure 5: Scattergram Showing the Relationship between 'Self before Becoming a Samaritan' – 'Self as a Samaritan' Discrepancy and STS Score

Testing Hypothesis 4: Relationship between overall conflict concerning ‘self after traumatic event’ and level of secondary trauma.

The descriptive statistics for overall conflict for ‘self after traumatic event’ are displayed in Table 10.

Table 10: Descriptive Statistics for Conflict for ‘Self after Traumatic Event’

	N	Range	Mean	SD
Conflict	48	1.7-13.7	7.6	3.02

The hypothesis that there would be a correlation between overall conflict concerning ‘self after traumatic event’ and level of secondary trauma was initially investigated by generating a scattergram of these two variables (Figure 6). From the scattergram, it did not appear that there was a relationship between the variables and this was confirmed when the two-tailed test failed to find a significant result ($\rho = -0.03$, $n = 48$, $p = 0.842$, two-tailed). In addition to the hypothesis not being statistically significant, there was no trend in the data.

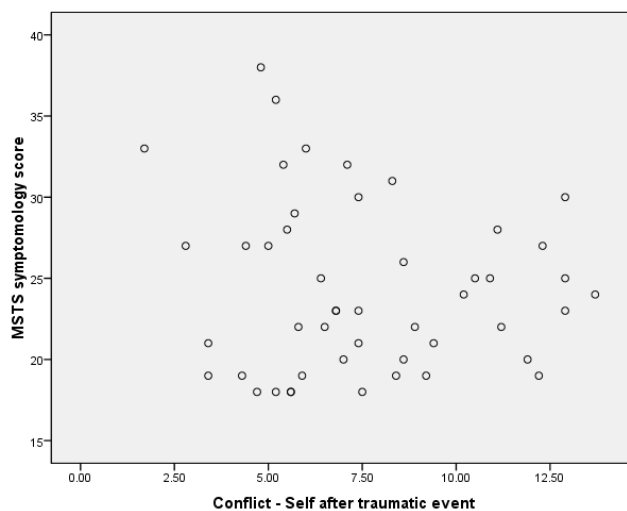


Figure 6: Scattergram Showing the Relationship Concerning Conflict between ‘Self after Traumatic Event’ and MSTS Score

Testing Hypothesis 5: Association between level of secondary trauma and degree of elaboration in the construing of ‘self after traumatic event’ (for both the emergent and implicit poles).

The hypothesis that secondary trauma will be inversely correlated with degree of elaboration of the ‘self after the traumatic event’ in terms of the implicit poles, and positively correlated with such elaboration in terms of the emergent poles was investigated.

The descriptive statistics for degree of elaboration in the construing of ‘self after traumatic event’ for the emergent and implicit poles are displayed in Table 11.

Table 11: Descriptive Statistics for Degree of Elaboration in the Construing of ‘Self after Traumatic Event’ for the Emergent and Implicit Poles

	N	Range	Mean	SD
Elaboration:				
Emergent poles	48	0-10	3.5	2.12
Implicit poles	48	0-9	4.77	1.91

Initially scattergrams were generated for MSTS score and degree of elaboration of the ‘self after the traumatic event’ in terms of both the implicit and emergent poles (Figures 7 and 8). This indicated that there was no association between these two variables (MSTS score and degree of elaboration), in regards to the implicit or the emergent poles.

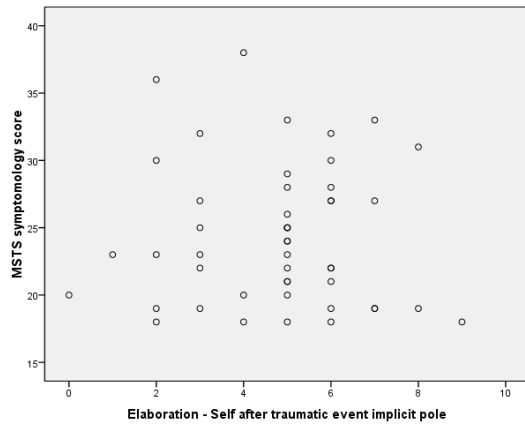


Figure 7: Level of Elaboration for ‘Self after Traumatic Event’ and MSTS Symptomatology Score (Implicit Poles)

A non-parametric correlational analysis (Spearman rank order) confirmed that the hypothesis can be rejected since the correlation between MSTS symptomatology score and level of elaboration for ‘self after traumatic event’ (implicit poles) was not statistically significant ($\rho = -0.016$, $n=48$, $p=0.458$, one-tailed).

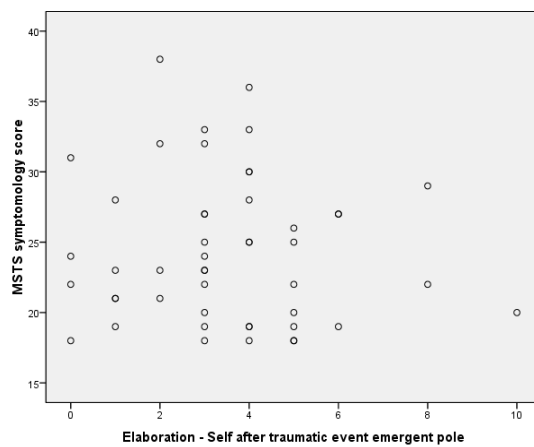


Figure 8: Level of Elaboration for ‘Self after Traumatic Event’ and MSTS Symptomatology Score (Emergent Poles)

A test of Spearman rank order confirmed that the correlation between MSTS symptomatology score and level of elaboration for ‘self after traumatic event’ (emergent poles) was not statistically significant ($\rho = -0.065$, $n=48$, $p=0.660$, two-tailed).

Testing Hypothesis 6: Difference between degree of elaboration of ‘self before traumatic event’, and ‘self after traumatic event’ (for the implicit and emergent poles).

The descriptive statistics for degree of elaboration in the construing of ‘self before traumatic event’ and ‘self after traumatic event’ for the emergent and implicit poles are displayed in Table 12.

Table 12: Descriptive Statistics for Degree of Elaboration in the Construing of ‘Self before Traumatic Event’ and ‘Self after Traumatic Event’

	N	Range	Mean	Median	SD
Self before traumatic event					
Emergent poles	48	0-10	4.10	4	1.9
Implicit poles	48	0-7	4.38	4	1.86
Self after traumatic event					
Emergent poles	48	0-10	3.5	3	2.1
Implicit poles	48	0-9	4.77	5	1.9

Histograms indicated that all the data was not normally distributed, and therefore a non-parametric Wilcoxon signed rank test was employed for the analysis of both the implicit and emergent poles.

Implicit pole (clustering 0-1)

It was hypothesised that there will be a significantly higher degree of elaboration of ‘self before traumatic event’, compared to ‘self after traumatic event’ in regard to the implicit poles.

Figure 9 displays the distribution of degree of elaboration for ‘self before traumatic event’ and ‘self after traumatic event’ (implicit poles).

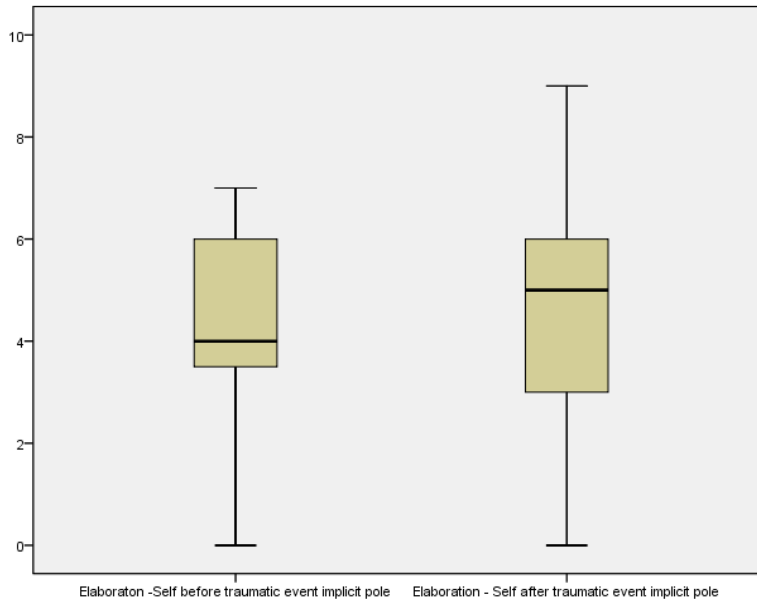


Figure 9: Boxplot Displaying Degree of Elaboration for ‘Self before Traumatic Event’ and ‘Self after Traumatic Event’ on the Implicit Poles

It can be seen that the degree of elaboration for ‘self before traumatic event’ ranges between 0 to 7, median score 4 and for ‘self after traumatic event’ from 0 to 9, median score 5. The mean score for ‘self before traumatic event’ was 4.38 and for ‘self after traumatic event’ 4.77, standard deviation 1.86 and 1.91 respectively. The distribution is negatively skewed for both self before and self after traumatic event (-0.43 and -0.31 respectively).

A Wilcoxon signed rank test revealed that there was not a statistically significant difference between degree of elaboration of ‘self before traumatic event’, and ‘self after traumatic event’, $z = -1.491$, $p = 1.36$, two-tailed.

Emergent pole (clustering 1-0)

It was hypothesised that there will be a significantly lower degree of elaboration of ‘self before traumatic event’, compared to ‘self after traumatic event’ in regard to the emergent poles.

Figure 10 displays the distribution of degree of elaboration for ‘self before traumatic event’ and ‘self after traumatic event’ (emergent poles).

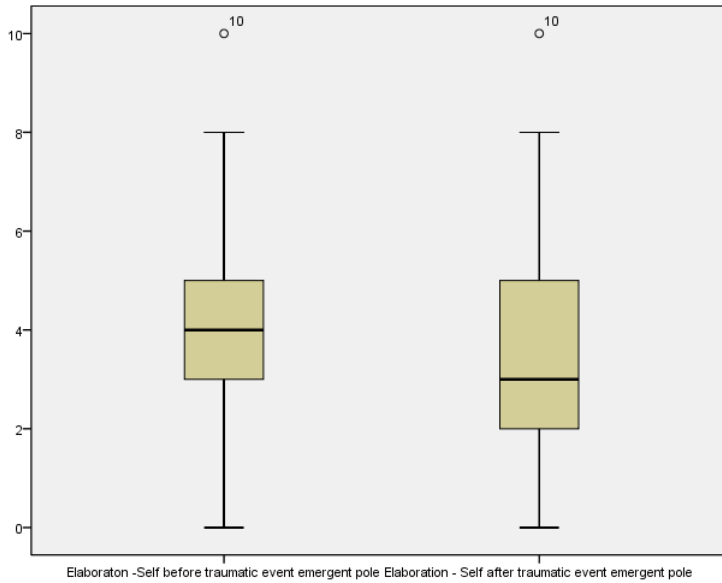


Figure 10: Boxplot Displaying Degree of Elaboration for ‘Self before Traumatic Event’ and ‘Self after Traumatic Event’ on the Emergent Poles

It can be seen that the degree of elaboration for ‘self before traumatic event’ and ‘self after traumatic event’ ranges from 0 to 10. The mean score for ‘self before traumatic event’ was 4.1, median 4 and for ‘self after traumatic event’ the mean score was 3.5, median 3. The standard deviations were 1.9 and 2.1 respectively. The distribution is positively skewed for both self before and self after traumatic event (0.46 and 0.61 respectively) and both have one extreme score (scores which fall above and below the 25th and 75th percentiles).

A Wilcoxon signed rank test revealed that there was a statistically significant difference between degree of elaboration of ‘self before traumatic event’, and ‘self after traumatic event’, but this was in the opposite direction to that which was predicted, $z=-2.241$, $p<0.05$, two-tailed, with a small effect size ($r=0.23$). The median (md) elaboration score reduced after the traumatic event (md=3) compared to before the traumatic event (md=4).

Further Investigations

Further analysis of the data was conducted by using t-tests. This test was chosen to look at group comparisons since the sample was in accordance with the assumptions required by the test. For example, the data were at interval or ratio level, there was

independence of observations, the data were normally distributed and there was homogeneity of variance.

Self before Traumatic Event

To determine whether there were any statistically significant differences between the level of elaboration of 'self before traumatic event' in regards to the implicit and emergent poles, a paired samples t-test was conducted. This revealed that there was not a statistically significant difference between the level of elaboration for the implicit (mean=4.38, sd=1.86) and emergent poles (mean=4.10, sd=1.91) for 'self before traumatic event', $t(47)=0.572$, $p=0.57$ (two-tailed).

Self after Traumatic Event

To determine whether there were any statistically significant differences between the level of elaboration of 'self after traumatic event' in regard to the implicit and emergent poles, a paired samples t-test was conducted. This revealed that there was a statistically significant difference between the level of elaboration for the implicit (mean=4.77, sd=1.91) and emergent poles (mean=3.50, sd=2.12) for 'self after traumatic event', $t(47)=2.62$, $p<0.05$ (two-tailed). The mean difference in elaboration levels for the implicit and emergent poles was 1.27 with a 95 per cent confidence interval ranging from 0.29 to 2.25. The eta squared statistic (0.13) indicated a moderate effect size. This suggests that the self after the traumatic event is more elaborated in regard to the implicit than the emergent poles.

3.4 Section 3: Questionnaire Sample

The following section will present the responses from the questionnaire sample on the Traumatic Life Events Questionnaire (TLEQ), Modified Secondary Traumatic Stress Scale (MSTS) and PTSD Screening and Diagnostic Scale (PSDS).

3.4.1 Traumatic Life Events Questionnaire

The TLEQ (Kubany, 2004) was used to gain the participants' history of potentially traumatic events (PTEs). Table 13 below displays the PTEs, the frequency with which that event has been experienced by the participants, and whether they experienced intense fear, helplessness or horror at the time.

Table 13: TLEQ Responses¹

Event	Frequency event experienced in sample (n; %)	Whether experienced intense fear, helplessness or horror (n; %)	Number of occurrences (n)
1. Natural disaster (e.g. flood, earthquake)	47 (18.1%)	17 (34%)	75
2. Motor vehicle accident (which required medical attention, or that badly injured or killed someone)	49 (18.9%)	27 (50.9%)	60
3. Other accident (where they or someone else were badly hurt)	33 (12.7%)	20 (54.1%)	56
4. Lived, worked, military service in warzone	19 (7.3%)	6 (46.2%)	33
5. Sudden death (of a close friend or loved one)	173 (66.8%)	83 (48.3%)	378
6. Life threatening or disabling event experienced by a loved one	104 (40.2%)	49 (46.7%)	169
7. Personal life threatening illness	42 (16.2%)	25 (55.6%)	57
8. Robbed or present during robbery where weapon used	26 (10%)	17 (56.7%)	38
9. Physically assaulted by stranger	40 (15.4%)	22 (52.4%)	58
10. Witnessed severe physical assault of acquaintance or stranger	30 (11.6%)	18 (52.9%)	59
11. Threatened with death or serious physical harm	58 (22.4%)	30 (52.6%)	137
12. Growing up: physically punished	23 (8.9%)	14 (46.7%)	113
13. Growing up: witnessed family violence	37 (14.3%)	32 (78%)	161
14. Physically hurt by intimate partner	37 (14.3%)	29 (76.3%)	114
15. Before 13: unwanted sexual contact (USC) with someone >5 years older	27 (10.4%)	13 (41.9%)	87
16. Before 13: USC by someone close in age	26 (10%)	10 (33.3%)	72
17. Age 13-18: USC	26 (10%)	14 (50%)	88
18. Adult: USC	24 (9.3%)	17 (70.8%)	67
19. Sexual harassment	84 (32.4%)	25 (30.9%)	244
20. Stalked	36 (13.9%)	23 (65.7%)	71
21. Miscarriage (participant or partner)	57 (22%)	30 (51.7%)	79
22. Abortion (participant or partner)	24 (9.3%)	7 (25%)	30
23. Other event either experienced or witnessed (life threatening, caused serious injury, highly distressing)	52 (20.1%)	32 (61.5%)	140

¹ Please note that some participants skipped this questionnaire, or parts of this questionnaire

As can be seen in Table 13, the event that was most commonly experienced was the sudden and unexpected death of a close friend or loved one (occurring in 66.8 per cent of the sample). This event also had the highest number of occurrences (happening 378 times within the sample). The event which participants least experienced was living, working or completing military service in a warzone (occurring in 7.3 per cent of the sample).

The event that was reported to have evoked most intense fear, helplessness or horror was witnessing family violence growing up (occurring in 78 per cent of the sample who endorsed that that event had happened to them). The event that participants reported evoked the least amount of fear, helplessness or horror was having an abortion (occurring in 25 per cent of the sample who endorsed that that event had happened to them).

A summary of the TLEQ responses (for males and females) is displayed in Table 14.

Table 14: Summary Scores from TLEQ

TLEQ Categories	Male (n=102)	Female (n=155)	Total Sample (n=257)
TLEQ CE			
Mean	4.03	4.25	4.16
SD	2.81	2.93	2.88
TLEQ CFH			
Mean	1.48	2.59	2.15
SD	1.71	2.46	2.25
TLEQ OC			
Mean	8.56	9.80	9.31
SD	8.15	9.97	9.30

After looking at the data it appeared that significantly more females reported that they experienced fear, hopelessness or horror (TLEQ CFH) than males during the traumatic events. This was later confirmed by conducting a Mann-Whitney U test

(Table 15). There were no significant gender differences for count of events (TLEQ CE) or number of occurrences (TLEQ OC).

Table 15: Gender and Level of Exposure to PTEs

	TLEQ CE	TLEQ CFH	TLEQ OC
Mann-Whitney U	7493.00	5651.00	7374.00
Significance (two-tailed)	0.48	<0.001	0.43

3.4.2 Secondary Traumatic Stress

The MSTS (Motta et al, 2001) was used to gain a measure of the participants' secondary trauma symptoms. Table 16 displays the STS scores.

Table 16: Summary of Secondary Trauma Symptom Scores (n=274)²

	Rarely/ Never	At Times	Not Sure	Often	Very Often
1. Avoid certain thoughts or feelings that remind me of the caller/phone call	74.8%	20.4%	2.6%	2.2%	0%
2. Avoid certain activities or situations because they remind me of their problems	94.9%	3.6%	1.1%	0.4%	0%
3. Difficulty falling or staying asleep	75.2%	21.2%	0.4%	3.3%	0%
4. Startle easily	90.8%	5.9%	1.1%	1.8%	0.4%
5. Flashbacks (vivid unwanted images or memories) related to their problems	82.8%	13.5%	2.2%	1.5%	0%
6. Frightened by the things that he or she said or did to me	89.8%	9.5%	0.4%	0.4%	0%
7. Experience troubling dreams similar to their problems	93.4%	4.4%	1.5%	0.7%	0%
8. Experience intrusive, unwanted thoughts about their problems	78.8%	19.8%	0%	1.5%	0%
9. Losing sleep over thoughts of their experiences	92.7%	6.6%	0%	0.7%	0%
10. Thought that I might have been negatively affected by their experience	81.8%	15.3%	1.1%	1.8%	0%
11. Felt 'on edge' and distressed and this may be related to thoughts about their problem	90.1%	8.8%	0.4%	0.7%	0%
12. Wished that I could avoid dealing with the person/persons named above	82.1%	10.6%	1.5%	4.0%	1.8%
13. Difficulty recalling specific aspects and details of their difficulties	75.4%	13.6%	5.5%	3.7%	1.8%
14. Losing interest in activities that used to bring me pleasure	95.6%	3.3%	0.4%	0.7%	0%
15. Increasingly difficult to have warm and positive feelings for others	92.6%	6.3%	0.4%	0.7%	0%
16. Less clear and optimistic about my future life than I once was	90.8%	6.6%	0.4%	1.5%	0.7%
17. Some difficulty concentrating	84.6%	14.0%	0.7%	0.7%	0%
18. Would feel threatened and vulnerable if I went through what the person above went through	40.3%	18.7%	13.9%	15.4%	11.7%

² Please note that some participants skipped this questionnaire, or parts of this questionnaire

Table 17 displays the descriptive data for the MSTS questionnaire.

Table 17: Summary Scores from MSTS Questionnaire

	Male (n=105)	Female (n=169)	Total Sample (n=274)
Range	18-37	18-46	18-46
Median	21	22	22
Mean	21.82	22.92	22.50
SD	3.83	4.66	4.39

3.4.3 Posttraumatic Stress Disorder

The PSDS (Kubany et al, 2004) was used to gain a measure of the participants' PTSD symptoms³. Figure 11 displays the distribution of symptom scores on the PSDS for the whole sample. It can be seen that the mean symptom score is 7.92 (sd=11.8), with the scores ranging from 0 to 78. The median score was 4. There are twelve extreme cases (as displayed by the participant's unique code) at the higher value for the PSDS symptom score.

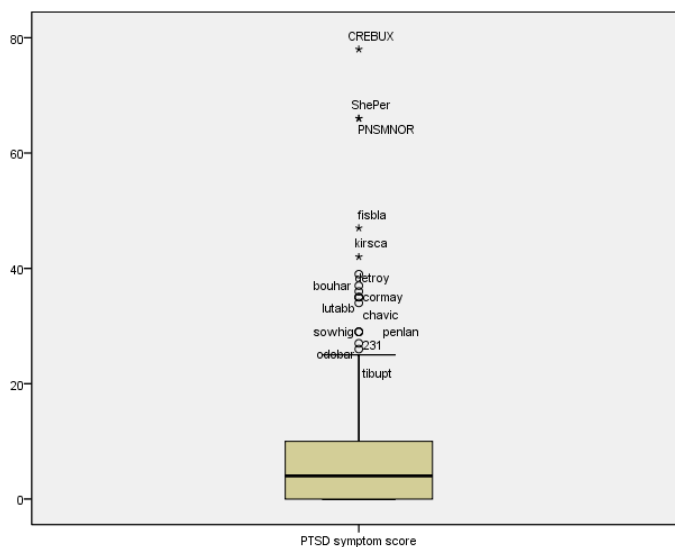


Figure 11: Boxplot Displaying PSDS Symptom Scores (Indicating Level of PTSD) for Whole Sample

³ Please note that some participants skipped this questionnaire, or parts of this questionnaire

Table 18 displays the PTSD symptom scores from the PSDS questionnaire.

Table 18: Participants PSDS Symptom Score (Total N=232)

PSDS Symptom Score	Qualitative Description	N	Percentage (%)
0-17	None- Mild	201	86.6
18-39	Mild – Moderate	26	11.2
40-49	Moderate – Severe	2	0.9
≥50	Severe	3	1.3

Of the 299 participants who started or completed the questionnaires, seven of them (2.3 per cent) stated that they had been diagnosed with or thought they had suffered with PTSD within the last five years. A further three participants (1 per cent) were unsure whether they had or not. The PSDS symptom scores (used to indicate the presence of PTSD symptoms) indicated that 17 (7.3 per cent) of the Samaritans who completed the PSDS questionnaire actually reached the cut off for PTSD symptoms (given that Kubany (2004) suggests that a PTSD diagnosis is usually confirmed in individuals who score 26 or above on the PSDS⁴).

Interestingly, only three of the seven participants who reported they had been diagnosed with, or thought they had suffered with PTSD, reached the cut off score of 26. Additionally, one of the participants who was unsure whether they had been diagnosed with PTSD or were currently suffering with it also reached the cut off score of 26 on the PSDS. This ultimately means that 13 participants reached the clinical cut off point for PTSD symptomatology but are unaware of it.

In total, seven participants stated that they had received professional psychological support/therapy from a mental health professional (e.g. a counsellor or psychologist) due to their emotional reactions following a phone call they took at the Samaritans. Only one of the participants, however, who reported they had been diagnosed with, or thought they had suffered with PTSD over the past five years said they had received support/therapy from a mental health professional. This suggests that many of the Samaritans who may have clinically meaningful symptoms of PTSD are not

⁴ It is important to reiterate however that a clinical interview is required to confirm such a diagnosis.

receiving professional help.

3.5 Questionnaire Hypotheses

The following section will present the analysis and results for hypotheses seven to ten, all of which relate to the questionnaire sample.

Testing Hypothesis 7: Relationship between level of posttraumatic stress and level of secondary traumatic stress.

It was hypothesised that there will be a positive correlation between level of posttraumatic stress and level of secondary traumatic stress. Initially a scattergram of these two variables was generated (Figure 12), which indicated that they were correlated with one another.

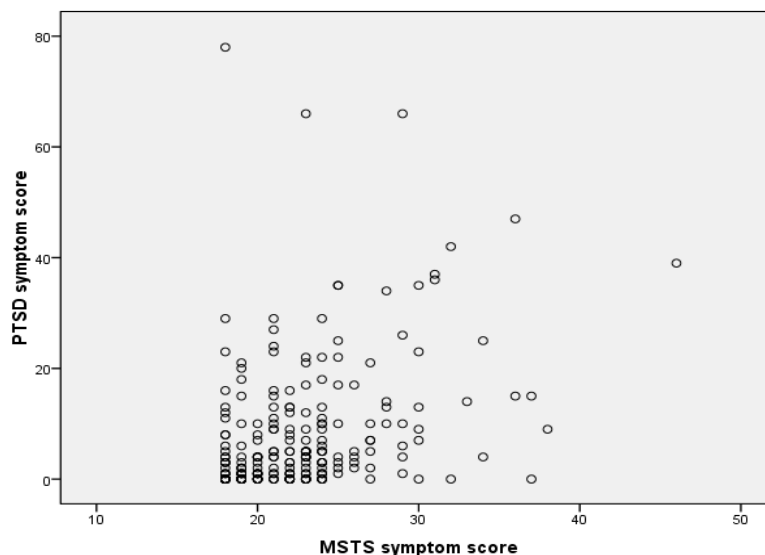


Figure 12: Boxplot Displaying the Relationship between MSTS Symptom Scores and PTSD Symptom Scores

The relationship between level of posttraumatic stress (measured by PSDS symptom score) and secondary trauma (as measured by MSTS symptomatology score) was investigated using the Spearman rank order correlation. This indicated that there was a medium correlation between the two variables, $\rho=0.394$, $n=234$, $p<0.01$, one-tailed, with MSTS symptom score increasing as the PTSD symptom score increases. These results indicate that the hypothesis can be accepted.

Testing Hypothesis 8: Symptoms of secondary trauma in Samaritan telephone operators

It was hypothesised that the prevalence rates of Samaritan telephone operators suffering with secondary trauma will not differ from those reported in previous studies (e.g. Motta et al, 2004a). The Motta et al (2004a) study reported 33 per cent of their sample reached the cut off score (38 or above) for clinically meaningful symptoms of secondary trauma (on the Modified Secondary Trauma Scale).

To test this hypothesis, a Chi-square test for goodness of fit was conducted (see Table 19).

Table 19: Chi Square Test for Level of STS

MSTS Score	Observed N	Expected N	Residual
≤37(not clinically meaningful)	272	183.6	88.4
≥38 (clinically meaningful)	2	90.4	-88.4
Total	274		

The Chi-square goodness of fit test indicated that there is a statistically significant difference in the proportion of Samaritan volunteers (0.73 per cent) who reported clinically meaningful levels of STS (≥38), compared to the value of 33 per cent in the Motta et al (2004a) study (X^2 (1, n=274)=129.1, $p<0.01$, two-tailed). There was an expected n=90, when actually only 2 Samaritans obtained a value of ≥38 on the MSTS symptom score. This means that fewer Samaritan volunteers reached clinically meaningful levels of STS than was predicted.

Testing Hypothesis 9: Relationship between participants' level of secondary trauma and their exposure to potentially traumatic events (PTEs)

Since it was hypothesised that there will be a positive correlation between participants' level of secondary trauma and their exposure to potentially traumatic events, the relationship between the participants' MSTS symptomatology score and

exposure to the number of potentially traumatic events (as measured by CE on TLEQ) was investigated using the Spearman rank order correlation. This indicated that there was a small correlation between the two variables, $\rho=0.181$, $n=257$, $p<0.01$, one-tailed, with MSTS symptom score increasing as the number of potentially traumatic events increases. These results indicate that the hypothesis is supported.

Testing Hypothesis 10: Relationship between participants' level of education and their self-reported level of secondary trauma

It was hypothesised that there will be an inverse correlation between participants' level of education and their self-reported level of secondary trauma.

A non-parametric correlational analysis (Spearman rank order) confirmed that the hypothesis can be rejected since the correlation between level of education and level of secondary trauma symptomatology was not statistically significant ($\rho=0.006$, $n=274$, $p=0.92$, two-tailed).

3.6 Section 4: Further Research Questions

The following section will consider three further research questions.

Question 1: Relationship between age of the Samaritan volunteers and level of STS

A scattergram was used to plot age of the volunteers and level of STS (as seen in Figure 13). As can be seen, the data did not appear to meet parametric conditions and therefore a non-parametric correlational analysis (Spearman rank order) was completed.

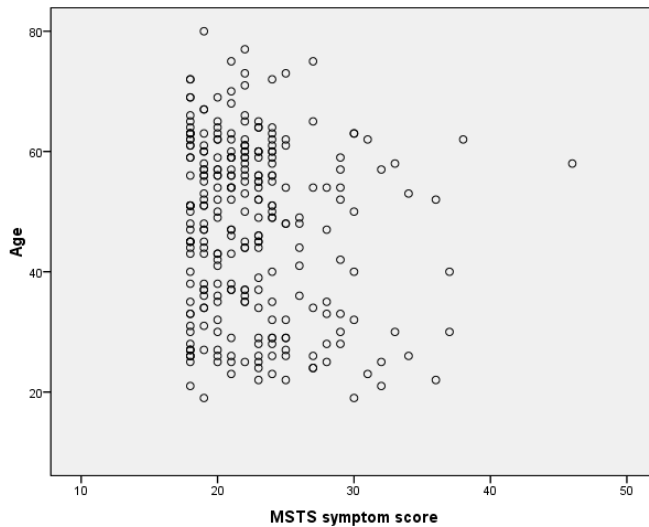


Figure 13: Scattergram Showing the Relationship between Volunteers' Age and Level of STS

This analysis confirmed that there was not a correlation between age and level of STS ($\rho = -0.116$, $n = 274$, $p = 0.054$, two-tailed), but it is important to note that this only just misses significance. It appears that the trend is that as age increases, STS score decreases.

Question 2: Relationship between the Samaritan volunteers' gender and levels of STS

Figure 14 displays the distribution of STS scores, broken down by gender.

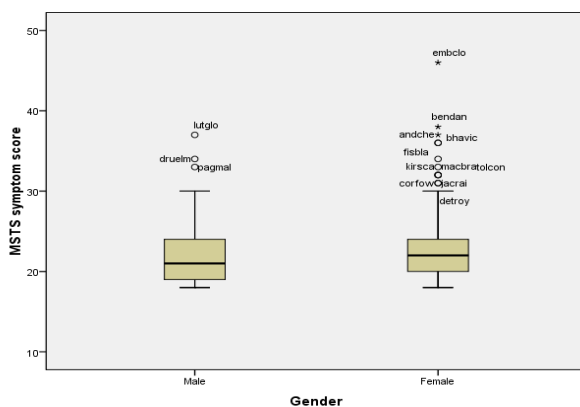


Figure 14: Boxplot Showing the Distribution of the Participants' Gender and Level of STS

A Mann-Whitney U test revealed no statistically significant differences in the levels of STS of males (mean=21.8, median=21, n=105) and females (mean=22.9, median=22, n=169), $U=7665$, $z=-1.905$, $p=0.057$, $r=0.1$, two-tailed. It is important to note, however, that once again this only just misses significance. It appears that there is a trend towards women scoring higher on levels of STS, as would have been predicted on the basis of previous research. Had this have been a hypothesis, a significant result would have been obtained on a one-tailed test.

Question 3: Relationship between level of STS and length of time as a Samaritans telephone volunteer

A Spearman rank order correlation indicated that there was not a statistically significant relationship between STS symptomatology score and length of time working as a Samaritans volunteer ($\rho=-0.092$, $n=274$, $p=0.13$, two-tailed).

3.7 Analysis

Due to the robust Spearman rank order tests being employed, a sensitivity analysis was conducted using other methodologies (namely the parametric equivalents of the tests). These led to the same conclusions, which suggests that the researcher can be confident in the findings.

3.7.1 Analysis of Individual Grids

To highlight case examples, two gridplots from IDIOGRID will be presented below (see Figures 17 and 18). These particular examples have been selected for two main reasons; first they lend support to some of the hypotheses in this research, and second they are examples of participants who scored relatively high (case example 1) and relatively low (case example 2) on the MSTS questionnaire, compared to the rest of the sample.

As previously explained in the methodology chapter, a gridplot provides a two dimensional representation of an individual's construct system. Broadly speaking, constructs which fall within opposing quadrants can be considered to be most dissimilar (Winter, 1992) and those which are plotted furthest from the centre of the gridplot can be considered to be most defined (Grice, 2004) and more extremely perceived (Winter, 1992).

Case example 1: A repertory grid participant who scored 36 on MSTS questionnaire (which measures levels of secondary trauma). Scores of 38 or more are suggestive of clinically meaningful mild to moderate anxiety and depression.

The first case example (Figure 15) is of a 52-year-old female (of 'mixed' ethnicity) who has been volunteering at the Samaritans for 113 months (approximately nine and a half years). She scored 15 on the PSDS questionnaire (which measures PTSD symptomatology. Scores of 18 or above suggest mild to moderate symptoms of PTSD are present). She also reported experiencing fourteen potentially traumatic events (PTEs), occurring approximately 41 times. The participant reported that on nine occasions she experienced intense fear or hopelessness during these PTEs.

In terms of the hypotheses, in this case example, there is a larger discrepancy between 'current self' and 'ideal self' (element distance 0.69) than case example 2 described below (element distance 0.44). The difference between these two participants on this measure is therefore consistent with the hypothesis concerned (albeit the distance between self-ideal is not large). The biplot for case example 1 indicates that the participant's 'ideal self' is seen as being 'principled', 'open' and of good 'health' and her 'current self' is rated as being 'trusting', having a 'sense of community', and 'growing in self-knowledge'. There is a discrepancy between the participant's 'self before being a Samaritan' and 'self as a Samaritan' (element distance 1.07), as was initially hypothesised would be the case in participants with higher levels of secondary traumatic stress (but was not found to be so in the sample as a whole). However, contrary to what might have been expected on the basis of her relatively high STS score, there is only a small discrepancy between her 'current self' and 'other Samaritans' (0.50). Figure 15 illustrates that this participant construes being traumatised as 'self serving' and 'closed'.

As previously discussed, the first and second principal components are plotted on the gridplot (depicted by the horizontal and vertical lines). The first component always accounts for most of the variance in the repertory grid. In this example, the participant's major dimension of construing accounts for 64.33 per cent of the variance in the grid. The constructs which have the highest loadings on the component contrasts people who 'grow in self knowledge', are 'perceptive' and are

'other centred' (construct loadings 5.00, 4.76 and 4.60 respectively) with 'homeostasis', 'self absorbed' and 'self centred'. 'Ideal self', 'self as a Samaritan' and 'self after traumatic event' are viewed in the former terms and 'most difficult client listened to at the Samaritans', 'father', and 'self before traumatic event' in the latter.

The participant's second principal dimension of construing accounts for 11.28 per cent of the variance in the grid. The constructs which have the highest loadings on the component contrasts people who are 'hopeful', 'self absorbed' and 'optimistic' (construct loadings 4.41, 2.21 and 1.71 respectively) with those who are 'less hopeful', 'perceptive' and 'pessimistic'. 'Partner/spouse/person closest fills this role', 'mother' and 'future self' are viewed in the former terms and 'easiest client listened to at the Samaritans', 'current self' and 'self before being a Samaritan' in the latter.

Analyses revealed that there are two implicative dilemmas within the grid for 'current self' and 'ideal self', therefore, 1.9 per cent of all the actual relationships in the grid were dilemmatic. Implicative dilemmas are relationships between an individual's constructs which present that person with a dilemma. This participant's dilemmas are:

- current self is construed as 'less hopeful', whereas ideal self is construed as 'hopeful'. The dilemma is that a hopeful person tends to be a deferential person, but the ideal self would not be deferential.
- current self is construed as 'pessimistic', whereas ideal self is construed as 'optimistic'. The dilemma is an optimistic person tends to be a deferential person, but the ideal self would not be deferential.

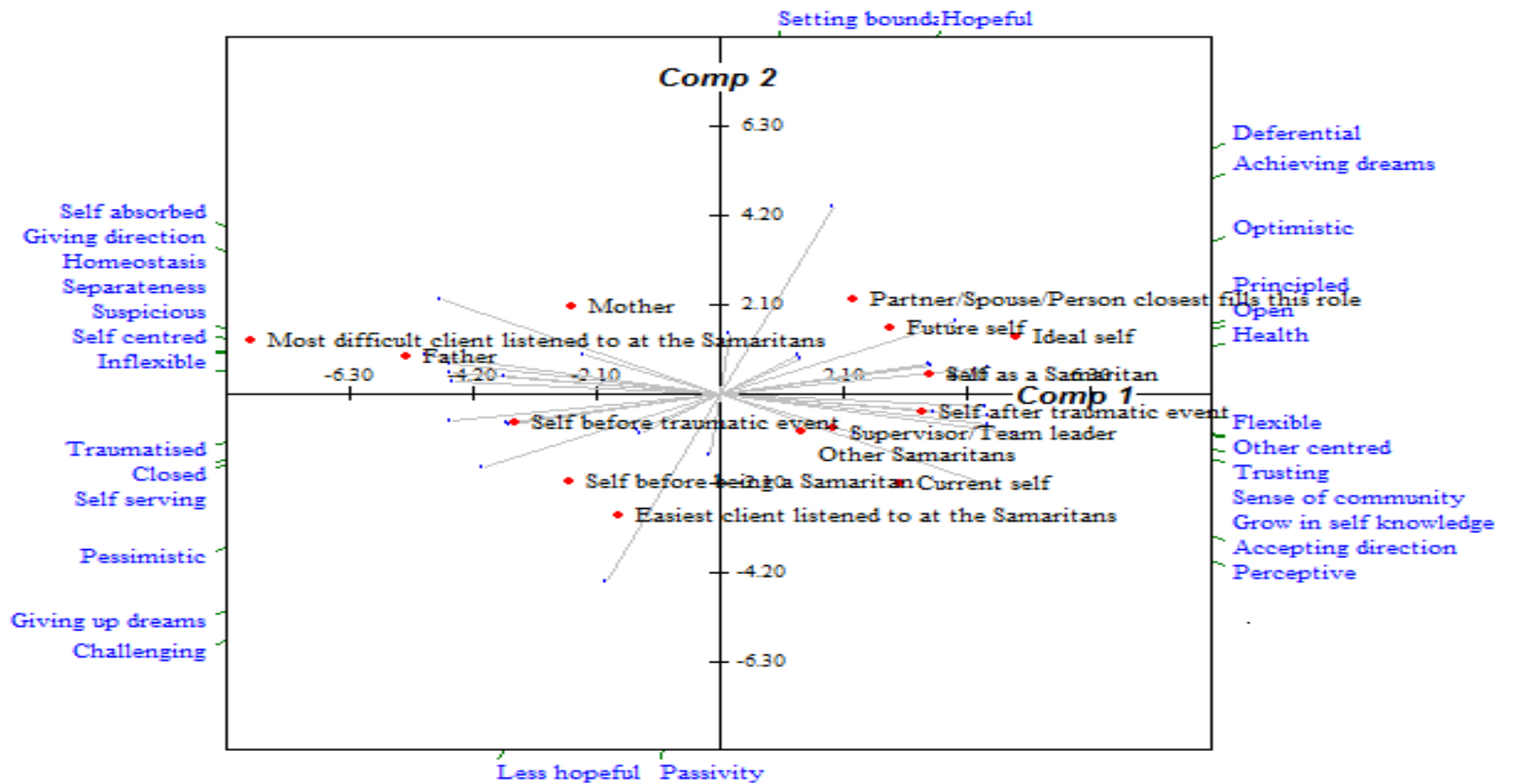


Figure 15: Biplot for Case Example 1

Case Example 2: A repertory grid participant who scored 19 on MSTS questionnaire (which measured levels of secondary trauma). Scores of 38 or more are suggestive of clinically meaningful mild to moderate anxiety and depression.

The second case example (Figure 16) is of a 60-year-old white female who has been volunteering at the Samaritans for 12 months. She scored zero on the PSDS questionnaire (which measures PTSD symptomatology. Scores of 18 or above suggest mild to moderate symptoms of PTSD are present). She reported experiencing four PTEs, occurring approximately seven times. The participant reported that on two occasions she experienced intense fear or hopelessness during these PTEs.

As previously indicated, in this example, consistent with the relevant hypothesis, this participant scored low on the MSTS questionnaire and reported little discrepancy between her construal of her current and ideal selves (element distance 0.44). The participant also rated her current self as being similar to other Samaritans (element distance 0.54), and sees herself as a Samaritan and prior to being a Samaritan as similar (element distance 0.41). This concurs with the hypotheses that the greater these discrepancies, the higher the level of STS will be.

The distance between self before and self after the traumatic event is smaller in this case example compared to case example 1 (element distance 0.78 compared to 1.10). It is interesting that this smaller distance is despite the participant describing herself as 'happy' prior to the traumatic event, and 'traumatised' afterwards'. This case example also illustrates that trauma is construed differently from case example 1 as the participant in case example 2 sees trauma close to being 'fancy free' (compared to 'closed' and 'self serving').

In this example, the participant's major dimension of construing, accounts for 68.89 per cent of the variance in the grid. The constructs which have the highest loadings on the component contrasts 'aloneness', people who are 'incompetent' and 'traumatised' (construct loadings 5.38, 5.14 and 5.05 respectively) with those who 'support' others, are 'more competent' and are 'protected'. 'Most difficult client listened to at the Samaritans', 'easiest client listened to at the Samaritans' and

'mother' are viewed in the former terms and 'ideal self', 'future self' and 'supervisor/team leader' in the latter.

The participant's second principal dimension of construing accounts for 12.80 per cent of the variance in the grid. The constructs which have the highest loadings on the component contrasts people who are 'fixed', 'protected' and who do their 'duty' (construct loadings 4.56, 2.44 and 2.18 respectively) with those who are 'transitional', 'traumatised' and who do things for 'pleasure'. 'Mother', 'father' and 'other Samaritans' are viewed in the former terms and 'self after traumatic event', 'self before being a Samaritan' and 'partner/spouse/person who closest fills this role' in the latter.

Analyses revealed that there are no implicative dilemmas within the grid. The lower number of implicative dilemmas in this case example, compared to case example 1, is consistent with the participant's lower MSTS score. This is in harmony with the work of Feixas and Saul (2003) who report that greater numbers of implicative dilemmas are associated with suffering and pathology, arguing that people who present with psychological difficulties (for example, with trauma) have more dilemmas than those who do not present with psychological difficulties (Feixas and Saul, 2005).

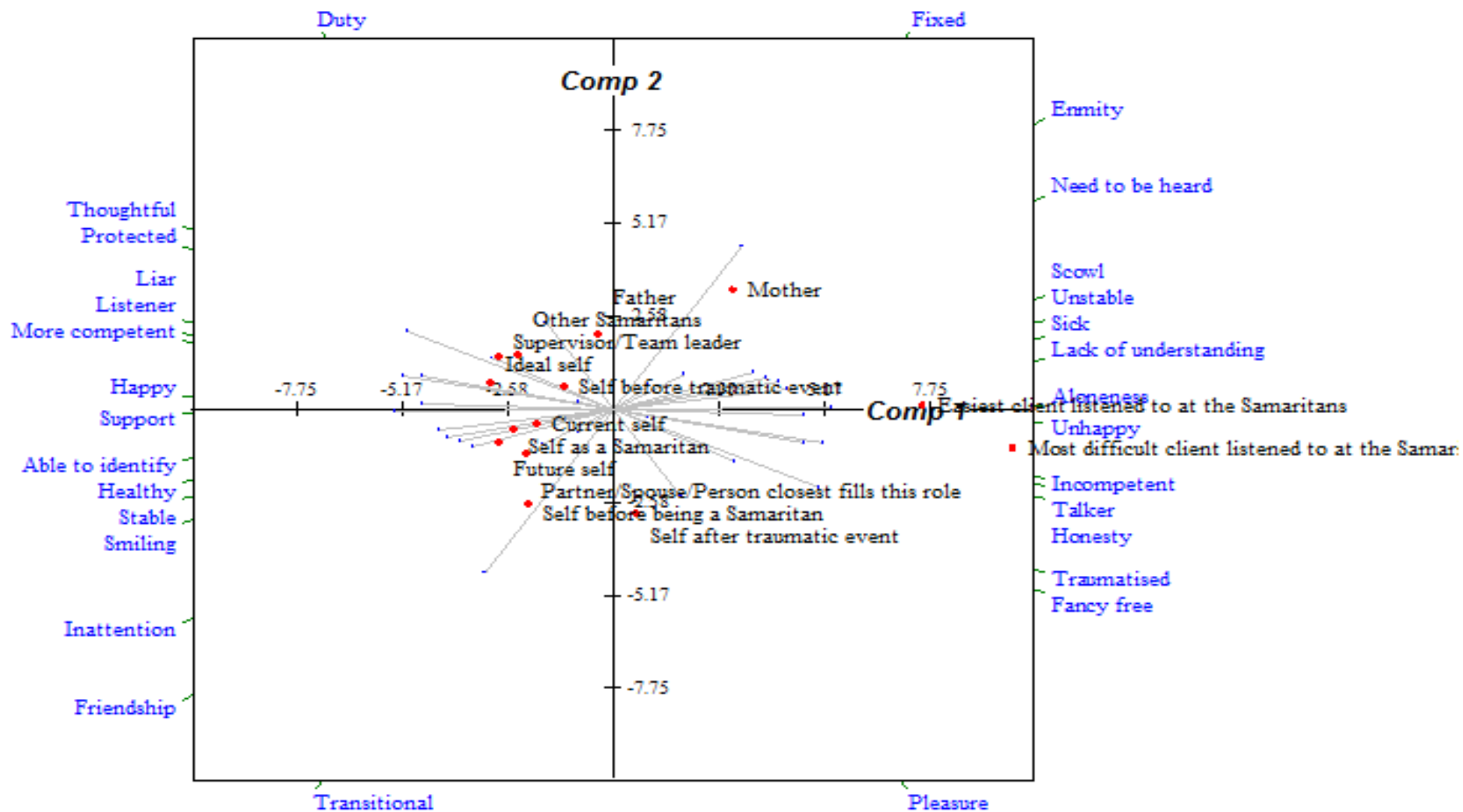


Figure 16: Biplot for Case Example 2

3.7.2 HICLAS Examples of Elaboration (for the Implicit and Emergent Poles)

This case example was chosen since it clearly demonstrates that different levels of elaboration can be obtained depending on whether the data is clustered on the implicit or emergent poles.

Case 3: A repertory grid participant who has an elaboration of 7 on the implicit pole, yet an elaboration of 0 on the emergent pole for 'self after traumatic event'. He also has an elaboration of 7 on the implicit pole and 1 on the emergent pole for 'self before traumatic event'.

The participant is a 35-year-old male of mixed race, who has been volunteering at the Samaritans for 14 months. On the questionnaires, he described his first few calls as a Samaritans volunteer as 'intense', saying that the shock of being witness to such sorrow and raw emotion left him reeling for some days afterwards. Indeed, he reported that he had wondered whether he would have the strength to continue volunteering. However, with experience he believed that one learns to be present with every caller's emotions and to understand that this is valuable in itself, and thus is able to find a way of releasing any emotions once the call is over so that one is able to be present for the next caller.

Within Figures 17 and 18, the binary codes which are coloured red indicate the elements the participant was presented with and the black binary codes indicate the participant's constructs. The binary codes that have been coloured blue and yellow indicate 'self before traumatic event' and 'self after traumatic event' respectively.

Figure 17 (showing clustering on the implicit poles) depicts that this participant has a greater level of elaboration for 'self after traumatic event' and 'self before traumatic event', compared to Figure 18 (showing clustering on the emergent poles). The high level of elaboration of 'self after traumatic event' on the implicit poles is not consistent with Sewell and Cromwell's PTSD model. They reported that traumatised individuals have lower levels of elaboration.

The results from the present research also highlight the importance of analysing the data for both poles, since clustering on either the implicit or emergent poles can produce different results.

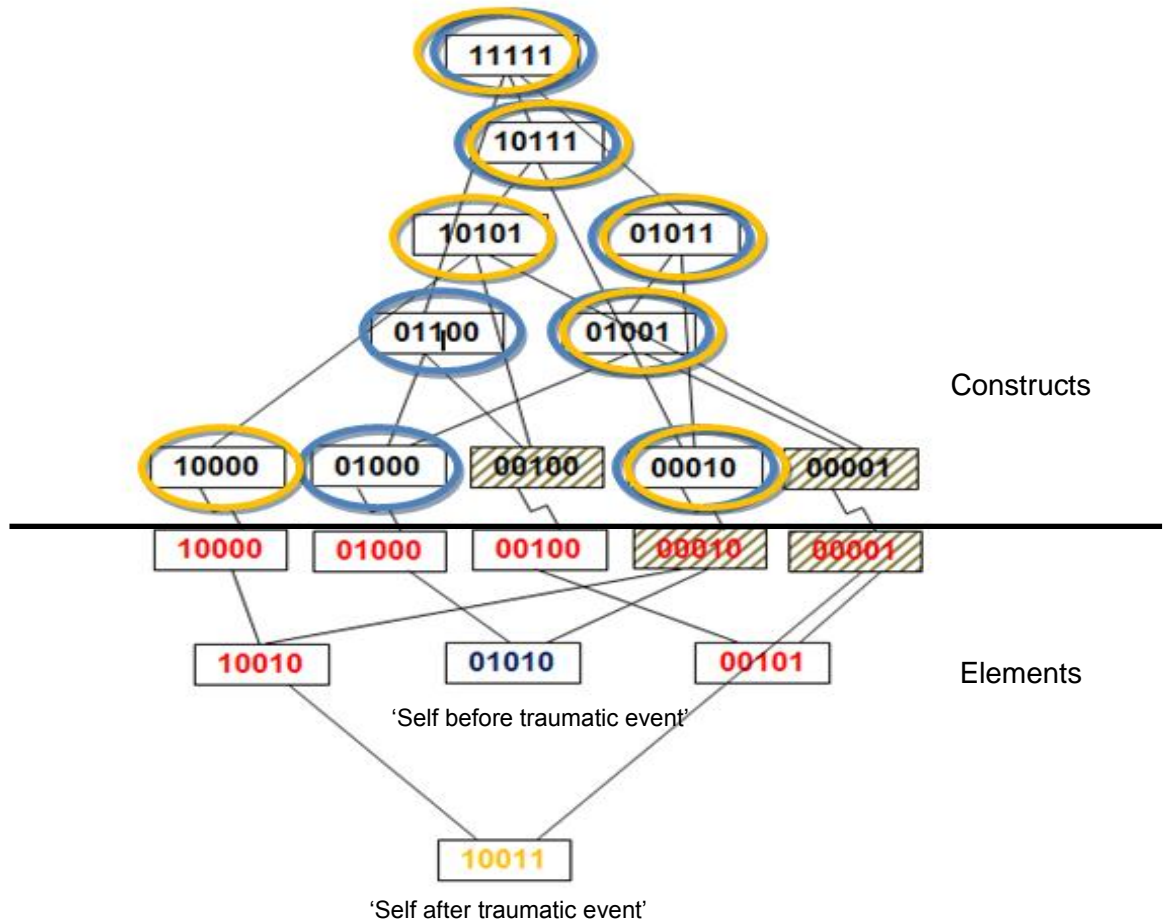


Figure 17: Implicit pole – Elaboration Score of 7 (for ‘Self before Traumatic Event’) and 7 (for ‘Self after Traumatic Event’)

Key:

- Red binary code indicates the elements presented
- Black binary code indicates the constructs elicited
- Blue binary code indicates the element ‘self before traumatic event’
- Yellow binary code indicates the element ‘self after traumatic event’
- Blue circles indicate elaboration score for ‘self before traumatic event’
- Yellow circles indicate elaboration score for ‘self after traumatic event’

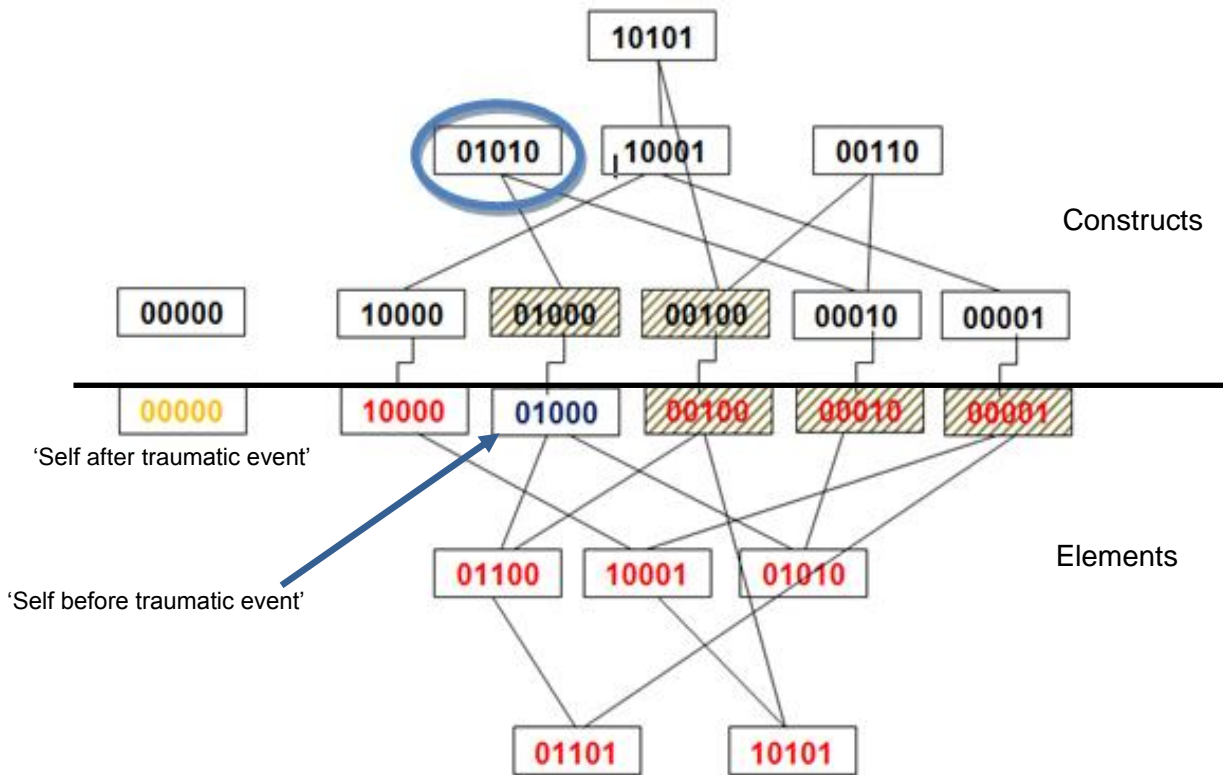


Figure 18: Emergent pole - Elaboration Score of 1 (for 'Self before Traumatic Event') and 0 (for 'Self after Traumatic Event')

Key:

- Red binary code indicates the elements presented
- Black binary code indicates the constructs elicited
- Blue binary code indicates the element 'self before traumatic event'
- Yellow binary code indicates the element 'self after traumatic event'
- Blue circles indicate elaboration score for 'self before traumatic event'
- Yellow circles indicate elaboration score for 'self after traumatic event'

3.8 Summary of Results

Table 20 presents a summary of the ten hypotheses and the three further research questions tested.

Table 20: Summary of Results

Hypothesis	Confirmed or Disconfirmed
Repertory Grids	
Hypothesis 1	Confirmed ($\rho=0.24$, $n=50$, $p<0.05$, one-tailed)
Hypothesis 2	Disconfirmed
Hypothesis 3	Disconfirmed
Hypothesis 4	Disconfirmed
Hypothesis 5	Disconfirmed
Hypothesis 6	Disconfirmed for implicit pole Disconfirmed for emergent pole, but a significant result found in opposite direction to that predicted ($z=-2.24$, $p<0.05$, two-tailed with a small effect size ($r=0.23$))
Questionnaires	
Hypothesis 7	Confirmed ($\rho=0.394$, $n=234$, $p<0.01$, one-tailed)
Hypothesis 8	Disconfirmed
Hypothesis 9	Confirmed ($\rho=0.181$, $n=257$, $p<0.01$, one-tailed)
Hypothesis 10	Disconfirmed
Further Research Questions	
1	No correlation between age and level of STS ($\rho=-0.116$, $n=274$, $p=0.054$, two-tailed)
2	No significant difference between gender and level of STS ($U=7665$, $z=-1.905$, $p=0.057$, $r=0.1$, two tailed).
3	No significant relationship between STS symptomatology score and length of time working as a Samaritans volunteer ($\rho=-0.92$, $n=274$, $p=0.13$, two-tailed)

CHAPTER FOUR: DISCUSSION

This chapter will initially provide an overview of the research aims and findings, including a summary of the sample characteristics and a summary of the hypotheses that were tested. The implications of the results will be discussed and methodological strengths and weaknesses of the study will be considered before ideas for future research are outlined. The conclusions of the research will then be examined. This will be written in the context of existing literature.

4.1 Overview of Research Aims

The aims of the research were to:

- a) explore the personal construct system of Samaritan telephone volunteers using a repertory grid technique (Kelly, 1955), and explore any relationships between the repertory grid measures and secondary trauma.
- b) consider how an individual's construing of a traumatic event can be used clinically, and how this may impact on the policies and working practices of voluntary telephone operators dealing with potentially traumatic callers.
- c) examine the prevalence of PTSD and STS in a sample of Samaritan telephone volunteers.
- d) assess the impact individual factors, such as previous trauma history, and level of education, have on the development and impact of STS and consider whether there is a relationship between STS and age, gender and length of time volunteering as a Samaritan.

4.2 Overview of Research Findings

4.2.1 *Sample Characteristics*

Despite the research reaching the required level of statistical power, the overall completion rate of the questionnaires in comparison to the number of volunteers was low. For the repertory grids, the uptake was the opposite, and was in fact good. This may possibly be due to a self-selecting bias. This means that those participants who agreed to be contacted to complete the repertory grids may somehow be different from the individuals who did not wish to participate. Together, this suggests that the questionnaires and the repertory grids may not be representative of the Samaritan volunteers. Additionally, the demographic information collected indicates that the sample appears to be biased towards white Europeans, which may also have

implications in the extent to which the findings can be generalised to volunteers of other cultural and ethnic backgrounds.

Nonetheless, volunteers spanning the breadth and depth of the United Kingdom completed the questionnaires, and the participants who completed the repertory grids were a good representation of those who completed the questionnaires. Additionally, demographic statistics provided by the Samaritans about their volunteers closely matched the demographic information of the participants who completed the questionnaires and repertory grids.

4.2.2 Traumatic Life Events

Of the 257 participants who completed the Traumatic Life Events Questionnaire (Kubany, 2004), the event that was most frequently endorsed was the sudden and unexpected death of a close friend or loved one (occurring in 66.8 per cent of the sample). This event also had the highest number of occurrences, occurring 378 times within the sample. The event that was reported to have evoked most intense fear, helplessness or horror, was witnessing family violence growing up (occurring in 78 per cent of the sample who endorsed that event had happened to them).

On average, each participant reported that 4.16 (sd=2.88) different traumatic events had occurred in their life, occurring on average 9.31 times (sd=9.30). Of these, on average, 2.15 (sd=2.25) of the traumatic events evoked fear, helplessness or horror in the participants.

4.2.3 PTSD Symptomatology

Of the 232 participants who completed the PSDS questionnaire (Kubany, 2004), it appeared that 86.6 per cent of the sample were not experiencing PTSD symptoms. However, 17 volunteers (7.3 per cent) reached the cut off for PTSD symptoms, suggesting they showed clinically meaningful PTSD symptomatology. Without a full assessment, however, a diagnosis of PTSD cannot be made.

It is of note that the PSDS event the participants recalled on the questionnaire, and therefore based their answers on, was not always Samaritans based.

4.2.4 Secondary Traumatic Stress

The MSTS questionnaire (Motta et al, 2001) suggested that only two of the 274 participants who completed the questionnaire reached a clinically meaningful level of STS (≥ 38). The range of scores for the sample was 18-49, with an average score of 22.5 (sd=4.39).

4.3 Hypotheses

4.3.1 Repertory Grids

Hypothesis 1: Relationship between 'current self' - 'ideal self' and level of secondary trauma

As hypothesised, a significant positive correlation was found between the participants' 'current self' and 'ideal self' discrepancy, and level of STS.

This is consistent with the findings by Freshwater, Leach and Aldridge (2001) that survivors of a particular form of trauma, sexual abuse, were more likely to report a higher self-ideal self discrepancy.

Low self-esteem has been associated with a 'current-ideal self' discrepancy (Harter, 1999) and with vicarious trauma (Hesse, 2002). It is therefore intuitive that individuals who score higher on the MSTS questionnaire would have a higher 'self-ideal self' discrepancy.

Hypothesis 2: Relationship between 'current self'- 'other Samaritans' and level of secondary trauma

It was thought that as 'current self' and 'other Samaritans' discrepancy increases, so would the level of STS. This was not evident in the results. This finding does not follow that of Harter and Neimeyer (1995) or Harter (2000), where it was reported that survivors of a traumatic event, childhood sexual abuse, construe the self as different from parents and others.

It is possible that the current research findings differ to that of previous findings due to the level of trauma experienced. For example, Erbes and Harter (2005) argue that traumatic events, such as childhood sexual abuse, can shatter core constructions of individuals since they are presented with proof that the world is not predictable. As

the mean MSTS score for the repertory grid sample was relatively low, it indicates that the Samaritans are able to integrate the trauma experiences they encounter whilst volunteering into their existing meaning-making system.

Hypothesis 3: Relationship between ‘self before being a Samaritan’- ‘self after being a Samaritan’ and level of secondary trauma

A significant relationship was not found between the distance between ‘self before being a Samaritan’ and ‘self after being a Samaritan’ and level of STS. This finding is inconsistent to that proposed by Sewell and Williams (2002) who argue that traumatic events can create a ‘current self’/‘past self’ discrepancy, where the present seems too incongruent with the past to be seen as having emerged from it (Sewell, 2003). It may be that the very nature of the Samaritans work helps an individual to consider his or her own background, and as such reduces the discrepancy between self before and self after becoming a Samaritan.

Hypothesis 4: Relationship between overall conflict concerning ‘self after traumatic event’ and level of secondary trauma

It was postulated that there would be a positive correlation between overall conflict concerning ‘self after traumatic event’ and level of secondary trauma. No such relationship was found.

Hypothesis 5: Association between level of secondary trauma and degree of elaboration in the construing for ‘self after traumatic event’

It was anticipated that as levels of secondary trauma (MSTS symptomatology score) increase, degree of elaboration for the ‘self after traumatic event’ will reduce on the implicit poles, and will increase on the emergent poles. Statistical tests indicated that no significant associations existed between the two variables for either the implicit or emergent poles. Further tests, however, revealed that there was a statistically significant difference between level of elaboration in relation to the implicit and emergent poles for ‘self after traumatic event’, with the implicit poles being more elaborated.

This finding does not concur with the findings of Sewell and Cromwell (1990), and therefore does not support their PCP model of trauma. Sewell and Cromwell (1990) argue that an unelaborated construct system will develop in response to traumas. It

is possible, however, that the finding of the current research differs as a repertory grid with people as elements was employed, and Sewell and Cromwell employed a repertory grid with life events as elements. This would mean that level of elaboration would differ depending on the elements chosen by the researcher.

Hypothesis 6: Association between degree of elaboration of 'self before traumatic event', and 'self after traumatic event'

The difference between degree of elaboration for 'self before and self after traumatic event' was tested. It was anticipated that 'self before traumatic event', would be more elaborated than 'self after traumatic event' on implicit construct poles, and less elaborated on emergent construct poles.

Although a significant difference was found between the level of elaboration for 'self before traumatic event' and 'self after traumatic event' (on the emergent poles), the difference was not in the predicted direction. The results demonstrated that on the emergent poles, 'self before traumatic event' was more elaborated than 'self after traumatic event'. The null hypothesis therefore has to be assumed.

Overall, the findings of this research suggest that degree of elaboration reduces for 'self after traumatic event' compared with 'self before traumatic event'. Although this is consistent with Sewell's PCT model of PTSD, where he argues that trauma symptoms result from unelaborated and isolated construals of traumatic events (Sewell, 2003), it is vital to mention that this was only for the emergent pole. Sewell's findings, which were used to develop the PCT PTSD model, were based on clustering on the implicit pole (Sewell, Cromwell, Farrell-Higgins, Palmer, Ohlde and Patterson, 1996; Sewell, 1996). This research did not find a significant result when looking at the implicit pole. Although this current piece of research was not based on Sermpezis and Winter's (2009) model of trauma, it is consistent with their finding that it is in fact the emergent pole which is related to trauma; however, it differs from their model as they argue trauma is actually overelaborated and not underelaborated.

The finding might also highlight meaningful differences in the nature of construing of traumatic experiences of Samaritan volunteers, compared to the construing of traumatic experiences of war veterans in the Sewell (1996) research.

Overall, the findings of this research demonstrate the importance of looking at both the implicit and emergent poles when using HICLAS, rather than assuming identical results will be obtained.

4.3.2 Questionnaires

Hypothesis 7: Relationship between level of posttraumatic stress and level of secondary traumatic stress

As hypothesised, the analyses found a positive correlation between level of PTSD and level of STS. This concurs with the research by Quaitie (2004), who found that humanitarian aid workers who met the DSM-IV criteria for PTSD also reported significantly higher levels of secondary trauma. It is possible that this finding was obtained as the symptoms for secondary trauma are almost identical to those of PTSD (Figley, 1995), differing only in extremity of symptoms (Motta, Kefer, Hertz and Hafeez, 1999). It indicates that individuals with a previous diagnosis of PTSD may reach significant levels of STS compared to their non PTSD symptomatology peers.

Hypothesis 8: Symptoms of secondary trauma in Samaritan telephone operators

The Samaritans sample did not report clinically meaningful levels of STS (≥ 38), compared to the value of 33 per cent in the Motta et al (2004a) study. Sewell and Cromwell's (1990) PCT model of PTSD, and cognitive behavioural models of PTSD both state the importance of elaborating and processing the trauma memory, making sense of it, and integrating it into the persons larger construct system or belief systems. Within the Samaritans there are numerous facilities set up to help a volunteer process their experiences of listening to another individual's trauma. For example, each volunteer has a de-brief after each shift; they are required to attend a number of training sessions per year; are around other volunteers who have had similar experiences and the organisation is set up to support anyone who finds the volunteering difficult. Ultimately, this means that the Samaritans volunteers constantly get the opportunity to process potentially traumatic experiences. The Motta et al (2004a) study was on university students who did not have the same support network geared to specifically supporting them in their witnessing of another's trauma in the way the Samaritans does. Thus, the support systems in place for the Samaritan volunteers may be acting as a protective barrier to STS.

Considering Davidson and Foa's model of who may develop PTSD (which could equally apply to STS, as outlined in the introduction), it is also possible that those individuals who choose to volunteer and are selected and remain at the Samaritans are internally different to those who do not choose to volunteer, are not selected or do not remain at the Samaritans. This would account for the remarkably low levels of STS found in the participants.

Hypothesis 9: Relationship between participants' level of secondary trauma and their exposure to potentially traumatic events (PTEs)

As expected, a significant positive association was found between extent of exposure to PTEs and level of STS symptomatology. This is compatible with research by Adams, Matto and Harrington (2001) and Pearlman and Maclan (1995). These researchers have reported that greater exposure to traumatic experiences is associated with a higher likelihood of developing PTSD. This implies that it may be advantageous to the Samaritans organisation if they monitor the number of traumatic events their volunteers have experienced. This does not take away from the fact that for some volunteers such exposure may not cause increased levels of STS, perhaps because their construct system is able to accommodate their experiences.

Hypothesis 10: Relationship between participants' level of education and their self-reported level of secondary trauma

An inverse correlation was not found between participants' level of education and their self-reported level of secondary trauma. This finding is inconsistent with much of the literature in the area, including research by Green, Grace and Glesser (1985), Resick (2000) and Pearlman and Maclan (1995). It is possible that the current finding is not consistent with the existing literature due to the intensive training the Samaritans organisation provides. Arming the volunteers with relevant skills to do their volunteering and providing support networks may enable the volunteers to reduce their levels of distress no matter what their level of education.

4.4 Further Research Questions

Question 1: Relationship between age of the Samaritan volunteer and level of STS

No significant association was found between age and level of STS, but a trend that neared significance was apparent. This finding supports that of Munroe (1991; 1995) where he found that age did not act as a buffer for secondary effects of trauma. However, it may be that age in conjunction with other factors is important. Since a trend was apparent in this research, further research in this area is important.

Question 2: Relationship between the Samaritan volunteer's gender and levels of STS

No significant association was found between gender and level of STS, but a trend was apparent which neared significance.

It is possible that previous research that has reported an association between gender and secondary traumatisation (including that by Kassam-Adams, 1995 and Good, 1996) will have found such a relationship due to the higher number of female participants in their samples. Although the present research still had more female than male participants who completed the questionnaires, there was not as much of a disparity. Nonetheless, as with the finding for age and STS, as the finding for gender and level of STS neared significance, further research looking at this area is vital.

Question 3: Relationship between level of STS and length of time as a Samaritans telephone volunteer

No relationship was evident between level of STS and length of time as a Samaritans telephone volunteer. This finding concurs with the findings from Hargrave, Scott and McDowall (1996), who suggest that for volunteers, STS is unrelated to the amount of volunteer experience. As suggested by Hytten and Hasle (1989), it is possible that Samaritan volunteers leave the organisation should they become overly distressed. Since only current volunteers were recruited in this study, such distressed individuals would not have been captured by this piece of research.

4.5 Relevance of Findings

This research is thought to be the first study looking at the impact of listening to another's trauma over the telephone. This is significant in that the findings of this research are able to contribute to the growing literature for secondary and vicarious trauma. It also means, however, that there are no comparable studies, and thus it is difficult to assert whether the results found are representative of other crisis line volunteers.

Within the literature on secondary and vicarious trauma it has been argued that exposure to traumatic material is directly related to the development of compassion fatigue (CF) (Motta, Hafeez, Sciancalepore and Diaz, 2001). The results of this research suggest that it may not be as straightforward as this, and in fact, a number of factors may actually mitigate STS, such as the number of PTEs an individual has experienced. It can therefore be argued that this research adds to the body of research which detects psychological vulnerability and 'resiliency' factors in those working with others who are traumatised.

As reported, a significant association was found between PTEs and STS symptomatology. This is compatible with research looking at personal trauma histories and trauma symptoms by Pearlman and Maclan (1995). Pearlman and Maclan found that therapists who had a personal history of trauma had elevations on general (Symptom Checklist-90-revised; Derogatis, 1994) and specific (Traumatic Stress Institute Belief Scale; Pearlman, 1996 and the Impact of Events Scale (IES); Horowitz, Wilner and Alvarez, 1979) measures of traumatic symptoms. Although the current research finding implies that it may be beneficial to volunteers' wellbeing if they are monitored on the number of PTEs they have experienced, it is felt that this may be too crude. Indeed, it has been found that resolved trauma histories may actually help to protect the volunteers from STS (Hargrave, Scott and McDowall, 2006). It may also be important to consider the individuals' appraisal of events when considering their volunteering since many individuals approach the Samaritans about volunteering due to personal traumatic events they have experienced. This would be consistent with Ehlers and Clark's (2000) cognitive model of PTSD, which suggests that appraisal plays a vital role in the development of trauma symptoms.

4.6 Implications of Findings

The present findings suggest that a comprehensive model is necessary to explain the development of STS. Currently there is only a PCT model for PTSD, and not STS. This may be significant since this research has highlighted that additional variables, such as previous exposure to potentially traumatic events moderate the effect of coping on symptom levels.

A major implication of this research concerns how an individual's construing of a traumatic event can be used clinically. The finding that individuals have a significantly lower degree of elaboration of the self after a traumatic event suggests that the traumatic event needs to be elaborated and integrated into the individual's construct system. As previously outlined, this concurs with the current way of working with PTSD within PCT and cognitive behavioural models. The findings also imply that it may be important to consider and work on the individual's current self and ideal self discrepancy, to reduce the impact of vicarious trauma. Practically, this may involve reconstructing the individual's ideal self, or attempting to resolve dilemmas which are hindering the individual's movement towards their ideal self. When looking at an individual's different selves, including their current and ideal self, regularly administering repertory grids is an invaluable way of measuring change (Ryle, 1976).

The Samaritans may also consider trauma workshops and training so the volunteers are educated about the possible risks, signs and consequences of exposure to another's trauma. Indeed, Figley (1995) argues that we have a duty to inform helpers about the hazards of the work. At the same time, however, the rewarding nature of the work should also be emphasised. Despite a significant number of volunteers not meeting the criteria for STS, training and education is still vital. For example, it may be that the distress of listening to another's trauma means that some Samaritans leave the voluntary sector, and thus they were not captured within this research sample. Just because the research did not find a significant result does not mean that some Samaritans do not become distressed at others' distress.

The results of this research may be used for selection criteria for the Samaritans. For example, the Samaritans may want to ask more questions surrounding the area of PTSD and trauma since the results of this research indicate that individuals who meet the criteria for PTSD are more likely to score higher on measures of STS. It is

important to reiterate however that this does not mean that an individual will score at a clinically meaningful level of STS, even if they have a diagnosis of PTSD; it just implies that there is a relationship between the two variables.

4.7 Features of the Research

4.7.1 Strengths of the Research

The main advantage of this research appears to be the contribution it has made to the understanding of STS and VT, in raising and developing an understanding of the effects of listening to another's trauma whilst working on a crisis line.

A further positive feature of this research is that the questionnaires were available to all 201 national Samaritan branches, based across the whole of the UK. Therefore, the data was not limited to specific areas, and thus is not biased towards local incidents such as the Bridgend suicides or Cumbria floods. Another benefit of this research is that the questionnaires chosen have been employed in previous trauma research (for example, Motta et al, 2004a; Motta et al, 2004b; Noble, 2007). Consequently, many of the results from this study are directly comparable to similar studies in the area, even though they do not have a focus on crisis line volunteers.

Employing repertory grids in this research had the advantage that due to its low face validity, participants were less likely to give socially desirable answers. Furthermore, the repertory grids were easy to use, enabled the researcher to easily determine the relationship between constructs and minimised researcher bias (Boyle, 2005). Using repertory grids also had the advantage that they created an air of mystery, encouraging some individuals to participate in the research as it was seen as being different to other pieces research they had encountered. At times, however, this last advantage did become a disadvantage in that some participants found it difficult to see the relevance of the repertory grid to the concept of trauma.

4.7.2 Limitations of the Research

A major limitation of the research is that it is primarily correlational; therefore, causal statements regarding the effects of listening to traumatic material cannot be made. Longitudinal studies and the development of secondary trauma scale norms will be necessary to further this area of research, so that comparisons can be made to the general population. Indeed, it was difficult to ascertain how significant the levels of

STS were for the crisis line volunteers as no norms are available. The findings for this research were based on the 33 per cent of participants who scored 38 or above in the Motta et al (2004a) study. Since Motta et al (2004a) recruited university students for their research, it could be argued that this reference group was not comparable, even though they had all reported being exposed to an individual who had experienced a traumatic event (hence by definition had the potential to be suffering with STS). Ideally, data from a number of studies that had employed the MSTS questionnaire would have been used to develop a comparison percentage.

It could be argued that the results are not representative of all the volunteers due to self-selection bias. The reason for the volunteers' participation is unknown, and thus it is possible that those individuals who were symptomatic decided not to respond to the research invitation for fear of the emotions that may be evoked, or not wanting to be reminded of past traumas. Alternatively, it is possible that some volunteers responded to the questionnaires as the research struck a chord with them, and they had noticed that they are affected by the calls they take whilst on shift. Despite having reached statistical power for both the repertory grids and questionnaires, it is clear that a significant number of volunteers did not participate in the research and it is vital to be mindful of the possible reasons for this.

Unfortunately, statistical analyses indicated that there were significant differences on a number of variables (age, length of time volunteering and MSTS score) between the participants who completed the questionnaires, and those participants who agreed to participate in the repertory grid stage of the research. Although it could be argued that this is not a major limitation (since there were not significant differences on many other variables), ideally this would not have been the case.

Although there were a number of advantages for the questionnaires being administered electronically, on reflection this may have limited the participation of some of the less technologically minded volunteers. Therefore, it would have been beneficial to have distributed paper copies in addition to the on-line electronic version of the questionnaires since this may have increased the response rate.

It could be argued that since the questionnaires were all self-report, the research relied on the openness and memories of the participants. The nature of some of the

questions was personal, enquiring about domestic violence as well as sexual and physical abuse. It is widely recognised in the literature that abuse is frequently under reported, which may have affected the results of the research. Furthermore, a number of volunteers may have been discouraged from either starting or completing the questionnaires since the questionnaire battery was fairly lengthy (it took approximately 35 minutes to complete).

For some participants there was a delay of two months from when they completed the questionnaires to when they completed the repertory grid. Consequently, such participants may have taken a number of distressing calls in the interim. It might therefore have been better to have re-administered the MSTS questionnaire to ensure the level of self-reported STS was similar. Despite this, each participant was asked at the start of each repertory grid interview whether anything had happened in their personal, professional or volunteering roles that they consider to have been traumatic, since completing the questionnaires.

A further limitation of this study was the lack of clarity at the start of the repertory grid interview that the traumatic event considered within the element of the grid should be connected to the Samaritans. Consequently, each repertory grid participant was re-contacted to ask whether they had thought of a Samaritans event, and if not whether they would be willing to re-complete that section of the repertory grid. Two Samaritans declined to participate in this task for a second time; therefore, their data was excluded for any hypotheses relating to 'traumatic event'.

4.8 Further Research

Throughout the research, many participants reported that they felt supported by their peers and that they valued this support. Therefore, co-worker support and cohesion may be an important variable to examine in future research. Further research should also look at the interaction of variables to provide more detail on possible early risk factors for STS and VT. It would also be interesting to consider whether males present with greater difficulties in other areas (such as alcohol and substance use), given the idea that was previously presented which stated that men do not readily admit to anxiety disorders, and instead turn to other mechanisms of coping.

Future research would also benefit from including participants who have left the Samaritans. During July to September 2009, 873 volunteers left their Branches, 4.3 volunteers per Branch (Samaritans Quarter Branch Statistics, 2009). Furthermore, 2,905 volunteers resigned in 2008, of which 2,227 were full members and 678 were in their probationary period (Samaritans Resource Information, 2009). Although the reasons for the Samaritans leaving are largely unknown, it is possible that those volunteers who left did so due to the effect that the volunteering was having on them and the traumatic material they listened to.

It would be interesting to extend the research by looking at STS qualitatively. Whilst conducting the repertory grid interviews it became apparent that many of the participants had a story to tell or an example to give around a traumatic call they had taken. Due to time limitations, this data could not be collected and included in this study, but such research would contribute to the existing evidence base.

In 2008, Samaritans provided support by telephone, face-to-face, email, SMS, letter and minicom. The majority of contacts in 2008 were by telephone (88.5%), followed by email (5.9%) and SMS (3.9%). This highlights that there is a wealth of ways of communicating with an individual, and it would be interesting to consider whether alternative methods of contact influence the levels of STS or VT. At present, the Samaritans do not have dedicated teams for each of the various methods of communication. Without this, each of the different methods of communication the Samaritan uses with a client would act as a confounding variable, a factor which would need thorough consideration should this research be conducted.

As discussed, a review of the literature did not reveal any previous research looking at the effects of telephone contact with distressed or traumatised individuals. Although this research has contributed to the existing literature, the researcher is aware that it is only one study in one voluntary organisation. There are many more crisis lines in operation, and therefore future research could consider levels of STS in different organisations, both newly developed and long-standing crisis lines of various sizes, and compare this to the Samaritans.

4.9 Conclusions

The role of the Samaritans volunteer often requires detailed conversations regarding an individual's trauma and emotions. Aspects of this role make it psychologically challenging and draining, particularly if the Samaritans caller is distressed or suicidal on the phone. Using a cross-sectional design, this research aimed to investigate levels and moderating factors of secondary trauma in crisis line volunteers. It also aimed to explore the personal construct system of the volunteers, using repertory grid technique (Kelly, 1955).

The findings indicated that although Samaritan volunteers did not appear to be at an increased risk of developing STS symptoms, degree of elaboration of self-construing reduced after the named traumatic event, and there was a significant difference in degree of elaboration for 'self after traumatic event' on the emergent poles of constructs. This provides some support to Sewell and Cromwell's (1990) personal construct model of PTSD.

It appears that volunteers who have experienced a number of personally traumatic events, or have higher PTSD symptoms are at more risk of developing STS. Although not quite significant, age and gender of the volunteer may also be important when considering risk factors for STS. This research challenges crisis lines to think about STS, and to implement some teaching and training around the topic.

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APPENDICES

APPENDIX 1: Search Strategy

Process

Key textbooks were read to gain background information on secondary trauma. This enabled more information to be gained on trauma, including secondary trauma, vicarious trauma and posttraumatic stress. From this reading, key authors and their original theoretical papers/books were identified and read.

Following this, electronic databases were systematically searched and website, citation and reference searches were conducted. This enabled identification of relevant research and theoretical developments since the original papers had been published. Through this process, gaps in both the empirical and theoretical literature were identified.

Databases

Literature searches were conducted between December 2008 and January 2011. The following databases were used in searching for relevant literature: PsychInfo; Medline; Pubmed; Cinahl (Cumulative Index to Nursing and Allied Health Literature); Cochrane Library. The Internet was utilised and search engines used including Google (www.google.com) and Google Scholar (www.scholar.google.com).

Search Terms

The following words were used as search terms in various combinations, along with a range of delimiters: Posttraumatic stress; Traumatic stress; Secondary traumatic stress; STS; Vicarious traumatisation; Vicarious trauma; VT; Compassion fatigue; Trauma; Stress reactions; Occupational trauma; Crisis line volunteers; Samaritans.

APPENDIX 2: Poster Advertising the Research

Do you feel you cope well as a Samaritans volunteer or does it sometimes leave you feeling distressed?

It may not just be your callers who need support

Hello, I'm Claire Warner, a trainee Clinical Psychologist. I am currently conducting research into the impact on you from listening to distressed callers and I would like to invite you to participate.



Anyone exposed to frightening or upsetting material can suffer from stress but more research is needed. The results will be used to help support and train Samaritans volunteers.

For more detail and to complete a questionnaire, please visit <http://tinyurl.com/ykawqwb> The questionnaire will be available until 31 December 2009. Any information that you provide will be kept confidential.

If you have any questions that are not covered on the site or would like more details on the research, please email me at c.g.warner@herts.ac.uk

WITH SAMARITANS

APPENDIX 3: Questionnaire to Obtain Demographic Information

Please provide some background information. Please feel free to clarify any of your answers in the box provided below.

Name: _____ Location: _____

Do you volunteer in the South-East of England? Yes [] No []

Details of preferred contact method (e.g. telephone, e-mail, work/home address)

Do you agree to be contacted to complete the second part of the study, should you be chosen?

Yes [] No []

What is your gender?

Male [] Female []

How old are you?

29 years or below [] 30-39 yrs [] 40-49 yrs [] 50-59 yrs []
60-69 yrs [] over 70 []

What is your ethnicity?

Black African []	Indian []	White []
Black Caribbean []	Pakistani []	Mixed []
Black other []	Bangladeshi []	Other []
Chinese []	Asian other []	

What is your marital status?

Married/Cohabiting []	Single []	Separated/Divorced []
Dating []	Widowed []	Other [] _____ (please specify)

How long have you been volunteering as a Samaritan?

[] years [] months

Currently, how many hours a week do you volunteer?

[] hours

Do you find some of the calls you listen to traumatic?

Yes [] No []

Do you have regular supervision?

Yes [] No []

If so, how often is this? (e.g. every week, once a month)

In the last 5 years, have you been given a diagnosis of Posttraumatic Stress Disorder or thought you might have suffered from it?

Yes [] No [] Don't know []

Have you ever had professional psychological support/therapy from a mental health professional (e.g. a counsellor or psychologist) in relation to your emotional reactions following a phone call you took at the Samaritans?

Yes [] No []

Do you think that the support systems that the Samaritans have put in place (e.g. supervision, de-briefing) have been helpful for helping you deal with traumatic telephone calls?

Yes [] No []

If yes, what was most helpful to you?

If no, what do you think may have been more useful?

Have you volunteered/been employed at any other crisis organisation?

Yes []

No []

If so, where was this and for how long?

Please feel free to make any other comments you would like to make concerning your experience of volunteering at the Samaritans

APPENDIX 4: PTSD Screening and Diagnostic Scale (PSDS; Kubany, 2004)

PLEASE NOTE THAT DUE TO COPYRIGHT RESTRICTIONS, A COMPLETE COPY OF THE PSDS CAN NOT BE REPRODUCED HERE

Circle Yes or No for the following three questions relating to the event(s) you just described:

- Were you extremely afraid at any time during the event(s)? Yes No
- Did you feel helpless or powerless during the event(s)? Yes No
- Did you experience horror at any time during the event(s)? Yes No

The experiences listed in Items 4 to 23 describe things that often happen to people who have been through traumatic events. For each item, circle the number that best describes how intensely you have had each experience during the *past month* (the past 30 days, counting today).

Use the following scale:
 0 = Absent or did not occur
 1 = Present to a slight degree
 2 = Present to a moderate degree
 3 = Present to a considerable degree
 4 = Present to an extreme or severe degree

- Unwanted thoughts or mental pictures of the event(s) when nothing was happening to remind you? 0 1 2 3 4
- Bad dreams or nightmares about the event(s)? 0 1 2 3 4
- Suddenly reliving the event(s), having flashbacks of the event(s), or acting or feeling as if it was actually happening again? 0 1 2 3 4
- Distress or emotional upset when reminded of the event(s)? 0 1 2 3 4
- Physical reactions when reminded of the event(s)? (such as sweaty palms, rapid breathing, pounding heart, dry mouth, nervous stomach, tense muscles) 0 1 2 3 4
- Efforts to avoid thoughts, conversations, or feelings that would remind you of the event(s)? 0 1 2 3 4
- Efforts to avoid activities, people, or places that would remind you of the event(s)? 0 1 2 3 4
- Inability to remember any important parts of what happened? 0 1 2 3 4

Items 12 to 23 describe how you may have thought and felt in the *past month* (the past 30 days, counting today) compared to *before* the event(s).

- Loss of interest in activities that had been important? (such as your job, hobbies, sports, or social activities) 0 1 2 3 4
- Feeling detached or cut off from others around you? 0 1 2 3 4
- Feeling emotionally "numb"? (for example, unable to feel tenderness, loving feelings, joyful feelings; or unable to cry) 0 1 2 3 4
- Thinking your future would be cut short in some way? (for example, no expectation of a career, marriage, or children; expecting a shortened life or premature death) 0 1 2 3 4
- Trouble falling or staying asleep? 0 1 2 3 4
- Irritability or outbursts of anger? 0 1 2 3 4
- Difficulty concentrating? 0 1 2 3 4
- Being alert, watchful, or "on guard"? (for example, looking around you, checking out noises, checking to see if windows and doors are locked) 0 1 2 3 4
- Jumpy or startled by sudden sounds or movements? 0 1 2 3 4
- Feeling guilt related to the event(s)? (in other words, feeling upset because you think you should have thought, felt, or acted differently) 0 1 2 3 4
- Feeling anger related to the event(s)? (in other words, feeling upset because you think someone else should have thought, felt, or acted differently) 0 1 2 3 4
- Grief, sorrow, or feelings of loss? (for example, loss of loved ones, belongings, identity, self-worth, faith in human nature, optimism, or control) 0 1 2 3 4

Circle Yes or No for the following two items:

- Have you had symptoms like the ones described above for more than 30 days? Yes No
- Have you had symptoms like the ones described above for more than 3 months? Yes No

For the next two items, fill in the blanks. For Item 26, make sure to specify whether your answer refers to weeks, months, or years. For Item 27, specify whether you've written your age or the date when the symptoms started.

- How long have you had symptoms like the ones described above? (weeks, months, or years) 8 WEEKS
- When did you first have symptoms like the ones described above? (your age or the date) 9/2003

For Items 28 to 38, circle the number that describes how much the experiences listed in Items 4 to 23 have interfered with your daily life or had negative effects on certain aspects of your life in the *past month* (the past 30 days, counting today).

Use the following scale:
 0 = No negative effects
 1 = Negative effects to a slight degree
 2 = Negative effects to a moderate degree
 3 = Negative effects to a considerable degree
 4 = Negative effects to an extreme or severe degree

- Amount of distress (anxiety, worry, sadness, frustration, or grief) that you have experienced 0 1 2 3 4
- Your social life in general 0 1 2 3 4
- Your relationships with your family 0 1 2 3 4
- Romantic or intimate relationships 0 1 2 3 4
- Your level of functioning at work (or school) or your ability to go to work (or school) 0 1 2 3 4
- Your enjoyment of leisure time or recreation 0 1 2 3 4

APPENDIX 5: Traumatic Life Events Questionnaire (TLEQ; Kubany, 2004)

PLEASE NOTE THAT DUE TO COPYRIGHT RESTRICTIONS, A COMPLETE COPY OF THE TLEQ CAN NOT BE REPRODUCED HERE

TRAUMATIC LIFE EVENTS	
<p>The purpose of this questionnaire is to identify important life experiences that can affect a person's emotional well-being or later quality of life. The events listed below are far more common than many people realize. Please read each question carefully and check the response that best describes your experience. Then check <i>yes</i> or <i>no</i> for each follow-up question. Be sure to complete the entire form unless your examiner has asked you to complete only the unshaded areas.</p>	
<p>1. Have you ever experienced a natural disaster (flood, hurricane, earthquake, etc.)? <input checked="" type="checkbox"/> no <input type="checkbox"/> yes</p> <p><i>If yes, how often?</i> <input type="checkbox"/> once <input type="checkbox"/> 4 times <input type="checkbox"/> twice <input type="checkbox"/> 5 times <input type="checkbox"/> 3 times <input type="checkbox"/> more than 5 times</p> <p><i>If this happened:</i> Did you experience intense fear, helplessness, or horror when it happened? <input type="checkbox"/> yes <input type="checkbox"/> no Were you seriously injured? <input type="checkbox"/> yes <input type="checkbox"/> no Was someone you cared about or were close to seriously injured or killed? <input type="checkbox"/> yes <input type="checkbox"/> no Did you think you or a loved one was in danger of being killed by the disaster? <input type="checkbox"/> yes <input type="checkbox"/> no</p>	<p><i>If this happened:</i> Did you experience intense fear, helplessness, or horror when it happened? <input type="checkbox"/> yes <input type="checkbox"/> no Were you seriously injured? <input type="checkbox"/> yes <input type="checkbox"/> no</p>
<p>2. Were you involved in a motor vehicle accident for which you received medical attention or that badly injured or killed someone? <input type="checkbox"/> no <input checked="" type="checkbox"/> yes</p> <p><i>If yes, how often?</i> <input type="checkbox"/> once <input type="checkbox"/> 4 times <input checked="" type="checkbox"/> twice <input type="checkbox"/> 5 times <input type="checkbox"/> 3 times <input type="checkbox"/> more than 5 times</p> <p><i>If this happened:</i> Did you experience intense fear, helplessness, or horror when it happened? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no Were you seriously injured? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no</p>	<p>4. Have you lived, worked, or had military service in a war zone? <input checked="" type="checkbox"/> no <input type="checkbox"/> yes</p> <p>If yes, were you ever exposed to warfare or combat? (examples: being in the vicinity of a rocket attack or people being fired upon; seeing someone get wounded or killed) <input type="checkbox"/> no <input type="checkbox"/> yes</p> <p><i>If yes, how often?</i> <input type="checkbox"/> once <input type="checkbox"/> 4 times <input type="checkbox"/> twice <input type="checkbox"/> 5 times <input type="checkbox"/> 3 times <input type="checkbox"/> more than 5 times</p> <p><i>If this happened:</i> Did you experience intense fear, helplessness, or horror when it happened? <input type="checkbox"/> yes <input type="checkbox"/> no Were you seriously injured or wounded? <input type="checkbox"/> yes <input type="checkbox"/> no</p>
<p>3. Have you been involved in any other kind of accident in which you or someone else was badly hurt? (examples: a plane crash; a drowning or near drowning; an electrical or machinery accident; an explosion, home fire, or chemical leak; overexposure to radiation or toxic chemicals) <input checked="" type="checkbox"/> no <input type="checkbox"/> yes</p> <p><i>If yes, how often?</i> <input type="checkbox"/> once <input type="checkbox"/> 4 times <input type="checkbox"/> twice <input type="checkbox"/> 5 times <input type="checkbox"/> 3 times <input type="checkbox"/> more than 5 times</p>	<p>5. Have you experienced the sudden and unexpected death of a close friend or loved one? <input type="checkbox"/> no <input checked="" type="checkbox"/> yes</p> <p><i>If yes, how often?</i> <input checked="" type="checkbox"/> once <input type="checkbox"/> 4 times <input type="checkbox"/> twice <input type="checkbox"/> 5 times <input type="checkbox"/> 3 times <input type="checkbox"/> more than 5 times</p> <p>Due to accident? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no illness? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no suicide? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no murder? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no</p> <p><i>If this happened:</i> Did you experience intense fear, helplessness, or horror when it happened? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no</p>

continued on next page...

APPENDIX 6: The Brief Symptom Inventory-18 (BSI-18; Derogatis, 2001)

PLEASE NOTE THAT DUE TO COPYRIGHT RESTRICTIONS, A COMPLETE COPY OF THE BSI-18 CAN NOT BE REPRODUCED HERE

HOW MUCH WERE YOU DISTRESSED BY:

	NOT AT ALL	A LITTLE BIT	MODERATELY	QUITE A BIT	EXTREMELY
1. Faintness or dizziness	0	1	2	3	4
2. Feeling no interest in things	0	1	2	3	4
3. Nervousness or shakiness inside	0	1	2	3	4
4. Pains in heart or chest	0	1	2	3	4
5. Feeling lonely	0	1	2	3	4
6. Feeling tense or keyed up	0	1	2	3	4
7. Nausea or upset stomach	0	1	2	3	4
8. Feeling blue	0	1	2	3	4
9. Suddenly scared for no reason	0	1	2	3	4
10. Trouble getting your breath	0	1	2	3	4
11. Feelings of worthlessness	0	1	2	3	4
12. Spells of terror or panic	0	1	2	3	4
13. Numbness or tingling in parts of your body	0	1	2	3	4

APPENDIX 7: Modified Secondary Trauma Scale (MSTS; Motta, Hafeez, Sciancalepore and Diaz, 2001)

Consider a negative experience or experiences that happened to someone close to you, such as chronic and/or terminal illness, serious auto accident, rape, etc. The person could be a family member, close friend, or anyone else with whom you have had a close relationship. We are interested in **how that person's emotional upset affected your feelings and thoughts.**

What relationship was that person to you? _____

What was the negative experience? _____

If you can't think of anyone close to you who had a highly negative experience, please put a check here _____

For the items below, **write in the number** that best describes how you think and feel about the events above. Complete the items even if you could not think of a close relationship who had a negative experience. If you were unable to identify someone above, you may use your own experience

(Describe) _____

1 = Rarely/Never; 2 = At Times; 3 = Not sure; 4 = Often ; 5 = Very Often
(Put number in spaces below).

1. _____ I force myself to avoid certain thoughts or feelings that remind me of (person above)
2. _____ I find myself avoiding certain activities or situations because they remind me of their problems.
3. _____ I have difficulty falling or staying asleep.
4. _____ I startle easily.
5. _____ I have flashbacks (vivid unwanted images or memories) related to their problems.
6. _____ I am frightened by things that he or she said or did to me.
7. _____ I experience troubling dreams similar to their problems.
8. _____ I experience intrusive, unwanted thoughts about their problems.
9. _____ I am losing sleep over thoughts of their experiences.
10. _____ I have thought that I might have been negatively affected by their experience.
11. _____ I have felt "on edge" and distressed and this may be related to thoughts about their problem.
12. _____ I have wished that I could avoid dealing with the person or persons named above.
13. _____ I have difficulty recalling specific aspects and details of their difficulties.
14. _____ I find myself losing interest in activities that used to bring me pleasure.
15. _____ I find it increasingly difficult to have warm and positive feelings for others.
16. _____ I find that I am less clear and optimistic about my future life than I once was.
17. _____ I have had some difficulty concentrating.
18. _____ I would feel threatened and vulnerable if I went through what the person above went through.

APPENDIX 8: Participant Information Sheet and Consent Form (Questionnaires)

Before you decide whether to take part, you may want to know more information about the study. Please find some Frequently Asked Questions below. If you have any further questions which are not answered here, please don't hesitate to call me on 07506704390. Please feel free to talk to others about the study if you wish.

What is the purpose of the study?

The study aims to add to the growing research looking at secondary traumatic stress, specifically looking at listening volunteers.

What will happen next if I choose to take part?

You will be asked to complete an on-line questionnaire, which you can access after you have read this information. It is anticipated that the questionnaires will only take 30 minutes to complete. The questionnaire will ask you for some demographic information and will ask you about traumatic life experiences and symptoms of stress that you may have experienced. Some of the questions are of a sensitive nature; however, your answers will remain confidential and your individual responses will not be given to anybody.

As a second part of the research, 52 individuals who live in the South East of England will be invited to chat in greater depth about your experiences (using a technique known as a 'repertory grid'. This helps us to gain an understanding of the links between the way you view yourself and other people, and how this has been influenced by your life experiences. Don't worry, I will tell you more about these if you are asked to meet with me). If you are asked to meet, I will visit you at the Samaritans centre where you volunteer. However, you can choose to just do the questionnaires and not meet if you wish.

The South East has been chosen for logistical reasons, so that I can meet face to face with you.

Who is taking part in this study?

Everybody who is a listening volunteer at the Samaritans has been invited to complete the questionnaire.

Do I have to take part?

No, it is up to you whether you decide to take part in all the study, just the questionnaires or none of it.

What if I change my mind?

You are free to withdraw your responses up until the research is written up (June 2010), without giving a reason. In this case any data you have contributed will be destroyed. A decision to withdraw at any time, or a decision not to take part, will not affect your work at the Samaritans.

Will my taking part in the study be kept confidential?

Yes. All the information about your participation and any information collected about you during the course of the research will be kept strictly confidential. Samaritans will NOT be advised of any of your individual data.

What if there is a problem?

If you have a concern about any aspect of this study, you can contact me (Claire Warner) directly and I will answer your questions (tel: 07506704390). It is possible that because you will be asked to think about traumatic life events, you may feel distressed. Telephone numbers and addresses of services where you can discuss your experiences will be made available. However, previous research has shown that many people find discussing stressful events a positive experience.

What will happen to the results of the study?

The results will be written up as a thesis for the requirements of the University of Hertfordshire's Doctorate in Clinical Psychology. It is also hoped that the study will be written up and published in a psychological journal. No participants will be identifiable in written or published material.

With your permission, the results from one of the questionnaires (Brief Symptom Inventory-18, which looks at your psychological well-being) will be used to produce

UK norms. This will mean sharing your answers to some of the questions with the company who own the rights to the questionnaire (Pearson). Norms are benchmarks that are set by finding the average scores from a large number of peoples responses. Other people who answer the questionnaire in the future will then be compared to these scores. Again, your individual responses and scores will not be identifiable and you will remain anonymous.

Who has reviewed the study?

The University of Hertfordshire School of Psychology Ethics Committee (protocol number PSY/06/09/CW) has approved the study.

You will be able to access a copy of this information sheet and consent form. If you decide to take part in the study, you will also be given a de-briefing sheet, describing the study again in case you have any questions afterwards.

Thank you for taking the time to read this information sheet and for considering taking part in this study.

CONSENT FORM

Title of Project: A Repertory Grid Study Looking at Secondary Traumatic Stress in Samaritan Crisis Line Volunteers.

Name of researcher: Claire Warner, Trainee Clinical Psychologist

(Please note: In order to do the questionnaires, you need to mark at least the first three boxes)

I confirm that I have read and understand the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

I understand that my participation is voluntary and that I am free to withdraw at any time, until the point the research is written up, (approximately June 2010), without giving any reason, without any of my rights being affected.

I agree to take part in the above study.

I agree to being contacted to take part in the second part of the study, to meet individually, should I be selected.

I agree that my data from the Brief Symptom Inventory-18 can be shared with Pearson to produce UK norms; I understand that if this is done, my details will remain anonymous.

APPENDIX 9: De-briefing Form (Questionnaires)

Thank you for taking the time to complete this questionnaire.

The purpose of the present study was to add to the growing research looking at secondary traumatic stress (STS), specifically looking at listening volunteers. The main aims of this study were to:

- Assess how much, if any, Samaritan listening volunteers experienced secondary traumatic stress through their work
- Assess the impact individual factors, such as age and length time volunteering, have on the development and impact of the secondary traumatic stress

In this research, a link to the questionnaire was posted on the Samaritans intranet system, where details of the research were provided. You were then asked to complete a consent form, which also asked whether some of the answers you provided to a questionnaire known as the Brief Symptom Inventory-18 could be used to produce UK norms; a benchmark that other people will be compared to. You then completed an on-line questionnaire which looked at basic demographic information (such as your age, length of time volunteering at Samaritans); traumatic events that have happened in your life; any secondary trauma you may have experienced; and a symptom inventory, looking at your psychological well-being.

Unfortunately, although you have completed a number of questions, I cannot give you feedback on your individual scores. However, you have been asked to make up a code which is unique to you, which can be given to me if you would like your data to be withdrawn from the study (and subsequently destroyed), up until it is submitted as a doctoral thesis.

If you would like to receive a copy of a report which will summarise my findings, please leave your contact information with the researcher, Claire Warner (c.g.warner@herts.ac.uk)

Thank you once again for your participation in this research. If you have any further questions or concerns please feel free to contact me at c.g.warner@herts.ac.uk for

more information. If this does not result in your satisfaction, please contact Professor David Winter at d.winter@herts.ac.uk, Consultant Clinical Psychologist and Doctorate of Clinical Psychology Course Director, Hertfordshire University.

How do you feel now?

Whilst everyone feels low in mood or anxious from time to time, if you have been feeling like this for some time and it is affecting your ability to cope with day to day life, you should contact your GP or supervisor and/or seek advice from a professional organisation. Additionally, it is possible that by participating in this study, you may feel a bit stirred up and/or emotional. Again, if you would like to talk to someone about these feelings, you are invited to contact the organisations listed below, contact your supervisor and/or visit your GP. Some of these organisations are:

MIND: A mental health charity

Tel.: 0845 766 0163

info@mind.org.uk

Mind

PO Box 277

Manchester, M60 3XN

ASSIST: A support group for those who have experienced trauma

Tel.: 01788 560800

help@assist-trauma-care.co.uk

11 Albert Street

Rugby

Warwickshire, CV21 2RX

Traumatic Stress Centre: A centre for people who have experienced trauma

Tel.: 01792 521063

enquiries@trauma999.co.uk

17 Ruggles Terrace

Morrison

Swansea, SA6 7JB

APPENDIX 10: Participant Information Sheet and Consent Form (Repertory Grids)

PARTICIPANT INFORMATION SHEET – Repertory Grid

You are being invited to take part in a research study which looks at the impact listening to distressed people on the telephone can have on the crisis line volunteer. You would have already completed the first part of the study, four on-line questionnaires and are now being asked to complete the second part; a repertory grid which will be used to gain an understanding of the links between the ways that you view yourself and other people and how this has been influenced by your life experiences. However, before you decide whether to take part, it is important to remind you of why the research is being done and what completing a repertory grid will involve. Please take time to read the following information carefully.

If there is anything that is unclear, or if you would like more information, then please ask the researcher, **Claire Warner (trainee clinical psychologist)**, email c.g.warner@herts.ac.uk, telephone 07738 443110.

What is the purpose of the study?

The research forms part of the requirements for Claire Warner's clinical psychology doctorate at Hertfordshire University. The study aims to add to the growing research looking at secondary traumatic stress, specifically looking at crisis line telephone operators. The study will be completed and written up by June 2010.

The purpose of us meeting is to find out more about how you cope with the emotional demands of your volunteering.

Why have I been chosen?

You are one of 52 people who have been selected from everyone who completed the on-line questionnaires. You were chosen for two reasons; firstly because you work at a Samaritans branch that is in the South East of England, thus are easily accessible for the Claire Warner to meet with you face to face and secondly because your answers on the questionnaire highlighted that you fulfilled the criteria to complete a repertory grid.

Do I have to take part?

It is up to you to decide whether you want to take part in this second section of the study. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form.

What if I change my mind?

If you decide to take part and later change your mind, you are still free to withdraw your responses up until the research is written up (June 2010), without giving a reason. In this case any data you have contributed will be destroyed. A decision to withdraw at any time, or a decision not to take part, will not affect your work at the Samaritans.

What will happen to me if I take part?

If you agree to take part, you will be asked to meet with me, Claire Warner on a one to one basis at the branch of Samaritans where you volunteer during your usual working hours. You will be asked to help complete a 'repertory grid' with me, which is a technique that helps gain an understanding about somebody's beliefs about themselves and other people. It is anticipated that this will take approximately one hour.

The repertory grid procedure is like a structured interview. I will be trying to understand you in your terms. There is no right or wrong answers. I will be asking you to make a series of comparisons which I will then ask you to score.

Will my taking part in the study be kept confidential?

Yes. This meeting, like your answers to the questionnaires will be kept confidential. No one will know of our meeting unless you choose to tell them. What you tell me will be anonymised before it is reported. The Samaritans will NOT be advised of any of your individual data.

What if there is a problem?

If you have a concern about any aspect of this study, you should ask to speak with Claire Warner who will do her best to answer your questions (tel.: 07738 443110). The interview will ask you to think about some traumatic life events which may cause you to feel distressed. If you become distressed at any time appropriate support will

be offered to you from Claire Warner, or after the study from her supervisor, Dr Louise Isham (clinical psychologist, tel.: 0208 659 2151). Additionally, leaflets of services where you can discuss your experiences will be made available. However, previous research has shown that many people find discussing stressful events a positive experience.

What will happen to the results of the study?

The results will be written up as a thesis for the requirements of the University of Hertfordshire's Doctorate in Clinical Psychology. It is also hoped that the study will be written up and published in a psychological journal. No participants will be identifiable in written or published material.

Who has reviewed the study?

The study has been reviewed and passed by the University of Hertfordshire School of Psychology Ethics Committee (protocol number **PSY/06/09/CW**).

You will be given a copy of this information sheet and a signed consent form to keep. If you decide to take part in the study, you will also be given a de-briefing sheet, describing the study again in case you have any questions afterwards.

Thank you for taking the time to read this information sheet and for considering taking part in this study.

Claire Warner

(Trainee Clinical Psychologist, University of Hertfordshire)

CONSENT FORM – Repertory Grids/Interview

Title of Project: *Is it Possible to Become Traumatized Over the Phone? A Repertory Grid Study Looking at Secondary Traumatic Stress in Samaritan Crisis Line Volunteers.*

Name of Researcher: Claire Warner

Name of Participant:

Location:

1. I confirm that I have read and understand the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. []

2. I understand that my participation is voluntary and that I am free to withdraw at any time, until the point the research is written up, (approximately June 2010), without giving any reason, without any of my rights being affected. []

3. I agree to take part in the repertory grid []

Name of volunteer **Date** **Signature**

**Name of person taking
consent (if different from
researcher)** **Date** **Signature**

Name of Researcher **Date** **Signature**

APPENDIX 11: Repertory Grid

1. Current Self (as I am)	2. Ideal Self (myself as I'd like to be)	3. Future Self (myself as I see I will be)	4. Partner/Spouse/Person closely fills this	5. Father	6. Mother	7. Self as a Samaritan	8. Self before being a Samaritan	9. Other Samaritans	10. Supervisor/Team Leader	11. Self before traumatic event	12. Self after traumatic event	13. Most difficult client listened to at the Samaritans	14. Easiest client listened to at the Samaritans	
														(very) 6 5 4 3 2 1 (not at all)
														traumatised

APPENDIX 12: De-briefing Form (Repertory Grids)

You have completed two parts of the study; questionnaires and a repertory grid. The purpose of this was to add to the growing research looking at secondary traumatic stress (STS), specifically looking at crisis line telephone operators. The main aim of completing the repertory grid was to:

- Explore the way individual Samaritan crisis line operators (both those report symptoms of secondary trauma and those who do not) view the world.

Unfortunately, I cannot give you feedback on your repertory grid, however, if you would like to receive a copy of the report summarizes our findings, please leave your contact information with the Claire Warner (c.g.warner@herts.ac.uk).

If you would like your data to be withdrawn up until the study is submitted as a doctoral thesis, you will be given a code which will correspond to your data, which will then be destroyed at your wish.

Thank you once again for your participation in this research. If you have any further questions or concerns please feel free to contact me at c.g.warner@herts.ac.uk or Dr. Louise Isham (clinical psychologist) at louise.isham@oxleas.nhs.uk for more information. If this does not result in your satisfaction, please contact Professor David Winter at d.winter@herts.ac.uk, Consultant Clinical Psychologist and Doctorate of Clinical Psychology Course Director, Hertfordshire University.

How do you feel now?

It is possible that by participating in this study, you may feel a bit stirred up and/or emotional. If you feel that you would like to talk to someone about these feelings, you are invited to contact Dr Louise Isham (Clinical Psychologist) who is a part of the supervisory team for this project. Her contact details are louise.isham@oxleas.nhs.uk or tel.: 0208 659 2151.

Whilst everyone feels low in mood or anxious from time to time, if you have been feeling like this for some time and it is affecting your ability to cope with day to day life, you should contact your GP or supervisor and/or seek advice from a professional organisation. Some of these organisations are listed below:

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Tel.: 01792 521063

enquiries@trauma999.co.uk

17 Ruggles Terrace

Morrison

Swansea

SA6 7JB

APPENDIX 13: Ethical Approval

SCHOOL OF PSYCHOLOGY ETHICS COMMITTEE APPROVAL

Student Investigator: Claire Warner
Title of project: Is it Possible to Become Traumatized Over the Phone? A Repertory Grid Study Looking at Secondary Traumatic Stress in Samaritan Crisis Line Volunteers.
Supervisor: David Winter
Registration Protocol Number: PSY/06/09/CW

The approval for the above research project was granted on 10 June 2009 by the Psychology Ethics Committee under delegated authority from the Ethics Committee of the University of Hertfordshire.



Signed:

Date: 10 June 2009

Dr. Nick Troop
Chair
Psychology Ethics Committee

STATEMENT OF THE SUPERVISOR:

From my discussions with the above student, as far as I can ascertain, s/he has followed the ethics protocol approved for this project.

Signed (supervisor): **Date:**