Trauma, Health and Conflict in Northern Ireland

A study of the epidemiology of trauma related disorders and qualitative investigation of the impact of trauma on the individual

The Northern Ireland Centre for Trauma and Transformation and the Psychology Research Institute, University of Ulster

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First reprint

ISBN 978-1-85923-228-6

> First reprint October 2008

In acknowledgement of those who have suffered trauma related disorders, their families and carers

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With thanks to Paul Seawright, the award winning photographer for the picture on the front cover

This study and final report was made possible by a grant from the Big Lottery Fund



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Acknowledgements

The completion of this research owes much to many individuals, many of whom will not be named in this report. Thousands of individuals have contributed to interview material that appears in this document. Without the assistance of these individuals this report would not exist or be a great deal poorer. These individuals have given us, in many cases, many hours of their time during which we have probed and questioned them on a great range of personal information. The authors of this report can only hope to have done some justice to the material with which they have been supplied.

Alison Hoffnagle, Nick Allis and Ron Kessler from Harvard University are to be thanked for assisting with the preparation of the interview material and for assistance with the data cleaning. Staff employed by Research Evaluation Services and Ipsos MORI, and in particular Martin Grimley who has worked for both organisations, are to be commended for the professionalism with which the interviews were conducted.

Conducting research is expensive. The costs of the primary research were met by the Research and Development Office in Northern Ireland and those of the secondary analysis and qualitative study, the subject of this report, by the Big Lottery Fund. Personnel within both organisations had the foresight and willingness to allow the issues raised in this document to be explored and addressed and we are most grateful to them for their support.

This research is a partnership between the University of Ulster and The Northern Ireland Centre for Trauma and Transformation (NICTT), in Omagh. So finally, we thank the other members of the team who are named in this report for the work that has been done; their efforts and contribution can, in part, be seen in its pages.

Work like this always involves a cast of key characters and we are very grateful to all who supported the study team in various ways.

We are particularly grateful to the staff at the Northern Ireland Centre for Trauma & Transformation for their practical help and support, to Professor Roy McClelland for his support and interest, Professor Paul Seawright for his thought provoking and hopeful photograph and to Shelley Moore at Creative Media for producing such a handsome report.

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Brendan Bunting, UU)

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Foreword

This study provides for the public, policy makers, service planners, providers, training organisations and others, valuable and important insights into the psychological and related consequences of traumatic experiences. With studies that have gone before we should now be in no doubt of the possibility of adverse effects of traumatic events and of the civil conflict (Troubles) related events in particular.

This report comes at an important point in the development of mental health services as the Department of Health, Social Services and Public Safety in Northern Ireland responds to the recommendations of the Bamford Review of Mental Health and Learning Disability in Northern Ireland. It also comes at an important time in the development of psychological therapies, the primary means of addressing Posttraumatic Stress Disorder and related psychological disorders.

The study is important in two other respects. First, we obtain from the findings a much clearer view of the mental health, physical health and daily living consequences of traumatic experiences and traumatic disorders. The need to approach trauma related needs as a public health and wellbeing concern should as a consequence, be beyond question.

Second, as we attempt as a community to address the legacy of the Troubles, the years of civil conflict that have impacted on so many people in Northern Ireland, the Republic of Ireland and Britain, here is an opportunity to address the past even if we cannot replace so much of that which was lost. The report, along with the endeavours, imagination and energy of many people in our community can help us to construct a public health and well-being response to the needs of those individuals, families and communities that have been affected by the conflict.

Roy McClelland

Chair of the Board for Mental Health & Learning Disability Former Chair of Healing Through Remembering

May 2008

Preface

This report describes evidence and findings from a two-part study investigating the experience and impact of trauma in Northern Ireland with a specific focus on trauma related to the Northern Ireland conflict. The first stage of the study investigated the prevalence of trauma and trauma related conditions in the general adult population using data from the Northern Ireland Study of Health and Stress; while the second stage involved an in-depth examination of the impact of trauma on 15 individuals and their families through a series of qualitative interviews. This report highlights the key findings from both aspects of the study and makes a series of recommendations to inform policy and service development for those who have been affected by the conflict and more broadly for those who suffer trauma related disorders.

This study is a joint project between the Northern Ireland Centre for Trauma and Transformation (NICTT) and the Psychology Research Institute at the University of Ulster (UU), made possible by a grant from the Big Lottery Fund. The NICTT was set up by a charitable trust in 2002 and is based in Omagh, Co. Tyrone, Northern Ireland. The Centre provides trauma focused cognitive therapy for people who have been adversely affected by traumatic experiences and who are suffering from Posttraumatic Stress Disorder (PTSD) and related conditions. The Centre also undertakes research into trauma and its treatment, and provides a range of educational & training programmes.

The study is a follow-up project to the Northern Ireland Study of Health and Stress (NISHS), which is being carried out by UU. The NISHS is one of the largest ever population studies of health in Northern Ireland and is part of the World Mental Health (WMH) Survey Initiative that is being conducted in over 28 countries throughout the world under the auspices of the World Health Organisation (WHO). The NISHS aims to gauge the state of emotional and physical health within family units in Northern Ireland.

May 2008

Preface to first reprint

One of the areas the team sought to investigate and which is reported upon extensively in the Report is the impact of the civil violence in Northern Ireland. Since the first print of the document was launched (30th May 2008) the research team has continued to examine the data from the study. Specifically we have examined further the impact of the conflict on the lifetime and 12-month prevalences for PTSD (see Chapter 5). The research team conclude that at a minimum, one quarter of all lifetime PTSD and possibly as much as one third is linked to traumatic events associated with the civil conflict. In terms of the 12-month prevalence, which gets us closest to the current level of disorder in the community, the research team conclude that 20% of the 12-month PTSD in the adult community is linked to the conflict. Finally, it is important to note that besides PTSD, people exposed to traumatic experiences can suffer from one or more other mental health disorders, a point which is discussed further in Chapters 5 and 6.

October 2008

Glossary of Terms

Chi-squared Test: *The Chi-Squared Test of Association* allows the comparison of two attributes in a sample of data to determine if there is any relationship between them. For example a Chi-squared Test can be used to test the association between the presence of PTSD and gender.

Comorbidity: Referring to the presence of additional conditions with a diagnosed disorder (e.g. the presence of other psychological disorders such as Major Depressive Disorder with PTSD).

Epidemiology: *Epidemiology* is the study of how often disorders or diseases occur in different groups of people and why. *Epidemiological information* is used to plan and evaluate strategies to prevent illness.

Logistic Regression: *Logistic Regression* is a model used for prediction of the probability of occurrence of an event. It makes use of several predictor variables or characteristics that may be either numerical or categorical. For example, the probability that a person met the criteria for PTSD at some point in his/her life might be predicted from knowledge of the person's age, gender, income etc.

Prevalence: The proportion of individuals in a population having a disorder or disease. *Prevalence* relates to the number of cases of a disorder or disease that is present in a particular population at a given time. For example the *12 month prevalence of PTSD* is the number of cases of PTSD present in the population in the last 12 months.

Qualitative research: Research based on obtaining and analysing the circumstances, characteristics or qualities of events or experiences. Through careful and systematic analysis researchers try to identify common issues and themes and interpret responses in the light of other information and theories.

Quantitative research: Research based on information usually obtained from surveys, observations or analysis that can be expressed in terms of measured numeric values, in terms of quantity or in terms of statistical comparisons.

Executive Summary

Northern Ireland has experienced 30-40 years of civil conflict in its recent history (often termed as the "Troubles"), giving rise to the need for investigations of the health impact of traumatic experiences and disorders. Whilst there is valuable information on the number of incidents relating to the Troubles, to date there has been no epidemiological data captured on the numbers of people in the Northern Ireland population exposed to traumatic events associated with the conflict, or whose mental or physical health has been adversely affected by their experiences.

This study provides information from the Northern Ireland Study of Health and Stress (NISHS) on the number of people a) who have been exposed to conflict related and other traumatic experiences and b) who have gone on to develop psychological, mental and physical health disorders. In addition, information from follow-up qualitative interviews is presented which provides an insight into the experiences of individuals who have had experiences linked to the civil conflict in Northern Ireland and who reported traumatic reactions. By providing both quantitative and qualitative evidence, we hope to present a more comprehensive illustration of the experience and impact of traumatic events in Northern Ireland, both as a consequence of the Troubles and other life events.

Key findings

- Two thirds of individuals have experienced at least one traumatic event during their lifetime; males were more likely to have experienced trauma than females.
- A total of 5918 traumatic event types were reported; of this total approximately 50% were conflict related events.
- The 12 month and lifetime prevalence of Posttraumatic Stress Disorder (PTSD) was 4.7% and 8.5% respectively; these figures are at the upper end of the range of estimates from other international epidemiological studies.
- Individuals who met the criteria for PTSD were twice as likely as those who did not, to have at least one other co-morbid mood, anxiety or substance use disorder.
- Two fifths of individuals who met the criteria for PTSD at some point in their lives also met the criteria for Major Depressive Disorder at some point in their lives.
- Individuals who met the criteria for PTSD and/or Major Depressive Disorder were more likely to have reported having a chronic physical health problem in the last 12 months.
- Individuals who met the criteria for PTSD and have had a chronic physical condition in the last 12 months were impaired in their normal daily activities for twice as many days as those without PTSD.
- Individuals who have experienced a traumatic event were more likely to be older, male, divorced and have achieved third level education; they are less likely to have a high income level and a lower level of educational attainment.
- Individuals who met the criteria for PTSD were more likely to be female, separated and have a low level of income.
- 34% of individuals that reported PTSD symptoms spoke to a medical doctor or other health professional; just 50% of these individuals received help that they considered to be helpful.

The main themes identified from the qualitative interviews include:

- Primary and consequential experience of Troubles related traumatic events.
- Experience of other non-Troubles related traumatic events.
- Illustrations of fear, shock and numbness.
- PTSD and other emotional symptoms.
- Physical health problems associated with the experience of trauma.
- Coping strategies: 'Get on with things', keeping busy, 'Nothing was talked about', and unhelpful ways of coping.
- The Troubles as 'normal'.
- The wider impact of trauma on life including work and finances, relationships, and attitude and behaviour.
- The need for support: the importance of family support, experience of professional services, and lack of services.
- What would have been helpful?

The findings of this study confirm that PTSD and other trauma related disorders are a specific and significant need in Northern Ireland's adult population. For a disorder that affects so many people, it must be a matter of concern that just one in six suffers got help that they felt was effective. There is a clear need for progress to be made in developing services. Troubles related events account for approximately 50% of the total number of event types reported in the population and we conclude that conflict and social violence has had a significant additional health impact on the Northern Ireland population.

Recommendations:

- 1. Improved public information for people involved in traumatic experiences, their families, schools, employers etc. to improve detection of PTSD and promote and support early help seeking.
- 2. The development of service pathways to ensure people with trauma related needs are referred to trauma focused and related services.
- 3. Support for primary and community care services (statutory and non-statutory) in detecting trauma related disorders, treating where effective services exist at this level and referring appropriately to specialist trauma related services.
- 4. Continue and enhance the development of mental health services to identify, assess and effectively treat trauma related disorders and to support people with trauma related needs before, during and after therapy.
- 5. Continue and enhance the development of specialist evidence based trauma services including the provision of support for people with trauma related needs before, during and after therapy.
- 6. The development of early trauma intervention services in line with the developing evidence base.
- 7. Services treating adults with Major Depressive Disorder should routinely assess for PTSD and provide effective trauma focused treatments where found.
- 8. Services and employers should be mindful of the additional risk for women in developing PTSD.
- 9. Primary and secondary care services should take into consideration the possibility of a link between the presence of specific chronic physical health conditions and PTSD, and refer for assessment where indicated.
- 10. Services and employers should be aware of the link between PTSD and impaired daily living functioning.

1. Background to the Study

1.1 Trauma related disorders

Posttraumatic Stress Disorder (PTSD) is the most frequently reported and extensively studied outcome of traumatic events (Somer et al 2005). PTSD is the name given to the psychological and physical problems that can sometimes follow particular threatening or distressing events (National Institute for Clinical Excellence (NICE) 2005) and was first classified as a disorder in the Diagnostic Statistical Manual of Mental Disorders, Third Edition (DSM-III), in 1980. Its current profile is described in DSM-IV-TR (2000).

Each individual will react to traumatic experiences uniquely. An event that causes distress for one might have no effect for another. Nonetheless, there is a range of commonly observed reactions to traumatic experiences that are widely shared. These symptoms can be characterised in three clusters:

- 1. re-experiencing of the event such as nightmares or flashbacks;
- 2. avoidance of things that remind the person of the event and numbing of emotions and responsiveness;
- 3. hyper-vigilance symptoms such as jumpiness, irritability and sleep disturbance (see also Appendix 1).

Whilst PTSD is focussed upon as the most significant psychological disorder that occurs in response to traumatic events, evidence over the past few decades indicates that traumatic events can give rise to a wide spectrum of mood, anxiety or substance abuse disorders (Shalev et al, in Yehuda 1998). This is discussed in some detail later. It has been consistently demonstrated that, more often than not, people develop, initially or over time, more than one disorder as a direct or secondary consequence of their experiences. In addition there is a growing body of evidence linking physical health problems with trauma related disorders, and in particular PTSD.

1.2 Northern Ireland and trauma

Northern Ireland has experienced 30-40 years of civil conflict in its recent history (colloquially termed as the "Troubles"), giving rise to the need for investigations of the health impacts of traumatic experiences and disorders. By 1997 3,500 deaths, 34,000 shootings and 14,000 bombings had been recorded (Fay et al 1997, Daly 1999). Whilst there is valuable information on the number of incidents relating to the Troubles, to date there has been no epidemiological data captured on the numbers of people in the Northern Ireland population exposed to traumatic events associated with the conflict, or whose mental or physical health has been adversely affected by their experiences. This study provides significant insight into the numbers of people a) who have been exposed to conflict related traumatic experiences and b) who have gone on to develop psychological, mental and physical health disorders.

Furthermore, partly as a feature of the environment of fear created by the context of civil conflict, people who have suffered trauma related disorders and problems as a result of the Troubles have had limited opportunity to 'tell their story' and to have their experiences heard, received and acknowledged. For similar reasons, people affected by traumatic events have had difficulty in knowing where to get help for such problems and who to trust.

Arguably, in order to fully understand the impact of trauma, the experiences of those affected should be listened to, heard and where possible, recorded. In the last decade, within psychology, there has been a marked increase in the commitment to, and research using, qualitative methodologies (Smith 2004). This type of research provides information on the characteristics (or qualities) of an experience and is invaluable in gaining an accurate understanding of the impact of traumatic events and their consequences. Beyond that, this information is also invaluable in designing and planning appropriate interventions and in commissioning and providing services.

By providing both quantitative and qualitative evidence, we hope to present a more comprehensive illustration of the experience and impact of traumatic experiences in Northern Ireland, both as a consequence of the Troubles and other life events.

2. Previous Research

2.1 Prevalence of trauma exposure and PTSD

As mentioned previously, the experience of trauma can lead to a wide range of disorders. Unlike other disorders, however, PTSD criteria stipulate that symptoms must be preceded and linked to a recognised traumatic event or experience. PTSD is therefore a tracer condition, dependent upon the experiencing or witnessing of one or more traumatic events, and as such provides a barometer of both the impact of violence on the population and the consequences for people. In this presentation of related literature, we will therefore focus primarily on evidence relating to the prevalence of PTSD as a window on the wider impact on physical and mental health.

Following the first classification of PTSD in 1980, a body of research and related literature emerged in the area of trauma and trauma related disorders and needs, with the majority of early studies focusing on small populations following specific traumas such as rape, combat and natural disasters (Breslau 2002). While these studies are valuable in the understanding of PTSD, their generalisability to the general population is limited. However as the definition and criteria of PTSD developed through numerous DSM editions, a diverse body of literature has developed. This has included most significantly the emergence of epidemiological studies of trauma and PTSD in the general population.

Estimates of the prevalence of trauma and PTSD will vary depending on the measurement tools, diagnostic criteria and sampling frameworks used in each study. Nonetheless, evidence from studies has demonstrated that the experience of traumatic events is indeed a common phenomenon, with more than two-thirds of persons in the general population experiencing at least one significant traumatic event during their lifetime (Galea et al 2005); and that PTSD is a common consequence of exposure to traumatic incidents and experiences (see below for further discussion). Studies of this nature, which enable the estimation of the extent of exposure to traumatic events in a population, are invaluable for planning, service provision and policy making. Specifically, such information is essential if a community and its services are to respond appropriately to disastrous events such as major incidents, or to pervasive traumatic events in the life of a community, such as an epidemic.

A further key finding that is replicated in the majority of studies is gender differences in exposure to traumatic events, with men consistently reporting a greater prevalence of trauma exposure than women. For example Kessler and colleagues (1995) reported significant gender differences in their National Comorbidity Study of 5877 individuals aged 15-54. Overall 60.7% of men reported experience of at least one traumatic event compared to 51.2% of women. The gender differences in the development of trauma related disorders, as opposed to exposure to traumatic events are discussed below.

Turning to evidence on the prevalence of PTSD, before commenting on the range of findings presented in the literature, an important distinction should be highlighted in relation to the different ways in which PTSD prevalence is presented. The majority of epidemiological studies report on '12 month' prevalence, 'lifetime' prevalence and 'conditional' prevalence of PTSD. '12 month' prevalence refers to the percentage of individuals in the overall population who meet the criteria for PTSD in the last 12 months. 'Lifetime' prevalence refers to the percentage of individuals in the overall population who meet the criteria for PTSD at some point in their life; 'conditional' prevalence refers to the percentage of individuals that have been exposed to one or more than one traumatic event, who go on to develop PTSD.

To summarise the evidence relating to the epidemiology of PTSD, estimates of the 12 month prevalence of PTSD range from 0.5% (Levinson et al 2007) to 3.6% (Kessler et al 2005). In terms of lifetime prevalence, estimates range from 1.0% (Helzer et al 1987) to 9.2% (Breslau, 1991). In terms of the conditional probability, overall estimates range from 6.9% (Frans et al 2005) to 23.6% (Breslau 1991), and vary considerably with respect to the nature of the trauma experienced. Again it is important to note that different studies have used different data collection instruments, population groups, and versions of DSM criteria which will have an impact on their findings.

Interestingly, evidence on gender differences with respect to PTSD prevalence presents a contrasting trend to trauma exposure (discussed above). Women, both within the general population and of those exposed to trauma, are at greater risk of PTSD development. Frans et al (2005) estimated the overall lifetime prevalence of PTSD at 5.6% with a 1:2 male-to-female ratio i.e. twice as many females develop PTSD.

2.2 PTSD and comorbid disorders

As previously noted, individuals that have experienced traumatic events are more likely than those in the general population to have symptoms of one or more mood (e.g. depression), anxiety or substance use disorders.

Davidson and colleagues in their examination of data from the Epidemiologic Catchment Area (ECA) Survey found that respondents with PTSD were 9.3 times more likely than non-PTSD respondents to have at least one other comorbid disorder (Davidson et al 1991). These findings are supported by Kessler et al, using data from the National Comorbidity Study (NCS). Their figures indicate that 88.3% of men and 79% of women with PTSD had a history of at least one other lifetime disorder (Kessler et al 1995). The sequence of onset of PTSD and other disorders is discussed further below.

Consistent findings also emerge in terms of the types of comorbid disorders that are most commonly associated with PTSD. Studies have consistently demonstrated a significant association between PTSD and both depression and anxiety (Helzer et al 1987; Davidson et al 1991; Breslau et al 1991; Kessler et al 1995; Breslau et al 1997; Perkonigg et al 2000; Creamer et al 2001). Breslau and colleagues (1997), in their study of 801 mothers, found that the most prevalent comorbid disorder was major depression, with 43.2% of women with PTSD having depression at some point in their life.

Specific anxiety disorders have been shown to be significantly associated with PTSD, namely Obsessive Compulsive Disorder (OCD) (Davidson et al 1991), Panic Disorder (Perkonigg et al 2000) and Agoraphobia (Breslau et al 1991; Breslau et al 1997). Numerous studies have also found a striking relationship between PTSD and substance use disorders. Breslau and colleagues (1998) found that the most prevalent comorbid disorder was substance abuse or dependence, while Kessler et al (1995) reported 51.9% of men with lifetime PTSD also having comorbid alcohol abuse or dependence.

There is continuing debate surrounding the sequence of onset of psychological disorders in relation to traumatic experiences. Elevated rates of comorbidity have prompted further investigation by numerous authors into the causal relationship between PTSD and the mental health consequences following exposure to trauma. Breslau (2002), in a review of epidemiologic studies of trauma, PTSD and other disorders, summarises these theories as follows.

- First, there is a possibility that pre-existing psychological disorders may increase the risk of exposure to traumatic events that may result in PTSD.
- Second, PTSD may be a contributory risk factor for other psychiatric disorders.
- Third, there is the possibility that there is a non-causal relationship between PTSD and other disorders.
- Finally there is the theory that traumatic events themselves cause various disorders other than PTSD.

Both Kessler et al (1995), and Perkonigg et al (2000) report that PTSD was more likely to occur prior to affective and substance abuse disorders; but less likely to occur prior to comorbid anxiety disorders.

These findings and analyses suggest that people who suffer from PTSD are more likely to have a range of mood, anxiety and substance-use disorders. They also infer that an examination of the impact of traumatic events should not be solely focused on PTSD, but on a range of possible psychological outcomes experienced following trauma exposure.

2.3 Trauma, PTSD and physical health

In recent years a growing body of evidence has emerged pointing to the association between physical health problems, and trauma related disorders including PTSD. Studies have linked traumatic stress exposure and PTSD to such conditions as cardiovascular disease (CVD), diabetes, gastrointestinal disease, fibromyalgia, chronic fatigue syndrome, musculoskeletal disorders, and other diseases (Boscarino 2004).

McFarlane et al (1994) investigated the reporting of physical symptoms from individuals with PTSD. Evidence revealed that within the PTSD group, significantly higher symptoms of cardiovascular, respiratory, musculoskeletal and neurological symptoms were reported. In a study of 1414 Northern Plains American Indians, CVD was also significantly more commonly reported in individuals with PTSD than those without, after controlling for traditional CVD risk factors (Sawchuk et al 2005). Norman and colleagues examined the associations between psychological trauma and physical illness in 680 primary care patients from the Collaborative Care for Anxiety and Panic Study. Results revealed that in men trauma history was associated with arthritis and diabetes; and in women with digestive diseases and cancer (Norman et al 2006). Trauma exposure has also been consistently linked to gastrointestinal problems. For example, in a 30 year longitudinal study of older combat veterans, an increased incidence of upper gastrointestinal disorders was found to be associated with greater combat exposure (Schnurr et al 2000).

The range of physical health problems associated with trauma exposure and/or PTSD suggests a number of possible explanations. One explanation that has been investigated focuses on poor health behaviours such as alcohol consumption and smoking that are significant risk factors for many physical health problems. A study of Israeli combat veterans by Shalev et al (1990), found that veterans with PTSD were more likely than those without PTSD to smoke, drink alcohol and have irregular eating habits. Note however, that this study did not report on the causal relationship. The second major line of enquiry in terms of the link between trauma, particularly PTSD, and physical ill-health centres on neuro-chemical changes in the brain. Stressful life experience can have significant effects on a variety of physiological systems, including the autonomic nervous system, the hypothalamic-pituitary-adrenal axis, and the immune system. Activation of these physiological systems during exposure to a stressor is adaptive in the short-run under certain circumstances but can become maladaptive if these systems are repeatedly or chronically activated (as in the case with PTSD) (Kemeny 2005).

2.4 Trauma, PTSD and socio-demographic correlates

Some epidemiological studies have also investigated personal and demographic characteristics and other risk factors for both trauma exposure and development of PTSD.

Turning to risk factors for trauma exposure, the majority of studies concur that men are more likely to experience a traumatic event during their lifetime than women (Breslau et al 1991; Norris 1991; Kessler et al 1995; Stein et al 1997; Creamer et al 2001; Frans et al 2005). Kessler and colleagues (1995) found that the prevalence of trauma exposure increased with age as might be expected. In contrast, Frans and colleagues (2005) found that an increased prevalence of trauma exposure was associated with being younger. Other significant predictors for exposure to trauma in this study included having a high education level and with being born abroad.

In terms of risk factors for PTSD, Kessler and colleagues (1995) examined a range of sociodemographic correlates including gender, race, urbanicity, marital status, age and education level using logistic regression analysis. Results indicate that women had a significantly higher lifetime prevalence of PTSD than men. In addition lifetime PTSD was significantly more prevalent among the previously married (separated, divorced, or widowed) than the currently married for both men and women. These findings on female gender as a risk factor for PTSD have been replicated in numerous epidemiological studies (Breslau et al 1991; Breslau et al 1998; Stein et al 2000; Perkonigg et al 2000; Creamer et al 2001; Frans et al 2005). According to Brewin et al (2000), in their meta-analysis of 14 separate risk factors associated with PTSD, race was one of the few demographic variables to be a weak predictor across all studies. In terms of other socio-demographic predictors, results across studies are inconsistent. Davidson and colleagues (1991) reported that the majority of people with PTSD (76.5%) were below 45 years of age, while less than 7% were older than 64. However χ^2 tests reveal a non-significant association (0.05 level) between PTSD and younger age. Perkonigg et al (2000) found that while the risk of experiencing traumatic events was significantly associated with being older, the progression to PTSD within the subsample of trauma victims was not associated with age. Evidence from a number of studies has suggested marriage as a protective factor for PTSD: Breslau et al (1998) and Creamer et al (2001) found that PTSD was significantly higher among the divorced than married individuals. In contrast Davidson et al (1991) found an elevated, but non-significant association with PTSD among married participants compared with other sub groupings.

To summarise the evidence on risk factors for PTSD, as is the case with exposure to trauma, gender appears to be the only consistent risk factor across epidemiological studies, with other factors shown to be significant in some studies but not others.

2.5 Studies of trauma in Northern Ireland

Northern Ireland, given the backdrop of 30-40 years of civil conflict, presents a specific environment for the study of traumatic events and their impact on the general population.

The earliest significant study in this field has been the Cost of the Troubles Study (COTT) (Fay et al 1999). This took the form of an in-depth investigation of individuals who have been exposed to Troubles related violence. The COTT Study sample was constructed by dividing Northern Ireland into three categories of reported levels of community violence: high intensity, middle intensity and low intensity (based on Troubles related death rate). A questionnaire was administered to 1,346 people to determine experience of the Troubles, effects of the Troubles and help and support required and received. The researchers concluded that around 30% of those who participated in the study and who had been exposed directly to violence associated with the Troubles had symptoms approximating to PTSD.

Muldoon et al (2003) similarly explored the breadth of conflict experiences in a representative sample of the population in Northern Ireland and Border counties of the Irish Republic. Overall, 50% of respondents reported having some direct experience of the Troubles during their lifetime. The three most prevalent events were experiencing a bomb (21.5% of men vs 18% of women), a riot (26.2% of men and 13.1% of women) or intimidation (25.3% of men vs 15% of women).

O'Reilly and Stevenson (2003) also examined the effects of the Troubles by carrying out a secondary analysis of data collected on 1694 respondents aged 16-64 as part of the 1997 Northern Ireland Health and Well-being Survey. Overall 21.3% of respondents said that the Troubles had either 'quite a bit' or 'a lot' of impact on their lives or the lives of their family. The corresponding figure for impact on their area of residence was 25.1%. Analyses of General Health Questionnaire-12 (GHQ-12) data revealed that respondents whose lives or areas had been affected by the Troubles were more likely to experience psychological problems. O'Reilly and Stevenson concluded that the Troubles represented a significant and additional impact on the mental health of the Northern Ireland population.

While reported experience of the Troubles in these representative studies is significant, a markedly smaller proportion of individuals regard themselves as 'victims' of the Troubles. Cairns et al (2003) examined the issue of perceived victimhood in a randomly selected sample of 1000 Northern Irish adults aged 18 years and over. Results reveal that a relatively small proportion (12%) of the sample thought of themselves as victims either often or very often. When asked about their involvement in violent events linked to the Troubles, 16% reported direct involvement. This perception by individuals in Northern Ireland, i.e. a lower sense of being a victim in comparison to experience of the violence, may well be linked to the idea that the Troubles became a way of life or the norm for many people, as reported by the COTT Study.

Aside from these representative studies of the experience of Troubles related events, a number of studies focusing on specific events during Northern Ireland Troubles highlight the fact that in some regions, entire communities have been exposed both directly and indirectly to extreme traumatic experiences. The Omagh bombing of August 1998 was the subject of several papers that report on the impact of a single incident. (Luce et al, 2000; Luce et al, 2002; Gillespie et al, 2002; Firth-Cozens et al, 1999; and a number of unpublished needs assessments). The Omagh bombing killed 29 people and two unborn children. Over 400 were injured, of whom 135 were seriously injured. In the course of the three and a half years following the bombing, the Omagh Trauma and Recovery Team provided psychological therapy and related services for over 670 people. Furthermore, an unknown but substantial number of people were provided with support from a range of primary care, mental health and, voluntary and occupational health related services (Luce et al 2000). A postal survey of 1064 health and social services staff following the bombing found that half reported having professional or civilian involvement. Symptom levels related to PTSD varied between staff groups. Those who reported being involved both in a professional and civilian capacity reported the highest levels of PTSD symptomatology. (Luce et al 2002)

Another similar event that impacted upon an entire community is the subject of a study by Curran et al (1990) who examined the impact of the Enniskillen bombing six months after the incident. The bomb exploded in November 1987 in the centre of town where several hundred people waited for the Remembrance Day ceremony service to begin, killing 11 and injuring 63 people. Curran and colleagues reported that six months after the bombing 50% of survivors who had been psychologically appraised had developed PTSD.

Hayes and Campbell (2000) and Shevlin and McGuigan (2003) focus on the impact of Bloody Sunday in 1972, during which 13 civil rights marchers were killed in Derry, Northern Ireland. Shevlin and colleagues draw attention to evidence which suggest that individuals indirectly exposed to a traumatic event can develop symptoms associated with PTSD. Both studies examine the issue of transgenerational effects of traumatic events. Bloomfield (1998) also alludes to this phenomenon, highlighting the unknown but significant number of 'secondary victims' in families affected by the injuries of a close friend or relative.

Taken together, these more local studies give an important insight into the extent of Troubles related traumatic experiences and their psychological impact. However, to date there have been no epidemiological studies of the Northern Ireland population, which have used a validated instrument that assesses PTSD in relation to DSM criteria, although as noted such instruments have been used in more local or incident specific studies. In addition, studies have focused specifically on Troubles related trauma or indeed, specific troubles related events such as a bombing affecting a particular community, which limits the generalisability to the wider population of Northern Ireland. Specifically, in relation to non-troubles related trauma, there are very few if any studies of the general population.

The question of whether the prevalence of lifetime trauma in the general population of Northern Ireland, given the strong indications of the additional burden of the Troubles, is on a similar scale to international epidemiological findings, is investigated in this study. A report of the Department of Health and Social Services and Public Safety concluded that much more evidence is required in order to fully understand the consequences, and in particular the long-term effects, on general and mental wellbeing. (DHSSPS 2004)

2.6 Qualitative evidence on the impact of trauma

As previously noted, the value of qualitative research in illuminating phenomena that may be hidden in typical quantitative studies is being increasingly recognised. In terms of trauma, each individual's experience is unique and the effects of trauma are very much a combination of the event itself, and more importantly, the individual's perception and appraisal of this event and its consequences (Ehlers & Clark, 2000). The myriad of factors influencing the experience of trauma and its consequences are rarely captured in quantitative studies, but can be explored in depth through the personal accounts of individuals. The findings from such studies are invaluable in enabling health and social care practitioners understand the complex needs of the affected individuals. As noted previously, such information can also be of assistance to policy makers, service planners and commissioners, service

providers and training organisations. Qualitative studies can also be of value in further developing quantitative research instruments by enabling the identification of key variables for assessment.

Both the COTT Study (Fay et al 1999) and The Bloomfield Report (Bloomfield 1998) allude to the importance of 'giving a voice' to people who have been affected by their experience of conflict. In one of the few qualitative studies in relation to the Northern Ireland conflict, Jamieson and Grounds (2002) investigated the impact of imprisonment on 20 ex-republican prisoners and their families. Important themes emerging from their interviews included complex issues of loss, psychological change, adjustment and areas of experience that were not, or could not be communicated. Many of the participants also described persistent structural and cultural barriers to social integration and employment. The authors conclude that their study reveals profound difficulties faced by a substantial section of the community, in this case those who have been imprisoned and their families. They also stress the point that an understanding of the effects of these experiences could only be gained from the perspectives of those involved (Jamieson & Grounds 2002).

Hayes and Campbell (2000) similarly investigated the psychological impact of Bloody Sunday through in-depth interviews with siblings and children linked to 12 of the 14 of those killed. Interview data were analysed to identify recurrent themes in relation to the impact of trauma, persistence of symptoms, and the effects on the emotional health of family members. These themes were then compared to participant scores on the GHQ-12 and the PTSD Symptom Inventory. Analysis of interview transcripts confirms the high levels of psychological problems suggested by GHQ and PTSD scores. The content of the narratives suggests a significant amount of enduring post-traumatic stress symptoms. Other themes to emerge from the interviews included perceptions of injustice, victim blaming and lack of support from statutory services.

Qualitative evidence also features prominently in the 2007 Northern Ireland Interim Victims' Commissioner's report (McDougal 2007). The report devotes a chapter to evidence from 15 case studies involving various individual victims and survivors of the Troubles as well as support group representatives. The main themes of these case studies range from 'The lack of support available during the early years of the Troubles and the long term effects of Posttraumatic Stress Disorder (PTSD)'; to 'Financial hardship issues resulting from ill health caused by 'Troubles' related trauma.'

By presenting both results from quantitative analysis and evidence from qualitative interviews, this report aims to add significantly to this area of knowledge by providing a valuable insight into the prevalence of trauma and trauma related disorders as well as an in-depth insight into the experience, perceptions and opinions of individuals who have experienced conflict related trauma.

3. Aims of the Study

3.1 Aims part 1: analysis of NISHS data

The overall aim of the first stage of this study is to quantify the extent and impact of conflict related and other traumatic events on the general population of Northern Ireland. In order to address this aim, the following research questions will be addressed:

- What is the level of exposure to traumatic events?
- What is the prevalence and degree of the development of trauma related disorders following exposure?
- What risk and protective factors are associated with traumatic experiences and the development of trauma related disorders?

3.2 Aims part 2: the interview study

The central goal of the qualitative study is to find out more about the experiences of individuals who have been traumatised by their experience of civil conflict in Northern Ireland. To achieve this overall goal this study aims to provide:

- An insight into the range and nature of traumatic incidents that have been experienced;
- An insight into the perceived impact of these events on individuals and their families;
- Information on the mechanisms, and development of trauma related health disorders;
- Information on the coping strategies that these individuals have employed;
- Information on the help, support and treatment services of which individuals have availed and their experiences of such services.

Using a combination of quantitative and qualitative data from individuals who have been traumatised by Troubles related events, we aim to add significantly to this area of knowledge. The use of a mixed methods approach allows us to understand the potential effects of trauma on the individual and also the proportion of individuals within the Northern Ireland population that is likely to be affected. This study has the broader aim of ultimately informing policy makers, planners, commissioners, service providers, training organisations etc. on the best way to respond to the needs of those traumatised by their experience.

4. Methods

4.1 Methods part 1: secondary analysis of NISHS data

4.1.1 The Northern Ireland Study of Health and Stress (NISHS)

NISHS is one of the largest ever population studies of mental health undertaken in Northern Ireland and is part of the World Mental Health (WMH) Survey Initiative that is being conducted in over 28 countries throughout the world under the auspices of the World Health Organisation (WHO). The Northern Ireland study aims to gauge the state of physical and emotional health within family units. Random number generation was used to select a multistage household probability sample in the 26 Local Government Districts. The Belfast District Council (BDC) was enumerated on the basis of its four district council wards, given the size of the population involved. Only English speaking adults were included in the sampling. Children were not included in the study. Other exclusions included individuals living in nursing or residential homes and other institutions such as hospitals and prisons.

At the time of the Trauma, Health and Conflict Study a total of 3100 individuals had been interviewed for the NISHS, using the WMH-Composite International Diagnostic Interview (WMH-CIDI). The WMH-CIDI is a comprehensive, fully-structured interview designed to be used by trained lay interviewers for the assessment of mental, behavioural and substance use disorders according to the definitions and criteria of ICD-10 and DSM-IV. The study did not investigate the presence and prevalence of the most serious mental health disorders such as psychosis.

The first section of the interview involves a series of screening questions related to a number of 'core disorders'. Answers to these questions determine the direction of the interview. For practical purposes, only a subset of the overall sample completed the PTSD section of the CIDI. A total of 1095 individuals completed the PTSD section of the instrument. This sample includes individuals who screen into the core disorders; a random sample of 25% of individuals who do not screen into the core disorders; and also 50% of individuals who are 'sub-threshold' core disorder cases.

The trauma section of the CIDI includes questions on 28 different types of traumatic events. If a participant endorses an event or events, they are asked subsequent questions in relation to a randomly selected event from the list of endorsed event types and also the participant's 'worst event'. These questions obtain information on symptoms, onset and duration of these symptoms, impairment and help seeking.

4.1.2 Data analysis

As previously explained, only a subset of the overall sample completed the CIDI section on trauma and PTSD. Prevalence rates for trauma and PTSD, based on these 1095 cases were therefore weighted to reflect the groupings described above, in order to reflect the overall population sample (N=3100). This is the method approved by WMH Surveys for use across the international studies. From this approach it is possible to compute, with a high degree of confidence, the levels of trauma exposure and trauma related disorders.

SPSS V11.5 (SPSS inc. 2002) was used to facilitate analysis. Chi-squared analysis was used to test differences amongst demographic subgroups. Logistic regression models were used to examine risk and protective factors associated with trauma exposure and PTSD.

4.2 Methods part 2: qualitative study

4.2.1 Participant selection and recruitment

Ethical approval to proceed with this follow-up study was granted by the University of Ulster Research Ethics Committee. Potential participants who had given their consent to be involved in future studies were identified from the NISHS. The trauma component of the CIDI was used to identify individuals that reported experience of conflict related trauma and reported having PTSD symptoms at some point in their lifetime.

Data collection was based on purposive sampling whereby the participants were selected according to criteria of relevance to the research question. The aim was to select a homogenous sample, in that participants have a shared or similar experience of an event (Willig, 2001).

A detailed examination of the trauma profile of PTSD and sub-threshold PTSD cases was required to determine whether it was highly probable that the traumatic events experienced were related to the Northern Ireland Troubles. In addition individuals who reported a lifetime trauma and met the criteria for depression following the trauma were also examined. These potential participants were identified by their unique sample ID. This information was then matched to their re-contact information provided during the NISHS. Individuals who met our inclusion criteria were contacted by a letter of invitation (Appendix 2) and were provided with an information leaflet (Appendix 3). This was followed, within a few days, by a phone call from the Research Assistant to provide more information, answer questions, obtain verbal consent and to arrange a date, time and venue for interview if appropriate.

A total of 15 interviews were completed. All interviews took place in a mutually agreed venue, where the participant felt comfortable, and lasted approximately one hour on average, although duration varied considerably depending on the participant. Formal, written consent was gained from each participant at the point of interview. Interviews were recorded on a digital voice recorder with the participants' consent and participants were offered a copy of their recording if they wished.

4.2.2 Data collection and analysis

A semi-structured interview schedule (Appendix 4) was designed to guide the collection of information on the impact of the traumatic event(s) on the participants. Ultimately the broad research question to be addressed concerned the impact of Troubles related trauma(s). The interview schedule was used to explore broad topic headings related to this question, including impact on various aspects of the participant's life, coping strategies and treatment. While the interview schedule was designed to focus the participant on areas of interest, a key assumption of our method of collection and analysis was that the participant is the expert. The participant therefore had a strong influence in determining how the interview proceeded, while the researcher's role ultimately involved guiding the participant through the schedule, using minimal probes. Data collection was therefore flexible in allowing deviations from the schedule to allow unanticipated topics or themes to emerge during the analysis (Smith, 2004).

Interpretative Phenomenological Analysis (IPA) was used as the approach to data collection and analysis in this study. The procedures used in IPA are described in Smith et al (1999). The aim of IPA is to explore in detail the participant's view of the topic under investigation. It is concerned with the processes through which individuals make sense of their own experiences, by examining an account in the participant's own words. The impact of traumatic events including the development of post-traumatic stress is very much associated with the 'meanings' or 'appraisals' that individuals attach to their experience. It was considered that as a hermeneutic approach, IPA would best capture the meanings associated with the impact of the Troubles on the lives of the participants.

Analysis of transcripts from qualitative interviews was carried out using Nvivo software (QSR 2007). Nvivo is a software package that facilitates the systematic sorting, arranging, managing and classifying of qualitative data, enabling the researcher to explore the key trends that address their research questions.

4.2.3 Ethical issues:

Given the sensitive nature of this area of study, it was important that ethical issues were addressed throughout the entire project and most importantly, that the dignity of the participants was respected. It is only from their accounts that we can begin to explore the impact of their experience.

Recruitment of participants was based on gaining 'informed consent'. Potential participants were identified and sent an invitation letter and information sheet that explained, in detail, the nature of the study and value of their involvement. This was followed a few days later by a phone call from our research assistant to arrange a date, time and venue for an interview, if appropriate. At the interview, our researcher again explained to the participant the nature of the study and format of the interview. The participant was encouraged to freely ask questions or raise any issues relating to the study. Fully informed written consent was then sought at the end of the interview (Appendix 5).

Interviews were recorded on a digital voice recorder, again with the consent of the participant. Interviews were transcribed and recordings subsequently destroyed. Each participant was offered a copy of their recording.

Participants' names and personal information were known only to the Research Assistant; personal details or identifying features were stored in a secure database accessible only to the research team, and were not used in any report arising from the study. Names and any other identifying features were removed from the interview transcripts. Furthermore, specific details that might compromise the anonymity of the participants have been edited from the results section. Care has also been taken to avoid the inclusion of details that could impact on third parties who may have been involved in or affected by the events described by participants.

As indicated, all potential participants were provided with an information sheet, outlining the background and purpose of the study. In addition, the Researcher provided each participant with a list of helping agencies that could be contacted. Participants were also offered an initial appointment with the NICTT if necessary, where they could receive advice on the most appropriate types of treatment or help facilities, and contact information for the appropriate services. The Research Assistant was supported by Dr Kate Gillespie, a specialist trauma focused cognitive therapist and consultant Psychiatrist, with a wealth of experience in the area of trauma and trauma treatment. Furthermore, the project was supported by two Clinical Contact Persons (CCP's), who were on call as the first point of contact for those requesting help, and those who displayed self-harm ideation, and for the interviewer to discuss areas of concern.

5. Key Findings Part 1: Analysis of NISHS Data

Analysis is based on a dataset with a total of 3100 individuals. In terms of the demographic breakdown of the sample, this includes 1362 males and 1735 females. The mean age of the participants was 47.97 (standard deviation= 17.63), with a minimum age of 18 and maximum of 93. As previously described, only a subset of the overall sample complete part two of the interview (N=1095). Analyses based on these individuals are therefore weighted to reflect the characteristics of the overall sample (N=3100).

5.1 Experience and nature of traumatic events

5.1.1 Lifetime exposure to trauma

At the beginning of the trauma section of the questionnaire, participants were asked if they had experienced any of 28 possible traumatic events during their lifetime. Table 1 gives the overall prevalence of lifetime exposure to any trauma in our sample, as well as the prevalence for males and females. Overall, 66% of the population reported having experienced at least one traumatic event during their lifetime. χ^2 tests reveal significant gender differences at the 5% level (p≤0.05), i.e. males are significantly more likely to have reported experience of trauma at some point in their life than females. These findings are similar to findings from other international epidemiological studies. In a comprehensive and systematic review of literature, Galea et al (2005) suggest that around two thirds of the population will experience a significant traumatic event at some time in their lives. Gender differences are also consistent with evidence from the National Comorbidity Study (Kessler et al, 1995).

Table 1: Lifetime exposure to traumatic events

	All	Male	Female
Lifetime Exposure (%)	66.3	68.8	64.3

Given that participants were asked to report their experience of trauma over the course of their lifetime, we would expect that prevalence rates would increase with age i.e. the older we get, the more traumatic events we are likely to have been exposed to. Table 2 however, presents a slightly different trend. The prevalence of trauma increased with age to a point and was highest among 45-54 year olds (72.8%), while the prevalence among the 75+ group drops to 52%. These findings are also illustrated in Figure 1.

Table 2: Lifetime exposure to traumatic events by age-group

	18-24	25-34	35-44	45-54	55-64	65-74	75+
Lifetime exposure (%)	55.5	61.7	70.2	72.8	69.2	71.8	52.0

Figure 1 Lifetime exposure to traumatic events by age group



Figures on exposure to trauma within different categories of marital status are presented in Table 3. Exposure was highest among the 'Divorced' group (82.5%) and lowest within the 'Never married' group (62.0%). While it is interesting to note the elevated prevalence of exposure to traumatic events among the 'Separated' and 'Divorced' groups, this does not necessarily mean that these groups are at higher risk of exposure. These figures could be explained by the fact that experience of traumatic events may increase the risk of relationship breakdowns and that a relationship breakdown itself may constitute a trauma categorised as 'other'.

Table 3: Lifetime exposure to traumatic experiences by marital status

	Married	Separated	Divorced	Widowed	Never married
Lifetime exposure (%)	66.6	73.9	82.5	62.7	62.0

5.1.2 Nature of traumatic experience

It was important that the nature of traumatic events should be examined in order to determine how prominent conflict related events feature in the lives of the Northern Ireland population. The prevalence of each of the 28 different traumatic event types is presented in Table 4. The most frequently reported event type was 'Unexpected death of a loved one' (28.8%), followed by 'Civilian in a region of terror' (22.0%), and 'Witnessed death or a dead body, or saw someone seriously hurt' (19.9%). The figures below highlight the significance of conflict related events in the trauma profile of the Northern Ireland population.

Table 4: Prevalence of 28 traumatic event types

Event Type	Lifetime Exposure (%)
Unexpected death of a loved one	28.8
Civilian in a region of terror	22.0
Witnessed death or a dead body, or saw someone seriously hurt	19.9
Mugged or threatened with a weapon	10.4
Automobile accident	8.8
Life-threatening illness	8.8
Man-made disaster	8.7
Beaten by someone else	7.4
Child with a serious illness	6.5
Private event	6.5
Other event (not mentioned)	5.4
Other life-threatening accident	5.2
Sexually assaulted	5.0
Civilian in a warzone	4.8
Traumatic event to a loved one	4.7
Saw atrocities	4.4
Combat experience	3.8
Stalked	3.8
Rape	3.5
Beaten by spouse or romantic partner	3.3
Toxic chemical exposure	3.0
Beaten by caregiver	2.3
Relief worker in a warzone	2.2
Natural disaster	1.8
Kidnapped	1.7
Refugee	1.1
Accidentally caused serious injury or death	0.8
Purposely injured, tortured or killed someone	0.00

Table 5 and 6 show the most frequently reported event types for males and females. The trauma profile of males and females are similar, in that they share six of their ten most frequently reported events ('Unexpected death of a loved one', 'Civilian in a region of terror', 'Witnessed death, anyone badly injured or dead', 'Life threatening illness', 'Mugged or threatened with a weapon', 'Man-made disaster'). The most prevalent type of traumatic event for both males and females was 'Unexpected death of a loved one' (28.4% and 29.0% respectively).

Table 5: Ten most frequent event types reported by males

Ever	nt Type Lifetin	ne Exposure (%)
1	Unexpected death of a loved one	28.4
2	Witnessed death, anyone badly injured or dead	28.0
3	Civilian in a region of terror	28.1
4	Mugged or Threatened with a weapon	14.4
5	Beaten by someone else (other than spouse/ partner or the subject of child abuse) 13.8
6	Automobile accident	13.0
7	Man-made disaster	12.4
8	Life-threatening illness	9.7
9	Combat experience	8.0
10	Life-threatening accident	7.7

Table 6: Ten most frequent event types reported by females

Ever	nt Type	Lifetime Exposure (%)
1	Unexpected death of a loved one	29.0
2	Civilian in a region of terror	18.8
3	Witnessed death, anyone badly injured or dead	13.5
4	Life Threatening Illness	8.1
5	Mugged or threatened with a weapon	7.2
6	Child with a serious illness	6.9
7	Sexual Assault	6.4
8	Private Event (event they didn't wish to speak about)	6.2
9	Raped	5.8
10	Man-made disaster	5.7

Given the apparent high prevalence of conflict related traumatic experiences, the total number of traumatic event types reported was examined and categorised to gain a deeper insight into the prominence of possible Troubles related events. A total of 5918 event types were reported by the individuals studied. These events were then categorised into five groups based on the nature of the event: event types that were characteristic of the Troubles formed the first category; the second category included accidents and natural disasters; events that involved domestic or sexual violence were grouped together in the third category; the fourth category included unexpected death of a loved one or trauma of a loved one; the final category included 'other' events (not categorised in the CIDI) and also 'private' events (that the participant preferred not to disclose). Table 7 and Figure 2 summarise the proportion of the total number of event types endorsed (5918) in terms of these five categories. Events that were characteristic of the Northern Ireland Troubles accounted for almost half of the total number of event types reported. If we consider that a proportion of the events involving unexpected death or trauma of a loved one may also have been related to the Troubles, it is likely that conflict related events are even more prevalent than the figure for the first category (45.7%) suggests.

Table 7: Breakdown of total number of events reported by the sample in terms of trauma category

War, conflict, social violence, man-made disaster	45.7%
Accident or natural disaster	15.0%
Domestic/sexual violence	12.1%
Sudden death of or trauma to a loved one	21.0%
Other or private event	6.2%
	100%

Figure 2 Percentage breakdown of the total number of event types by event category



5.1.3 Multiple traumas

Results on the total number of event types are reported in Table 8. Results reveal that the majority of individuals who reported an experience of a traumatic event had experienced more than one event type (64.4%). Almost 3% of individuals reported having experienced 10 or more events over the course of their lifetime. It is important to note that the figures are based on the *number of different event types* reported. It is possible that individuals have had *multiple occurrences or ongoing experience* of the same event, meaning that they may have experienced an even higher number of traumatic episodes.

Table 8: Number of different traumatic event types reported by those who have experienced trauma.

Number of traumatic% of those that experienced lifetime traumaevent types reported

1	35.6
2	23.6
3	11.7
4	11.7
5	5.3
6	4.2
7	2.1
8	2.4
9	0.8
10 or more	2.5

In order to further explore the profile of traumatic experiences in relation to age-group, the average number of event types reported by each age-group was calculated. The mean number of traumatic event types experienced in the overall population was 2.9. Again there is a peak in the middle of the distribution with '45-54' year olds reporting an average of 3.4 different event types.



Figure 3 Average number of event types per age group

The distribution reported above raises important questions. As previously mentioned, we would expect the distribution to increase with age. The bell shaped distribution above, however, suggests that additional factors are at work. One possible factor is the Troubles, which may have featured more heavily in the lives of those in the middle age-groups. Other possible explanations include the impact of retrospective reporting; the fact that individuals that have had traumatic events have passed away; or older individuals are in nursing home or other residential institutions that have not been included in the sample.

5.2 PTSD

5.2.1 Prevalence of PTSD

As previously noted, PTSD is unique as a mental illness. In order to meet the criteria for PTSD, an individual must have experienced a traumatic event. This is unlike other disorders where the identification of a traumatic event is not an essential precursor.

The following table presents figures on the 12 month¹, lifetime² and conditional³ prevalence of PTSD in the general population of Northern Ireland and for males and females. In contrast to findings in relation to exposure to traumatic events, females are more than twice as likely as males to meet the criteria for lifetime PTSD (χ^2 =33.69, p=0.00) and three times as likely as males to have 12 month PTSD (χ^2 =35.45, p=0.00). In addition females have a higher conditional risk of PTSD development following exposure to traumatic events (χ^2 =42.39, p=0.00). This indicates that whilst males are more likely to experience traumatic events, females are more likely to develop PTSD.

Table 9: Prevalence of lifetime, 12-month and conditional PTSD

	Prevalence in population (%)	Prevalence among males (%)	Prevalence among females (%)
12 month PTSD	4.7	2.2	6.8
Lifetime PTSD	8.5	5.2	11.1
Conditional PTSD	12.8	7.6	17.3

The prevalence of lifetime PTSD by age group is shown in Figure 4. PTSD was highest among 65-74 year olds (12.2%) followed by 35-44 year olds (12.0%). There does not appear to be any clear trend across age groups.



Figure 4 Prevalence of lifetime PTSD by age group

¹ 12 month PTSD is the percentage of individuals in the population who met the criteria for DSM-IV PTSD in the last 12 months.

² Lifetime PTSD is the percentage of individuals in the population who met the criteria for DSM-IV PTSD at some point during their life.

³ Conditional PTSD is the percentage of individuals that have been exposed to trauma who go on to develop PTSD

The prevalence of lifetime PTSD by marital status is shown in Figure 5. Lifetime prevalence is highest among the separated group followed by the widowed group. Again there is no clear trend in relation to marital status. Given that the prevalence of PTSD is higher in the married group than in the divorced group, it does not appear that marriage is a protective factor.



Figure 5 Prevalence of lifetime PTSD by marital status

As previously noted, the NISHS is part of the World Mental Health (WMH) Survey Initiative that is being conducted in over 28 countries throughout the world under the auspices of the WHO. While data collection and analysis is still ongoing in many of these countries, numerous papers have been published which provide estimates of the lifetime and 12-month prevalence of PTSD. Figures 6 and 7 illustrate where the Northern Ireland (N.I) figures are in relation to other countries involved in the WMH Survey Initiative. These countries include Israel (Isr), South Africa (S.Afr), Mexico (Mex); the ESEMeD group which includes France, Spain, Belgium, the Netherlands, Italy and Germany; Lebanon (Leb); the USA and New Zealand (N.Z). ⁴

Figure 6 Comparison of 12 month prevalence of PTSD in Northern Ireland with other countries



⁴ Levinson et al 2007; Stein et al 2008; Medina-Mora et al 2007; Alonso et al 2004; Karem et al 2008; Kessler , Berglund et al 2005; Kessler, Chiu et al 2005; Oakley-Brown et al 2006.

Figure 7 Comparison of lifetime prevalence of PTSD in Northern Ireland with other countries



The figures above highlight the fact that the 12 month and lifetime prevalence of PTSD in Northern Ireland lies to the upper end of international estimates. Prevalence rates are well above the estimates from comparable European countries (ESEMeD) and other countries in which conflict has been a feature of their recent history (South Africa, Israel and Lebanon).

5.3 Other disorders and comorbidity

As previously noted, PTSD is not the only possible outcome following exposure to traumatic life events. A number of mood, anxiety or substance use disorders may develop in connection with exposure to a traumatic event.

Lifetime and 12 month prevalence estimates of key psychological disorders reveal that PTSD is one of the most prevalent disorders in the Northern Ireland population. Behind Major Depressive Disorder (MDD), Alcohol Abuse and Specific Phobia; PTSD is the second most common anxiety disorder. It is more prevalent than General Anxiety Disorder (GAD), Social Phobia, Panic Disorder, Agoraphobia and Bipolar Disorder. It is worth noting that psychosis and personality disorders were not included in this study.

5.3.1 The prevalence of key disorders within trauma categories

It has already been demonstrated that conflict related traumatic events are the most frequently reported event types within the population, accounting for at least half of the total number of event types reported. In order to investigate the impact of different types of traumatic events, the prevalence of key mood, anxiety and substance use disorders was examined in relation to the five trauma groupings discussed previously. Table 10 below summarises these figures. Individuals were assigned to each of the five trauma categories based on a randomly selected event from the event types that they reported.

Table 10: The prevalence of key disorders within traumatic event categories

	War, conflict, social violence, man-made disaster (%)	Accident or natural disaster (%)	Domestic or sexual violence (%)	Sudden death or trauma of a loved one (%)	Other or private event (%)
Social Phobia	4.4	0	6.0	2.7	13.2
Specific Phobia	10.1	3.3	14.9	10.3	13.2
Panic attacks	34.4	18.7	32.8	25.0	28.9
Panic disorder	2.5	1.1	1.5	2.7	5.3
Agoraphobia	1.9	1.1	4.5	4.3	2.6
GAD	3.5	2.2	6.0	4.3	5.3
PTSD	7.9	2.2	14.9	13.0	15.8
Major Depressive Episode (MDE)	16.1	13.2	26.9	13.0	13.2
MDD	14.5	13.2	19.4	12.0	10.5
Bipolar Disorder	2.5	1.1	10.4	1.6	2.6
Dysthymia	1.9	1.1	7.5	3.3	5.3
Drug Abuse	1.9	3.3	6.0	3.3	5.3
Alcohol Abuse	20.8	14.3	13.4	10.9	15.8

The analysis above reveals that the prevalence of key disorders is generally higher among individuals that fall into the 'domestic or sexual violence' category. For example 19.4% of individuals in this category have had depression during their lifetime. Individuals in the 'war, conflict, social violence, manmade disaster' category have the highest prevalence of panic attacks and alcohol abuse.

In relation to PTSD, prevalence is highest among individuals in the 'other or private event' category (15.8%) compared to 7.9% among the first trauma category. This suggests that the risk of developing PTSD, having experienced a conflict related event is not as high as other event types such as domestic or sexual violence. However given that a high percentage of individuals fall into the conflict related category, the number of individuals with PTSD in this category accounts for a large proportion of lifetime prevalence within the overall sample.

5.3.2 Comorbidity of PTSD and MDD with other psychological disorders

The comorbidity of PTSD and Major Depression was also examined in relation to these psychological disorders. Table 11 below gives figures on comorbidity between PTSD and other disorders; and between major depression and other disorders. The figures in the second and third columns are the percentage of individuals with and without PTSD that also have another lifetime disorder. The figures in the fourth and fifth columns give the percentage of those with and without major depression who also have another lifetime disorder.

Individuals who met the criteria for PTSD were twice as likely as those who did not, to have at least one other co-morbid mood, anxiety or substance use disorder.

Table 11 Comorbidity of PTSD and MDD with other psychological disorders

Disorder	Individuals with PTSD (%)	Individuals without PTSD (%)	Individuals with MDD (%)	Individuals without MDD (%)
Social Phobia	16.7	5.0	18.4	5.0
Specific Phobia	26.1	9.6	24.5	8.9
Panic Attacks	60.8	24.6	58.2	23.9
Panic Disorder	9.5	2.8	10.8	2.7
Agoraphobia	13.7	2.5	8.7	2.1
GAD	9.5	4.7	21.2	3.9
PTSD	-	-	19.6	6.2
MDE	48.5	16.4	100	2.3
MDD	39.2	14.9	-	-
BIPO	11.4	3.0	0	3.0
Dysthymia	14.8	2.5	19.8	1.4
Drug Abuse	7.4	2.56	4.4	2.2
Alcohol Abuse	30.3	13.3	23.0	13.0

Figures 8 and 9 highlight the extent of the difference between PTSD and non-PTSD groups; and MDD and non-MDD groups in terms of the prevalence of other selected psychological disorders.

Figure 8 Comparison of comorbidity between PTSD and non-PTSD groups



Figure 9 Comparison of comorbidity between MDD and non-MDD groups



Figure 10 and Figure 11 below also highlight the extent of the association between PTSD and Major Depressive Disorder (MDD). The figures indicate that approximately two fifths of individuals that have had PTSD at some point in their life will also have had MDD at some point in their life; while one fifth of individuals that have had MDD at some point in their life will also have had PTSD at some point in their life. These findings raise important considerations for service provision and treatment.

Figure 10 Proportion of all individuals who met criteria for PTSD who also met the criteria for MDD



Figure 11 Proportion of all individuals who met criteria for MDD who also met the criteria for PTSD



5.3.3 Onset of PTSD and depression in relation to the experience of trauma

As discussed above, PTSD is not the only outcome that may develop after exposure to a traumatic life event. Indeed, the range of outcomes that may follow has been the subject of much attention. A number of authors have suggested that depressive disorders often arise following PTSD. The first ageof-onset for depression and PTSD were examined to determine when each of the conditions came in relation to the other. The table below summarises age-of-onset data for individuals with PTSD and depression. For example, among individuals with both lifetime PTSD and depression, 43.5% had PTSD prior to the onset of depression.

Table 12 Contrasting the onset of PTSD and depression

Onset of Disorder	% of individuals with PTSD and Depression
Depression First	34.8
PTSD First	43.5
Simultaneous Onset	21.7

To build a detailed picture of the relationship between the experience trauma, the onset of PTSD and the onset of depression, we examined information on 'first age of onset' data, that is the age when the participant experienced the traumatic event linked to PTSD. The flow diagram below summarises the sequence of onset of depression and PTSD in relation to each other and also the traumatic event (linked to PTSD). The percentages displayed are the percentages of all individuals who met the criteria for PTSD and Major Depressive Disorder at some point in their life.

Figure 12 The occurrence of PTSD and depression in relation to the experience of trauma



5.4 Trauma and physiological conditions

Although the primary focus of this project was the psychological impact of trauma in Northern Ireland, one of the major themes to emerge from the series of qualitative interviews was the prevalence of physiological health problems and their link with the experience of trauma. One participant describes below the physiological health problems she experienced after her father was killed during Troubles related violence.

They said I just held emotions back and then everything went rapidly wrong after that. My appendix had burst and my ovarian cysts had burst and then I took a thing on my lung through the poison going through me and then removed ribs and part of the lung [...]. After my daddy died it sort of all kicked in.

These findings prompted an examination of literature on the topic and also an exploration of the relationship between trauma and physiological health problems within the NISHS data. This theme will be discussed in-depth in the qualitative results section.

5.4.1 The association of PTSD and MDD with chronic physical conditions

The CIDI includes a detailed section on 'Chronic Conditions' where individuals are asked if they have experienced a range of physical health problems within the last 12 months. Table 13 presents results from a series of cross tabulations of PTSD with various chronic conditions experienced in the last 12 months. χ^2 tests reveal that individuals who met the criteria for DSM-IV lifetime PTSD were significantly more likely to have experienced physiological problems in the last 12 months, than those who did not meet the criteria for DSM-IV lifetime PTSD.

Table 13: The association between DSM-IV lifetime PTSD and chronic conditions experienced within the last 12 months.

Chronic Condition (12 month)	% Individuals with PTSD	% Individuals without PTSD
Any Chronic Condition †	87.1	64.7
Pain Condition †	64.4	35.2
Cardio vascular Condition †	36.7	23.2
Arthritis or Rheumatism †	31.8	21.1
Seasonal Allergies †	26.5	15.1
Ulcer in your Stomach or		
Small Intestine †	16.3	7.2
Respiratory Condition †	16.0	10.4
Diabetes or High Blood Sugar †	7.2	3.5
Epilepsy or seizures	1.9	0.8
Cancer ‡	0.8	3.2

 $\uparrow \chi^2$ tests show significant differences between the 'with PTSD' and 'without PTSD' group (p≤0.05).

 \ddagger Cells in cross-tabulation were not adequately populated to allow χ^2 analysis

The above analysis is replicated in Table 14 but this time considers the relationship between lifetime MDD and chronic conditions in the last 12 months. χ^2 analysis shows that individuals who met the criteria for DSM-IV MDD were significantly more likely to have reported any pain condition, arthritis or rheumatism, allergies and epilepsy or seizures, than those who did not meet the criteria (p≤0.05). This association however is reversed with respect to respiratory conditions. No differences between groups were found in relation to cardiovascular problems, diabetes or high blood sugar, or ulcers.

Table 14: The association between DSM-IV lifetime MDD and chronic conditions experienced within the last 12 months.

Chronic Condition (12 month)	% Individuals with MDD	% Individuals without MDD
Any Chronic Condition †	76.0	64.7
Any Pain Condition †	53.0	34.6
Arthritis or Rheumatism †	26.3	21.2
Any Cardio vascular Condition	24	24.5
Seasonal Allergies like Hay fever †	18.9	15.4
Ulcer in your Stomach or Small Intestine	9.0	7.8
Any Respiratory Condition †	8.4	11.3
Diabetes or High Blood Sugar	3.8	3.8
Epilepsy or seizures †	3	0.5
Cancer ‡	0	3.6

† χ^2 tests show significant differences between the 'with MDD' and 'without MDD' group (p≤0.05).

 \ddagger Cells in cross-tabulation were not adequately populated to allow χ^2 analysis
5.4.2 The impact of psychological disorders and chronic disorders on daily activities

Figure 13 below highlights the significance of the relationship between PTSD and physiological health problems. Each individual that endorsed a chronic condition was asked a series of follow-up questions. One of these questions asked: 'How many days out of the last 365 were you totally unable to work or carry out your normal activities because of your chronic condition?' Figure 13 illustrates that individuals with PTSD were impaired in their daily activities, due to a chronic health problem, for almost twice as many days (mean=97.0 days) as those without PTSD (mean= 53.3 days).

Figure 13 Impact of PTSD and chronic physical health problems on normal daily activities



The results in Figure 13 can be compared with those in Figure 14 which illustrates the impact of depression and chronic physical health problems on normal daily activities. Individuals with MDD and a chronic condition were unable to carry out their normal activities due to their chronic condition for an average of 64.2 days in the previous 12 months. The corresponding figure for those without MDD is 53.3 days. Overall, Figures 13 and 14 reveal that the combination of PTSD and chronic physical health problems is associated with a greater level of impairment in daily activities compared to that of MDD and chronic physical health problems.

Figure 14 Impact of Major Depressive Disorder and chronic physical health problems on normal daily activities



5.5 Demographic predictors of exposure to traumatic events and PTSD

One of the major aims of the study was to determine risk factors and protective factors for exposure to traumatic experiences and the subsequent development of PTSD. In other words, are there certain types of individuals that are more (or less) likely to have been exposed to trauma; or more (or less) likely to meet the criteria for PTSD? Table 15 shows the results of Logistic Regression Analysis which was used to investigate possible socio-demographic predictors for both exposure to trauma and lifetime PTSD. These predictors include gender, age, individual income, marital status, and highest level of educational attainment. For each categorical predictor variable included in the regression, a base category was assigned a value of 1.00 and subsequent categories were assigned an odds ratio in relation to this base category. Model 1 considers socio-demographic risk factors for lifetime PTSD. In model 1 in relation to gender, for example, the male category was assigned a base value of 1.00 and the corresponding odds ratio for the female category was 0.798. This indicates that females are approximately 20% less likely to have experienced trauma during their lifetime.

In terms of significant predictors of lifetime exposure to a traumatic event, as indicated, females were significantly less likely than males to have experienced a traumatic event. Model 1 also indicates that the risk of exposure to trauma generally increases with age. People in the highest income bracket were less likely to have experienced a traumatic event. Individuals who were divorced at the time of the interview were two and a half times more likely to have been exposed to trauma as those who were married. Finally, those whose highest educational attainment was Primary or GCSE/ O-level were significantly less likely to have been exposed to trauma.

In relation to risk factors for PTSD, Model 2 reveals that females were twice as likely as males to meet the criteria for DSM-IV PTSD during their lifetime, despite being significantly less likely to have been exposed to trauma. The risk of PTSD generally decreased as income level increased, though not significantly for the £20,000-£29,999 category. People who were separated at the time of the interview were twice as likely as those who were married to meet the criteria for PTSD. Those whose highest educational attainment was Third-level or GCSE/O-level were also more likely to meet the criteria for PTSD at some point in their life.

Table 15 Logistic regression of risk factors for exposure to trauma and lifetime PTSD

	Model 1: Risk of exposure to lifetime traumatic event (95% Confidence interval)	Model 2: Risk of lifetime PTSD Odds ratio Odds ratio (95% Confidence interval)
Male Female	1.00 .798 (.670956) †	1.00 2.075 (1.523-2.826) †
Age	1.012 (1.005-1.018) †	.991 (.980-1.001)
Married Separated Divorced Widowed Never Married	1.00 1.398 (.923-2.118) 2.695 (1.743-4.167) † .886 (.635-1.234) .903 (.719-1.134)	1.00 2.062 (1.213-3.507) † .690 (.361-1.315) 1.626 (.974-2.716) 1.289 (.888-1.872)
≤£9,999	1.00	1.00
£10,000-£19,999	.972 (.784-1.203)	.603 (.421865) †
£20,000-£29,999	.853 (.658-1.111)	.691 (.440-1.086)
£30,000+	.685 (.473936) †	.394 (.173897) †
13-14 years (A-level) 8-12 years (GCSE/ O-level) ≤ 7 years (Primary) 15 + years (Third level)	1.00 .652 (.530803) † .361 (.253517) † 1.146 (.887-1.483)	1.00 1.961 (1.365-2.818) † .378 (.143-1.002) 1.802 (1.188-2.733) †

† The odds ratio is significantly different at the .05 level (two-tailed) from the reference category value of OR=1.00

5.6 Help seeking and experience of services

At the end of the PTSD section, individuals that reported experience of any trauma during their lifetime and any PTSD symptoms related to this experience were asked about their contact with services. Just over a third of such individuals reported ever having talked to a medical doctor or other health professional about problems related to their experience of trauma.

Table 16: Service contact of individuals who have experienced any PTSD symptoms

	% of individuals who have spoken to a medical doctor or other health professional about their PTSD symptoms
Yes	34.4
No	65.6

Of those who spoke to a medical doctor or other health professional, just 50% (i.e. 17.2% of the total who had PTSD symptoms) reported getting treatment that was 'helpful or effective'. Given the elevated prevalence of lifetime and 12 month PTSD in the population, these findings on service use have important implications for future planning and provision of trauma related services.

6. Findings from Qualitative Interviews

A total of 15 interviews were undertaken (see methodology for details of participant selection). Most people were interviewed alone in their home. However, one participant preferred to be interviewed in an alternative venue. The interviews lasted on average one hour (maximum 180 minutes, minimum 35 minutes) and were audio recorded with the participant's consent. Two participants preferred not to have their interviews recorded, but were happy for the interviewer to make notes. The main themes that emerged from this study are discussed and direct quotes, or interviewer's notes, used to illustrate these themes. The symbol * has been used to indicate the beginning of a quote from a different participant. Brackets and three dots [...] indicate that irrelevant material has been removed to aid clarification or save space. Quotes that include explicit detail or, which compromise anonymity have also been edited. Care has also been taken to avoid the inclusion of details that could impact on third parties who may have been involved in or affected by the events described by participants.

Table 17 and 18 below summarise the characteristics and attributes of the 15 individuals that took part in the qualitative study. All 15 participants reported direct experience of a Troubles related traumatic event and nine reported indirect experience. In addition seven interviewees also reported experience of other traumatic events that were not connected with the Troubles.

Characteristics		Number of Participants
Gender:	Male	12
	Female	3
Age:	18-24	0
-	25-34	1
	35-44	2
	45-54	9
	55+	3
Marital Status:	Married	11
	Single	3
	Divorced	0
	Separated	1
	Widowed	0
Troubles Relate	k	
Trauma:	Direct	15
	Indirect	9
Other Trauma		7

Table 17: Participants' characteristics (N=15)

Table 18: Participant attributes

Participant	Gender	Age	Marital Status	Employment Situation	Most Recent Career Role	Worst Event
1	Male	54	Married	Unemployed	Former Textile Worker	Civilian in warzone
2	Female	47	Married	Employed	Former Care Worker	Murder of Parent
3	Male	53	Married	Sickness Absence	Former Civil Servant	Witnessed death or dead body
4	Male	44	Married	Employed	Civil Servant	Witnessed death or dead body
5	Female	58	Married	Retired	Retired Shop Assistant	Child with a serious illness
6	Male	52	Married	Employed	Shop Assistant	Witnessed someone seriously injured
7	Male	32	Single	Student	Student	Private Event
8	Male	49	Single	Unemployed	Long-term unemployed	Private Event
9	Male	52	Married	Employed	Machine Operator	Automobile Accident
10	Male	66	Married	Retired	Former Manager	Mugged/threatened with a weapon
11	Male	68	Separated	Retired	Retired Teacher	Unexpected death of child
12	Male	61	Single	Unemployed	Former Trade Worker	Mugged/ threatened with a weapon
13	Male	42	Married	Employed	Civil Servant	Man-made disaster
14	Female	49	Married	Homemaker	Homemaker	Mugged/threatened with a weapon
15	Male	45	Married	Employed	Restaurant Manager	Life threatening accident

Table 19 shows the number of PTSD symptoms reported by each of the 15 interview participants. As described earlier the qualitative sample included individuals who reported experience of conflict related events and met the criteria for depression.

Participant	Avoidance (n=7)	Re-experiencing (n=5)	Hyper-vigilance (n=5)
1 6	0	0	0
2	5	4	5
3 ⁶	2	4	4
4	7	5	5
5 ⁶	0	0	0
6 ⁶	0	5	4
7	4	5	5
8	7	5	5
96	2	4	2
10 ⁶	1	3	3
11	5	3	2
12	3	2	5
13	3	5	3
1 4 ⁶	0	0	0
15	6	5	3

6.1 Experience of trauma

All 15 participants were selected from the NISHS on the basis that they endorsed at least one conflict related trauma that they experienced during their lifetime. The experience of trauma was, however, diverse and complex. While individuals were included on the basis that they had experienced a Troubles related trauma, the majority of participants reported experiencing multiple traumatic events during their lifetime, including non-Troubles related incidents. An example is given below.

*At that particular time, I was in a train crash and was in [hospital] for a month with a broken pelvis. That was one of the traumas, right. At that particular time our [child] was in hospital, she was in accident and emergency and then my two brothers were lifted by the army, by the police at the time and one of them lost his eye. This all happened within about a week.

6.1.1 Primary experience of Troubles related events

All 15 participants recalled at least one primary experience of the Troubles. Several participants described in detail various incidents where they found themselves amidst the violence as these individuals describe.

*Again around the early part of the seventies there is a particular day called Bloody Friday [...] I was caught up in it. I was caught in a bomb blast that day and the same day having come out of hospital I was trying to get home with my mother and my brother and we got caught literally dodging bullets as we crossed the road with bullets ricocheting off the walls and scrambling across the ground to get home.

*I was out on patrol and you know when a bullet comes close, cause you hear it zip. It zips the air, it just doesn't go over your head and you just don't hear a bang and I heard the bullet zip past me and I knew it was close. Next thing I know I was below a car hiding.

⁵ Symptoms related to either 'random' or 'worst' event as reported in the NISHS.

⁶ Participant reported experience of an event(s) related to the Troubles, but did not meet the full criteria for DSM-IV PTSD .i.e. at least 3 avoidance symptoms; at least 1 re-experiencing symptom and at least 2 hyper-vigilance symptom.

Six interviewees also described in graphic detail, their experience of bomb explosions related to the Troubles. Examples from two are given below.

*There were stolen [goods] or something in the [building] out the back, police got wind of these [...] and decided they were going to raid them but the whole [building] was booby trapped [...] So when they were getting the last [item] it blew the walls out and brought the roof in. There was [a policeman] at the concrete slab (sic.)- kind of like half of him was all underneath it. There was another [person] and he was completely, oh I can't even describe it, [The participant went on to describe, in graphic detail, the person's dismembered body].

*The annual dinner was on up in the [local club], it was a mixed club. We were sitting at a table at the bottom end [...], everybody was sitting down. I got up and went to the bar and a bomb went off and it blew right across to where we were sitting, it sort of went over everybody. It lifted my mate and blew him against the counter and I ended up underneath a table. A [person] got her face spilt and another one lost [his/her] eyesight.

Two of the participants talked about violent Troubles related incidents that they witnessed as children, one describing the day that one of his close friends was injured.

*[My friend] was in front of me and he got hit in the face by a rubber bullet [...] but I think that was one of the scariest things that I have ever saw because I have never seen anybody with so much blood on them.

*We were all playing [...] and next thing there was a bang and a shot rang out and one of these big lads just fell down. He had been shot in the head and as an eight year old you look and it was just extremely unpleasant.

Participants also described frightening episodes in which they were threatened or held at gunpoint by members of paramilitary groups. Three individuals described this type of incident as the 'worst' in the original NISHS interview. One of these individuals recalled three such incidents that he experienced in close proximity.

*It was about 10 or 11 in the morning so there was a lot more people in the place than there normally would have been [...] and these three guys came in with big rifles and one guy was shouting, "Up against the wall! Up against the wall!" So we all got up against the wall [...] but this guy grabbed me by the scruff of the neck and I had a rifle at my head and said "Where is the money? Where is the cash box?" and dragged me into the office [...] he lost the head [...] and made me lie on the floor and wouldn't let me get him the box until I told him where it was. [...] Then about two weeks after that we were working on a bombed-out building and these two guys came in and held us up again and stole the cash box again. [...] I looked and there were four or five goons all with hoods on came bounding into the office shouting "Get your f-ing [...] hands up or we'll blow your f-ing [...] head off !" and this sort of thing. Then you think 'Oh God!' So they tied me up and got the keys to the safe. [There was] about two or three thousand pounds worth of gift vouchers in the safe. [...]So they got them plus whatever bit of money was in the place and I was left tied up.

6.1.2 Consequential experience of the Troubles

A total of nine of the 15 participants described having some consequential experience of Troubles related events. The term 'consequential' refers to events in which the participant was not actually involved in the primary event (e.g. a bombing or shooting) or did not witness the event. Examples of this type of traumatic experience may include a death or other trauma of a loved one; being involved in the aftermath of a trauma; or learning about the traumatic experience(s) of others. The extracts below highlight just a few of the types of events that were indirectly experienced. These examples highlight the fact that the distinction between primary and consequential experience is often irrelevant in terms of the impact on the individual concerned. What seems to be more important is not so much the experience as understood in some technical or objective way, but the subjective nuances and meanings that the individual takes from their traumatic encounter.

One of the participants described how her family received the devastating news that her father had been shot dead during a particularly intense period of violence.

*Daddy was supposed to finish his shift at nine. My [uncle] said it was gave out on the radio that a security man was shot [...]. Then we didn't have a phone, but two doors down, [a neighbour] had a phone and my brother went down and he phoned the [hospital] and asked who he was. [The man in the hospital] said "Tell your mother your father died peaceful". He was shot in the head and the chest and then [my uncle], he took all to do with it and the police didn't come until the next day to tell my mummy.

Another man described how he was called to the scene of a car bomb explosion.

*Well, it was not so much that I witnessed it, I was called out to it. [...] What he [my boss] wanted was for us to go through the debris [...]. He wanted everything recovered from it so that is what we had to do. We actually had to search through the rubble and that is when we started finding pieces of body and things like that.

Other interviewees referred to incidents where they learned of loved ones that had been killed or injured. One man described how a close friend was tortured and shot by members of a paramilitary group.

*He was a good friend to me [...]. One thing killing a man, it was the way they killed him [...]. Him and his mate were sitting in the living room. One [gunman] came through the front door and one [gunman] came through the back door. [The participant went on to describe how, over the course of 20 minutes, his friend was tortured and killed, in the presence of other family members].

Another participant spoke of his experience as a volunteer group worker, which regularly brings him into contact with individuals that have been affected by the Troubles. This example highlights how people experienced the effects of the Troubles through their work.

*My involvement with [a voluntary group] brings me into contact with people who have been directly affected by the so called 'Troubles' here in Northern Ireland. Either they have had family killed or family who were imprisoned for what they were doing or they have discovered suddenly that their beloved children have been involved in terrorist activity, on both sides of the fence and it is amazing [...] what people actually say to you and suddenly it is as if you become trusted [...] I have heard some horrendous stories and so in that sense it [my experience] is indirect.

6.1.3 Non-Troubles related trauma

While the primary focus of the qualitative interviews was the experience and impact of Troubles related trauma, many of the participants described traumatic events that are not connected with the Troubles. These events are also important for this study as they help build a picture of the trauma profile of our participants and they also serve as a relevant comparison to Troubles related events in terms of the meanings attributed to the event and the perceived impact.

One man compared his experience of trauma in another country with that in Northern Ireland.

*I've witnessed deaths here [Northern Ireland] and deaths in Germany. Traffic accidents was the main thing [...] and you are bound to see it at some time in your life but a death is a death regardless of what caused it. It is all trauma.

A number of the interviewees stated in the original interview that they had witnessed somebody being killed or a dead body, or someone badly injured. Two men recalled in vivid detail their experience of unexpectedly seeing a dead body or someone being killed.

*I can tell you the very first time I encountered a dead body and I actually remember the man's name, but I won't tell you, but that's the detail that I can remember[...]I was very new on the job and we were down along the [river]. We spotted a mannequin, 100% that it was a mannequin and we went and investigated and it transpired that it wasn't a mannequin; it was a man who had been in the river for a number of weeks.

*The worst thing I ever seen was a man being killed on the road. [...] I was going down [...] and I was at the crossroads and I seen a wee red car coming and [pulled out behind it]. The next thing I seen these white bags and shopping flying up into the air and a man going through the air like a rag doll, and I pulled up behind the car and a girl got out screaming. She was driving the car and a fella was sitting in the car in shock. The pedestrian hit the passenger's side and the window was in. I said to the guy, "Do you want to speak to the girl?" 'cause she was screaming. So he came to his senses and got out and I went over and looked at the man and he was just lying at the side of the road like a rag doll, and I knew him cause you used to see him walking about the road.

6.2 Immediate/short-term impact

Having asked about the experience of Troubles related and other traumas, the participants were invited to reflect upon their immediate feelings or short term impact of the trauma(s) that they described.

6.2.1 Fear

The most common immediate emotion described by the participants was one of fear. Several spoke of general feelings of fear as a result of what they had witnessed or experienced, while others spoke of specific fear for their life or safety of their family.

One man described his immediate reaction to witnessing, as a child, his friend being shot.

*But I think that was one of the scariest things that I have ever saw because I have never seen anybody with so much blood on them. You couldn't even tell who he was. I remember running home after that crying and whatever [...]. I remember telling my mummy that I thought he was killed and I thought that he was dead [...]. I remember being terrified of it.

Another participant recalled the fear and emotion that he experienced while recovering a dead body from a river.

*You can just imagine, he had been in the water for weeks and I was sort of scared of him. That is being honest. Even though he was dead and this was my job [...]. So that would have been my first encounter with death in that way, sort of 'on the street', like raw and I found it really emotional.

A number of participants talked about how they feared for their life or safety; or the safety of loved ones as a result of the violence that they had been caught up in.

*You used to have that fear in you [...]. There was just the fear of something happening to the kids. I think, but I don't know if it would be anything to do with that, but I think it would be, but you just think- 'what if that happens and the kids are there and what would I do?'

One participant described how he felt when he was threatened by members of a paramilitary group.

*For that half an hour or hour that I was there it was still going on in my head that I had brought my own car to my own funeral; really and there's nothing I can do about it [...]. Obviously I felt like my life was in danger.

Another man spoke of the fear he felt for his safety, following a series of violent attacks on his business.

*All this stuff going on and in your head, you think-'I am going to die' [...]. You felt a bit, sort of, they could pick a shot whenever I am locking up.

6.2.2 Shock

Another immediate reaction to their experience of trauma that the participants described was shock. One participant described to the researcher how he felt having first witnessed violence.

*His immediate feelings were that he was mixed up and shocked that people could do that to one another. The burning of the shops didn't really affect him because he was not directly involved. The violence between adults however left him numbed. ⁷

Another man described his shock at the lack of sensitivity shown by his employers following a bombing incident.

*I suppose it is old fashioned [...] but the survivors of the bomb that night were [...] sent back out on patrol and that was the attitude. I went mad and I was in shock and shaking and crying and I was told "It is like falling off a horse, you have got to get back on it or you won't." I thought that was a terrible attitude but that is what happened then.

6.2.3 Lack of immediate impact and numbness

A few of the interviewees spoke of how they failed to fully process the trauma they had experienced in the immediate aftermath for various reasons. One woman describes how she found it difficult to accept that her father had been killed.

*I didn't take it in because his coffin was lidded. I'm going to go on in here and say that I can't really remember much about it but because I wasn't seeing him, I didn't think he was in there. When I was right and back to normal again, even going out, when I was out with my friends I would have seen someone and been about to say 'There's my daddy!' You know, it's hard to really take it in when you don't actually see. Does that make sense?

The following participant similarly describes how dealing with the practicalities meant that he didn't have much time to dwell on his experience.

*That sort of shook you up a bit but it seemed to affect people a year or two afterwards worse than at the time. [...] The pressure was on and as I say the first year or two after a lot of these things happened you [...], you were pretty busy and you hadn't much time to think about a lot of things, but it still got to you.

The above extracts illustrate examples of the short-term impact of trauma on the interviewees and their families. The wider and longer-term impact of their experience will be explored in subsequent sections.

6.3 Symptoms

With the central focus of the project being the impact of traumatic experiences, one of the major themes that emerged from the interviews was emotional symptoms that participants identified as being connected with the traumatic event(s) that they experienced. As previously indicated PTSD is the most frequently reported and extensively studied outcome of traumatic events. (Somer et al, 2005). Indeed PTSD symptoms emerged as a strong and frequent theme from our analysis of the 15 interview transcripts. Quite a number of additional symptoms, however, also emerged which do not necessarily fit within the diagnostic criteria for PTSD. Furthermore another theme that emerged was the experience of physiological health problems, which in a number of cases were directly attributed to the experience of trauma.

6.3.1 PTSD symptoms

As described previously, PTSD symptoms can be characterised as three clusters: (1) re-experiencing of the event such as nightmares or flashbacks; (2) avoidance of things that remind the person of the event and numbing of emotions and responsiveness and (3) hyper-vigilance symptoms such as jumpiness, irritability and sleep disturbance. Interviewees were asked about symptoms that they have experienced and could identify as being linked to the traumatic episode(s) that they described. Examples of all three clusters of symptoms emerged frequently from the interviews.

⁷ Participant preferred not to have their interview recorded. Statements are therefore based on the interviewers notes.

6.3.1.1 Re-experiencing

Thirteen of the 15 participants made some reference to re-experiencing symptoms in the form of 'flashbacks', 'nightmares' and 'reminders' amongst others.

The participants spoke of how certain reminders, smells or memories 'takes you back like you were just standing there watching it.' One man described how he would be wary of 'cars parked funny', which reminded him of his experience of a car bomb during the Troubles.

*It did affect my life in that times you would find, when I walked past parked cars- just back to the car bombing-cars parked funny or somewhere where it shouldn't be, I always was a wee bit nervous, believe it or not tip toeing past. I don't know that that would make any difference. Things like that would happen if we were out shopping or something like that.

A number of participants spoke of the role that the TV and media have to play in reminding them of their traumatic experience. One man was asked if there was anything in particular that triggered memories of his experience.

*Anytime there is a programme about the history of the Troubles [...] all these things it takes you back like you were just standing there watching it. It's strange. It takes you back in an instant cause you remember either you've seen that bit of footage 400 times or you actually remember an occasion where you were in the centre of town and saw the front of a whole building coming out into the front of the road. It's weird.

Other re-experiencing symptoms that commonly occur after a traumatic event take the form of flashbacks, intrusive memories or nightmares.

One former soldier describes how just very recently he has been having nightmares about the aftermath of a Troubles related car bomb.

*Recently, I don't know whether it is the drugs I am on or what but since my heart attack I have been dreaming weird dreams and I have dreamt more about this incident than I have ever done and it is just as if I am there and I am talking out loud. The missus says "You are talking in your sleep". I have always talked in my sleep but [recently] I have been really literate if you like, louder and as if I am talking to other people, which is unusual for me.

One participant gave a particularly graphic example of intrusive memories of a Troubles related bomb that has stuck with him to this day.

*I remembered so much detail about it with like [describes dismembered bodies]. It sticks with you, you know. It's not something you're going to forget. [...] Just surprising now, the wee bits and pieces, like your man's leg that have just stuck with me which didn't really bother me [at the time] and if I had of had a normal day I wouldn't of remembered it, would I?

Only two of the interviewees specifically mentioned 'flashbacks' during their interview. One man described how he experiences flashbacks associated with an explosion that caused him to lose most of his sight in one eye. Interestingly the flashbacks that he spoke about are related to an event that happened prior to this traumatic incident.

*If I seen anybody working with a battery or even a battery sitting on the floor there and somebody grinding beside it I wouldn't be happy at all [...] I seen a fella one day before the accident happened to me and I always flashback to him. He asked me for a cigarette and he had no light and somebody told him there was a battery sitting and he could spark it and light the cigarette and so he did and he got the cigarette lit with a spark, but what could have happened there with his head beside it?

6.3.1.2 Avoidance and numbing

Symptoms of avoidance also emerged as a very important theme from the analysis of interviews. These symptoms were manifested in different ways including avoidance of places or activities that were associated with a traumatic event, avoiding talking about the event(s) or keeping details from family and loved ones. Some participants spoke of how they 'bury things'; while several participants described 'safety behaviours' that they engaged in following the traumatic episode.

Several participants discussed how they avoided and in some cases still avoid places that they associate with Troubles related events.

One woman, for years, avoided taking her children to a certain area in town for fear of being caught up in violence.

*I wouldn't have taken the kids over to town on my own; never would have took them over on my own when they were wee. You used to have that fear in you [...] No I never crossed the bridge. Everything that I needed was always here or if I was going over somebody else would have went with me like my husband but I would never have went on my own with them. I didn't like going over whether I was with anybody or not.

One man spoke about how he never walked via a local police station again following a violent event, which he witnessed as a child.

*I remember being terrified of it you know, but I never ever walked through to the police station again after it. The police station sort of went across the road if you know what I mean. The barricades went across the road and the army were in the houses across so you had to go through a search area to walk down the hill. I never went to school that way again.

The participants also spoke of how they avoided activities that reminded them of their trauma or made them anxious. One woman told the researcher of how she avoided walking at night or using transport following a particular traumatic experience connected with the Troubles.

*The participant stated that after the event she wouldn't go outside the door at night or go walking when it was dark. She was very nervous around vans etc. For example if she sensed a van coming up behind her she would stand in a doorway until it passed. She was also very nervous travelling and didn't drive for three years after the event. She didn't like travelling in buses etc. and said she was a 'nervous wreck' if she had to travel anywhere. This lasted approximately five years.⁷

'Safety behaviours' also emerged as an avoidance symptom from the interviews. A few participants spoke of how they would engage in a variety of these behaviours to cope with their experience.

*I didn't want to meet those kind of people when I was coming home at 11 o'clock at night. So obviously I used the front door one night and the back door the next night; come home at 11p.m. one night and 1a.m. the next and 9.30p.m. the night after that, things like that you know. Just jump things around because I didn't want to get into any pattern that people could pick up on with me coming home especially those people.

*As I say just cars made me feel a bit nervous. In fact even now, maybe it is just habit when I start my car in the morning I leave the door open in case there is a blast. It lessens the blast but I think that is just a habit more than anything.

The other main example of avoidance was not talking about the event, or keeping details of the trauma from family and loved ones. One man, having experienced multiple Troubles related traumas, described how he has repressed these experiences.

*I guess you bury those concerns or worries. [...]Then you get back into a routine until of course the next big atrocity happens and then you are wary again [...]. To bury things, repress things, isn't good 'cause some days they will come back and they will bite you really hard.

Several participants spoke of how they kept the details of the trauma that they had experienced from their family and colleagues to avoid upsetting them unnecessarily.

*Mind you I haven't described what actually was there; I just said there was [a number of] men dead. I didn't say they were in bits and pieces all over the place [...] I haven't gone into any detail. There was no reason to upset other people.

Emotional numbing is another group of symptoms that are commonly experienced in the aftermath of traumatic events. A number of interview participants spoke about how they lost interest in usual activities or how they would 'lose heart'.

*I couldn't be bothered. Even at weddings I have a couple of drinks and come on home again. I just can't be bothered with crowds, that sort of thing [...] I never bother much with anything.

*Now I would say I would still get a bit depressed or I would just lose heart, like that for no reason. I be up to go out or build myself up to do something and then suddenly say 'what's the point and just not be bothered.' It could still hit me like that but not as much as it used to.

6.3.1.3 Hyper-vigilance

The final cluster of symptoms that characterise PTSD is hyper-vigilance. This cluster incorporates being nervous, on edge or jumpy; disturbed sleep; feeling irritable; having difficulty concentrating or being more alert or watchful than usual. Once again these symptoms were frequently reported by the interview participants.

One man describes his behaviour, following his experience of a bomb, if he came across a car that was 'parked funny'.

*I always was a wee bit nervous, believe it or not tip toeing past. I don't know that that would make any difference. Things like that would happen if we were out shopping or something like that [...] As I say, just cars made me feel a bit nervous.

One man who lost his sight in one eye during an accident said the following.

*And for some reason now if anybody points something at me with sharp points I just snatch it out of their hand. I can't help it. It is kind of a phobia about it. If somebody is pointing say a spade at me for some reason I can't handle it. I have to look away. I can't explain it. I think somebody told me some time when you have two eyes you have two chances but if you have one eye you have only one chance left. If I see somebody pointing something at me it feels like it is my last chance sort of thing. I could end up blind. So that is one of the things that has, what would you say, that haunts me, sort of thing, like if I see something sticking out of a bag I have to make it safe, sort of thing.

Four of the interviewees told of how, after their experience of trauma, they became more alert, watchful, security conscious and in some cases suspicious and paranoid.

*I hated going into town, detested it with a passion and I certainly avoided going into town because the bomb that was going to go off next was going to be in the shop that I was in and it was going to get me, everybody else was going to be ok but I detested it and I think it just wasn't me, it stuck with an awful lot of people going about their daily lives in a normal way but certainly that was a heightened concern that I had at the time.

*As you can see my front door, on your way out there, it's 'bar city' and mortise locks and I've got batons of wood to strengthen the frame. I've become a bit of a security expert. ⁸

One man described his struggle with paranoia after his friend was murdered during the Troubles.

⁸ The man had a lot of locks and bolts on his front door and referred to his door as 'bar city'

*Massive bouts of paranoia for two, three or four years after he died. If anybody stared at me, 'Why is he staring at me? Who is he? Am I going to get tugged? Am I being watched? Have I been forgotten about? I was one of his friends, guilty of association, you know all this [...] I got terrible paranoid after my mate got shot.

Another man describes his feelings of irritability or anger that he experienced, when asked about symptoms that he attributes to his experience of trauma.

*I think now but like everything I am saying I don't have any great evidence of it but probably anger and bad temper. There is sometimes when I feel like I am keeping,[...] when I go along with some sort of even keel, I am suppressing something that feels like it is going to explode.

Aside from nightmares that have been discussed under the re-experiencing cluster of symptoms, two participants made reference to experiencing disturbed sleep as a result of their experience. One participant describes this below.

*I think probably my biggest one and I don't know if this is relevant or if it associated with it at all, but my sleeping pattern is unbelievably bad. What does that mean? I sleep in fits and starts and if I sleep for maybe three hours, a three hours stretch would be a big sleep for me.

6.3.1.4 Onset and duration of PTSD symptoms

The participants reported various timescales in terms of the onset and duration of the symptoms described above. For some participants, onset of symptoms occurred shortly following the event. These symptoms continued for 'a couple of days' for one of the participants, while others reported experiencing symptoms years after the event(s).

*I think I had nightmares for a couple of days but not very long because I was only young at the time.

*It's fair to say I have very few symptoms today. The odd occasion and I mean very odd now, once a year, twice a year at the most, I would wake up dreaming I was back in that situation but that maybe happened once last year. Today I would say that I don't have any sleepless nights because of what happened 30 years ago. For a few years after the event, I had a lot of sleepless nights. That caused me a lot of worry. I can't say that I'm deeply affected by it now. It has maybe affected my behaviour more than anything else.

In contrast, for a few participants, onset of symptoms occurred many years after their experience. A few participants talked about currently experiencing trauma symptoms.

*Recently, I don't know whether it is the drugs I am on or what but since my heart attack I have been dreaming weird dreams and I have dreamt more about this incident than I have ever done and it is just as if I am there and I am talking out loud[...] even now, maybe it is just habit when I start my car in the morning I leave the door open in case there is a blast, it lessens the blast but I think that is just a habit more than anything.

Another described his recent experiences to the researcher.

*To this day he still doesn't like going out of his 'comfort zone'. He has always attributed it to his traumatic experience with the Troubles. He stays in his own area because he is more content there. His wife booked them into a hotel for a week this August. He stayed just for a weekend and then had to come home. This has happened on numerous occasions. When he is out of his 'comfort zone' he gets nervous, butterflies, sweats and is physically sick. As soon as he comes home he settles down straight away. He takes the dogs a walk across the field out the back of his home and is content doing that.⁷

6.3.2 Other emotional symptoms

In addition to typical PTSD symptoms, quite a number of the interviewees described symptoms that do not necessarily fit within the diagnostic criteria for PTSD. Examples include the development of anxious attachment patterns or over protectiveness towards children; guilt or a feeling of responsibility; revenge

and illogical thinking and severe depression among others.

A number of participants spoke of how they became particularly attached to loved ones or very protective of their children as a result of their experience.

*All parents are protective of their children. I find myself being overly protective, very overly protective to the extent that I don't allow my children to do things that I was allowed to do when I was a wee lad. Times have moved on and they should be able to do things but even so, simple things, I hate my daughter who is 11 years old, I hate my daughter crossing the road cause it's a danger.

Another participant described similar symptoms to the researcher.

*She stayed in and life now was very much her family and kids and their school. She described her house as very regimented. When the kids came home from school it was 'door closed and books out.' ⁷

Another symptom described by the interviewees was feeling responsible in some way for what happened or experiencing feelings of guilt.

*I probably worried more about fellas' jobs and the place going bust or something like that. That puts as much pressure on you as wanting to help them you know.

*If I seen mutual friends that I hadn't seen since he died I avoided them. I couldn't have a conversation with them. I couldn't 'cause I knew like I ran about with two of his first cousins and I avoided them for about two or three years[...] You know I felt I was letting him down and I felt that I had let him down anyway for some reason and I hadn't but I felt like I had.

The above example also illustrates avoidant reactions.

One participant described the desire for revenge that he still feels to this day.

*Still to this day I will find out who done it and fix them right.

While some symptoms of depression overlap with numbing symptoms discussed earlier, some participants specifically referred to depressive episodes they experienced since their traumatic experience.

*My depression got that bad, there that I couldn't get out of bed. Literally hadn't the energy to get off that bed. I wasn't feeling sorry for myself [...] or anything, I was f***g exhausted. It was doing my head in. I was maybe feeling good and I wanted to get up but I was like 'Aagghh I'm going to get up, I'll get up in a wee minute' but I was back to sleep again. Awake asleep, awake asleep, it was nuts.

*So eventually I broke. I was sitting here one Sunday and after chatting to my brother on the phone the tears came and the wife didn't really know what was happening to me and I went to the doctor's the next day and I told the doctor.

One man of told of how multiple traumatic events that he experienced eventually resulted in a suicide attempt.

*I drove into a tree in [one summer]. I had just had enough and I was full of drink and I had started taking anti-depressants.

6.3.3 Physical health problems

One of the most striking findings from the qualitative study was the prevalence of physiological health problems among the participants. Although the interview schedule did not specifically explore this subject, it nonetheless emerged as an important finding.

A number of interviewees talked about physical injuries that they experienced, and in some cases still endure, as a result of a traumatic experience.

*I lost most of the sight in my left eye. It happened because of a car battery way back in the early 70's [...] I had forgotten about the gas that the battery creates so it had all gathered up inside the boot so I went out and started screwing the top on and it sparked and with the gas inside the boot the top came off and hit me in the eye.

*That hip and all was smashed. [...]I think this other hip is going too with putting the weight on to it [...] I lost two stone and the nurse says "Would you not go out for about 20 minutes a day?" I said "I couldn't walk from here to the shops, I'm in agony." [...] It's very painful around the back and hips so I more or less just sit about the house.

Another participant described to the researcher the physical assault that she suffered during a Troubles related incident when she was taken and held against her will.

*Those holding the participant and her partner 'battered the day lights' out of them. Their doctor came to see them both. The participant said that the body outline used by the doctor to record bruising was nearly completely covered.⁷

A total of eight participants made some reference to other physiological health problems that they have had since their traumatic experience(s). In some cases, participants specifically attributed their health conditions to the traumatic incident.

*I was taken in and they thought it was angina but now they are investigating stomach problems [...] and it's all stress related through what had happened [...] well the hospital said all that, it's really stress related [...] but apparently it just had all come to a head, only I wasn't a person that grieved. They said I just held emotions back and then everything went rapidly wrong after that. My appendix had burst and my ovarian cysts had burst and then I took a thing on my lung through the poison going through me and then removed ribs and part of the lung [...]. After my daddy died it sort of all kicked in.

*From July 2005 I took food poisoning and was very sick in [hospital] for five weeks. They told me it was a possible tumour. They didn't know exactly what it was but after the five weeks they decided it was [bowel] disease and said I would need an operation. [...] It [the traumatic experience] has affected it all, indirectly. I now have a bowel condition due to stress. I would have led a very stressful life until recently. [The hospital] is telling me it's stress and a modern day diet has more or less left me like this, so I have to obviously put it down to stress and the condition my bowel was in.

6.4 Coping

During the interview, participants were asked about how or what methods they used to cope with their experience. While there was a range of coping mechanisms reported and a few interviewees reported talking 'among ourselves' about their experience; the strongest theme to emerge was that 'nothing was talked about then' or that 'you just got on with things'.

6.4.1 'Get on with things'

When specifically asked about coping, the majority of participants talked about getting on with things due to the practicalities of their situation or simply because that was the norm at the time i.e. during the Troubles.

*I suppose it is old fashioned [...] but the survivors of the bomb that night were [...] sent back out [...] and that was the attitude.

One woman spoke of how she was back to work within a few days of the bombing of her workplace.

*At the time I was younger then. I would have been about 17 or 18 and it was an everyday kind of thing back then. We were back working. He [her boss] got help with a premises in another place and we were back working the next day or the day after [...] Yes. As I say he went and opened up again. He got a temporary premises up the street and we went in and cleaned it up to open up again so you never had time to sort of dwell on it. I suppose when you get older and you think back on it you think 'God that was awfu!!' but just at the time it was happening everywhere.

6.4.2 Keeping busy and other methods

While very few of the participants mentioned specific methods of coping, one participant described how keeping busy and also getting back to work were important coping strategies for him.

*I have changed my attitude now [...] I would be more adventurous and outgoing. I have an interest in motors and I have done things around the house, the DIY jobs[...]When I come home after a long day's work and the wife asks me to do something I go and do it because it sort of keeps your mind occupied. I think going back to work was good[...]The main thing for getting me back on my feet again was getting me back to work.

Another participant describes how he talked with friends about his experience.

*I think you sort of chatted it over with some friends and ended up making a laugh out of everything. It was your way of coping with it more than anything.

6.4.3 'Nothing was talked about'

Most of the participants, made reference to the fact that Troubles related incidents were never discussed. In some cases this was to avoid upsetting loved ones with details of traumatic experiences, while in other cases it is unclear if this was a coping strategy or just a social norm. It also seemed to be the case that for some people it was unclear whom they could trust and therefore it was better to remain silent.

A woman spoke of how not discussing matters with the children in her family, was 'just a way of life then'.

*You know when all that happened that the priest came up or somebody came up. Well we were all put out to the back kitchen or the scullery as we called it then. But nothing was talked about in front of us. [...]Ye weren't told nothing then. That was between the adults and that's it [...] I think that was just the way of life then. [...] I mean there are things that we have heard that happened years ago and you think 'Jes's I didn't know about that!' Because you weren't told, you weren't told anything. I suppose they were protecting you in a way but I think that was the way of life then. They didn't tell you things. That was none of your business, if you needed to know you were told.

Another man referred to the importance of keeping information about sectarian groups secret as a result of the environment that surrounded the Troubles. He contrasts this to the present day, where people are now beginning to tell these stories.

*Once you found out what was going on you didn't tell anybody because you were afraid that if my dad found out about the [sectarian group] he would maybe hit me a thump[...] even the time I got my nose broke I thought that by the time I get home nobody will notice by the time I wash my face up but my nose was that wide![...] It used to be that you couldn't even tell stories to your friends but people are now starting to tell stories that have never been told.

6.4.4 Unhelpful ways of coping

A number of participants also mentioned employing unhealthy behaviours to help them cope such as taking up smoking again or alcohol abuse.

*I am back again to the old smoking chestnut. What's that about? Some sort of crutch? [...] I go on extreme diets from over-eating to under-eating, to in between. I use exercise or the other end of that is-no exercise. I have got this pendulum that swings from one end of the scale to the other.

*I took and still to this day would be a binge drinker. When I say a binge drinker I mean like technically a binge drinker. I would go out on a Friday and drink a bottle of vodka and a few pints and not be able to move on a Saturday or a Sunday and not drink again for two weeks or a month.

6.5 Wider/long-term impact of trauma

The short-term impact of trauma has been discussed in earlier paragraphs. Participants were also asked about the wider, longer-term impacts and whether certain aspects of their life have been affected by what they experienced.

6.5.1 Troubles as 'normal'

When asked about the impact of traumatic experiences on their life, one of the most interesting findings that became a recurrent theme from the interviews was reference to Troubles related events as being 'normal' or 'just one of those things'.

For example some participants denied that their experiences have had a lasting effect due to the fact that they did not interpret their experience as abnormal or unusual.

*But I don't really look at it as traumatic. You might find it traumatic but at the time that is what was going on and it was normal. It was a normalisation at the time [...] You weren't the only one, you know that kind of way. You'd maybe be chatting to someone from England who would be flabbergasted. [...] I say around that time I never really thought. That was ordinary life to me. That's what's shocking about it.

Another man similarly did not interpret his experiences of the Troubles as being traumatic.

*You talk about trauma. I don't know that I have ever really had trauma. Well I do know that I have had trauma but not so much with the Troubles but maybe I did and I don't know. It is just one of those things [...] You just sort of think –'that's what a lot of people put up with as normal.' You just get on with it.

Another man highlighted the significance of the view that Troubles related incidents became normality.

*I remember one Sunday evening, I was 16 or 17, I was still living at home. We heard bang, bang, bang[...]. I opened the door and a guy is standing there. He asked "Is there any chance of you ringing an ambulance?" and I said, "What is wrong?" And he said he had just been shot in the knee. My mother phoned the ambulance and I stood talking to this guy. It was like a scene from some strange movie. It's not that I was anaesthetised; it's just that I knew that he wasn't going to die. He had just been shot in the leg but you think, 'How strange- I'm standing having a conversation at the door with this guy who is bleeding all down his leg and has a bullet through his kneecap somewhere and it is almost normal". It is almost acceptable [...], maybe part of your findings will be that people do get numbed to a certain extent by, if you see something so often, it becomes not the norm but you are able to block it out or deal with it. You absorb it and move on. It is probably the people who get caught up in one or two incidents that are spread out in time that have more of an impact on them.

While many of the participants referred to the normality of their experience or the fact that they grew up with the Troubles, one participant distinctly recalls life before the Troubles and compares this to life during the Troubles. Troubles related events were not 'normal' in his experience.

*I always remember the times when before there was all this sort of trouble [...] I mean you just walked along not worrying in the least, not afraid to walk anywhere. You weren't thinking that anybody from any side was going to ask who you were or going to ask you to do anything and it is hard to think, I just can't think, that it was ever like that. Then once all these flags appeared and I was thinking that this is a Catholic street but that was the first time. [...] As I say if you go back to the late 50s and early 60s, it was a different world.

6.5.2 Missed opportunities

A number of participants spoke about the lack of, or missed, opportunities in Northern Ireland as a result of the ongoing conflict that they lived through.

*I felt I was robbed of a teenage life and she [my mother] was the type, she didn't care whether I worked or didn't work, as long as I was there and I was ok. [...]My mummy always used to say I was capable but I never got the chance.

*You know they were great to work with, don't get me wrong, brilliant but there was no way I was going up into [catholic area] because, they used to call me the 'orangie'.

Another man gave his view on the lack of employment options for young people in Northern Ireland due to lack of investment. He spoke of how the Troubles contributed to this situation.

*I feel the opportunity wasn't there for me when I was 15. I moved to England, get a half decent job if you even could get a job, which you possibly couldn't. Or become a hood [...] or join the IRA. That was the options [...] I believe that I totally, totally missed opportunities.

Another man describes the lack of motivation he felt to plan for a future career as a result of the climate he grew up in.

*[...] well because you just sort of lived every day like it was the last one or the first one, whatever way you want to look at it. You sort of lived every day for that day and I never sort of made any plans for what I wanted to be or what I wanted to do or anything.

6.5.3 Lasting impact on health

While the short to medium-term impact of traumatic experience has been explored previously, a number of the interviewees talked about the lasting impact that physical and psychological health problems have had on their lives and how they have had to adjust as a result. These participants are coping, not only with the psychological consequences of trauma, but also the psychological impact of their health problems and the impact on their social life.

One man talked about the 'lasting effect' that memories of a bomb have had on his life.

*The bomb [...] had a lasting effect on me. I remembered so much detail about it [...], it sticks with you, you know, it's not something you're going to forget.

Another man described the frustration he suffers because he is unable to undertake many of the activities that he enjoyed so much before a serious car crash.

*Interviewer:

Would that bother you being house bound a lot of the time? Respondent:

It does yes. I like to get out but with the car there, I have a friend who keeps horses and I would go up to the horses a run, just to pass the day, you know. Then sometimes that annoys me too 'cause I can't ride a horse or have one but I still go up cause I like to see the things. I used to fish a terrible lot. I would have fished every hour of the day but now I can't fish either 'cause I get too sore. I would have done fly fishing and walking [about] but now I have to sit and that annoys me.

The following participant spoke of how she still would like to know the details of what happened to her father, who was allegedly caught up in crossfire and killed. Despite this she describes her anxiety about uncovering these details.

*I do want to know what happened, hand on heart I do but then I said to myself 'Can I process it?' and then you say to yourself 'I suppose it's only making excuses. Does it matter who done it?' and then I say 'No it doesn't matter but it does, cause I still want to know' [...] I would just like to know what happened. I know I want to know what happened; coping with it might be another thing. [...]I mean, you hear different shootings but you know who done it, whether it was the police, army, IRA, UVF, whatever but that case, we still didn't know. It was actually recorded 'misadventure', if I remember correctly-that was the recording. That's why I would still like to know.

6.5.7 Work and finances

Another area of life that was affected by traumatic experiences was work life and finances. One participant describes the pressure he felt at work as a result of an accumulation of traumatic events.

*Years ago this was the 'I really need to do something; I really need to change here. This [experience of trauma] is starting to affect everything, work, home life and everything.' That was probably about five or seven years ago [...]. Well, work I would have been starting to get, probably a misconceived confidence and what does that mean? Probably saying inappropriate things that were going to get me into bother because I was getting angry about whatever and directing probably in the wrong direction. Not dealing with things. Not processing all this stuff was leading me to [...] more and more pressure from different work practices and [...] felt and at that stage I was hardly getting any sleep at all. [...] I was mostly walking about at night maybe chatting on the phone to the wife and whatever.

Another woman spoke of her devastation at having to give up working after she suffered a heart attack.

*And I walked to work every morning. [...] I loved getting up in the morning and going to work, now. I really did. And giving that up, I nearly died giving that up. I loved it and the company. I met that many people. And I found that, well, it took me wild long to get over that.

One man described the difficulties he still faces since giving up his work as a soldier after a Troubles related bomb.

*It is just that I have found myself, because I wasn't working, I found myself in financial difficulties paying the mortgage and stuff like that. So I went to a [support agency].

Another participant similarly recalled the 'pressure' he faced following the bombing of his business during the Troubles, when he tried to keep his business running with no premises.

*You were going on with no premises and you don't really get that much help you know. [...]. At that stage nobody came to see, not just my own wellbeing but all the jobs that were at stake and as I say there were plenty of families depended on the firm for a living [...]. There was a lot of pressure you know to find work for every week.

6.5.8 Social life

The participants also spoke of the effect that growing up in a violent environment had on their social life. Avoidance, which has been explored previously, had a significant impact on participants in terms of socialising.

One participant spoke of how her social life came to a 'stand still', while another told of how he grew up with 'few friends'.

*I suppose social life [was affected] because I wouldn't have went out a lot to social events over the town. It would have been this side and if anybody wanted to go anywhere I would say "No, I wouldn't go over there."

*I stopped going to the youth club and I sort of went about more on my own than running about with friends and that. It got that you couldn't trust them [...] I never supported the [paramilitary groups] or anything like that and it was just a hiding for nothing but that sort of put you back from socialising because you were afraid of this gang. Another man similarly described how he grew up with few friends as he was not interested in socialising in his local area.

*So in terms of socialising it affected my friends because I ended up with few. It affected me growing up and doing the social things that teenage boys do. I just wasn't really involved in any of that stuff. I guess to the extent, that aspect has stuck with me. When I make friends, it's difficult for me to drop my guard and make friends with people. I don't do it easily or readily. It's not that I don't trust people but I trust myself more. I'm not easy to get to know.

6.5.9 Family and relationships

Other participants explained how their experience affected their family; as well as relationships with family and friends. One man talked about the negative impact that the death of his child had on relationships within his immediate family unit.

*One of the big negatives is that I now live on my own because of the fact that the relationship between my wife and myself, particularly after [son's] death, deteriorated.

On the other hand another participant told the researcher about the positive impact that her experience of trauma had in terms of her relationship she had with her children.

*After her daughter was born she just got on with it. Her husband was 'inside' for five years. On a positive note, she feels she was a devoted mother because she never went out. She stayed in and life now was very much her family, the kids and their school. ⁷

6.5.10 Attitude and behaviour

Another important impact of trauma that most of the participants reported was the effects on their opinions, attitudes and behaviours. For example some participants described how they became more cynical, bitter or 'disillusioned' with the political situation in Northern Ireland.

*I don't have much time for all these guys from both sides, all these ones claiming to be peace makers. Where I would have been very liberal minded [...], I just haven't time for them at all. I am against their politics sort of thing, you know when you think what they were at and I am not picking on one side because I think one is as bad as the other.

*I don't even vote. No, we don't have strong political views at all. To me they are all just lining their pockets the whole lot of them. That's the way I think about them anyway.

Another participant explained how his behaviour changed as a child who lived in the midst of ongoing violence.

*I was quite rebellious after that. [...] in terms of mood and attitude I changed from somebody who was a nice wee lad to somebody who was more staunch in their views and that was entirely brought on by the fact that I had witnessed what were [paramilitary group] atrocities to me, despite the fact that there were other similar atrocities going on by [another paramilitary group] on a daily basis. My focus was that people had done something to me and my family [...]. Naturally I had a reaction to that.

In contrast another man told how he became 'more gentle' after he spoke with a woman about the death of her husband during Troubles related violence.

*I said to him [a friend] "How do you mean I have changed?" And he said "You became softer; more gentle and you weren't quite as angry as you used to be when work wasn't done or that sort of thing."

A number of participants spoke of the impact that their experiences had in terms of their attitude toward their children's upbringing.

*Yes, there are a lot of things that I put priority on now which I never did or wouldn't have and creating a stable environment is really important to me. Creating a stable environment for my kids, education related, is important to me for my kids so that they have got choice and opportunity. I was lucky I had opportunity when I was young and I just want to make sure that they have the same thing. It is a learning experience, learning that if you want to get on in life you've got to put a bit of effort in because the community that I came from didn't give a stuff about anything but themselves and that was the way it was. They came from a society where if you were bigger you were the boss and that's just not a society that I liked at all.

*If you had of been talking to me 10 years ago I would have been too much of a big man to even tell you this. I wouldn't have revealed this to anybody. I'm a man and it's just not manly or macho to tell people that you are afraid of something or you weren't comfortable with something. I think age brings that as well and I am trying to share that with my two sons. I have a 15 year old and a 24 year old and I am trying to share that you don't have to carry this burden. You don't have to be a man, to hell with that. That is nonsense. You are allowed to have emotions.

6.6 Support, services and treatment

One of the major areas that this study explored with the participants was sources of support they received and services and treatment they have availed of in relation to their experience of trauma. A number of major themes emerged within this area, raising important issues for the future provision of services.

6.6.1 Family

The majority of interview participants stated that their main source of support was family and then friends or individuals in the local community.

*Oh family aye! Oh definitely with one another. Well we always talked to one another but there wasn't doctors involved or you didn't go anywhere. We would have talked among ourselves about 'they should have done this and they should have done that'. I think at that time if something went wrong, the only peace-maker was the priest. The priest would have been involved. The priest would have been taken down to the house and he would have sat and talked to you. But that would have been the only person outside of family really at that time that you would have got. You know, the way nowadays there's things like everything, like counselling and all. But family now would have been the main thing.

One man spoke about how there was no one else to help other than his family.

*There was nobody to turn to and at that time I had my own mindset as well. I think sometimes if you go to a support group it's a weakness. I'm a firm believer of -sort it out yourself and-batter on yourself and kind ofdone by yourself [...]. But I think you just came up with your own coping mechanisms yourself and as I said there was no-one else to help you other than your own family.

Another man described how important the support of his wife and a close friend was in helping him deal with his depression.

*The wife was very supportive of me. She wouldn't say to me "Get back to your work!" or anything like that and a very good friend came down here to help try and advise me of things. He is a business man himself. I didn't want people thinking that I was just lying about the house and some people close to me were saying "Don't worry about [people who say such things]."

6.6.2 Financial support

Some of the participants faced extreme financial difficulty as a result of injuries incurred during the Troubles, businesses being destroyed or emotional ill health. While most of these individuals spoke of the lack of practical help, a few reported receiving some form of financial support.

*I know now for a fact it was a solicitor and the first offer [my mother] got was for £800 and she settled for £1250 and I know now that seems a pittance to me now but maybe in 72 or 74 whenever it was settled it was big money but my brother he wasn't entitled to anything and [my sister] was entitled to £200 and I was entitled to £100 and I always think she was underdone there as well. But then the year I got married the [public body] reviewed claims that people were apparently underpaid and she got more. It was another £3000 then.

*It is just that I have found myself, because I wasn't working, I found myself in financial difficulties paying the mortgage and stuff like that so I went to a [support agency]. I received money from them for a start and the girl also advised me that she could get in touch with [another support agency] to see if there was anything psychological or whatever [...] Yes, it has taken a lot of worries off me because I was really worried about it and it was the only thing I could think of because I thought I was going to have to sell the house and all the rest of it, but people have been very good.

6.6.3 Professional services and other helping agencies

Less than half of the participants made some reference to professional services, treatment or other helping agencies that they came into contact with in relation to their experience of trauma. They also gave their opinion on the helpfulness of the treatment they received.

Five participants spoke about medication for emotional problems that they or a member of their family have taken as treatment for the effects of trauma, as these individuals describe below.

*I am on anti-depressants at the minute. Again that is to do with my heart problems you know.

*I did [use medication] and I used and again you could not take my word for the names of things but it's something, did it contain, is it certone?, [...] I took something else as well cause I took Prozac and that is the serotonin or whatever you call it and I took some other thing after that when I complained about that

*I had a row in the [residential unit] over tablets. I take Fluoxitine, 20mls and I forgot to take one and I got up the next day and asked for one for the day before and she wouldn't give me it.

Some of the interviewees also reported seeking professional help in the form of counselling and psychological therapy. One participant told the researcher about his contact with services.

*He saw a doctor about five years ago. Things weren't the same at home and the jealousy thing wasn't good at home. A professional was sent out to see him but then the place he worked for closed down after three months. Another health professional came to see him and made a judgement about his wellbeing based on the appearance of his house. He said he 'wasn't doing too bad.' This made the participant very angry.⁷

Another man spoke about his contact with therapy and commented on the expense and also effectiveness of this treatment.

*I then went as I said to you before to explore cognitive therapy. [...] But I ended up paying him £50 a go for over a period of a couple of months. I was paying this every week and I don't know what it was but I just didn't click with him either. I don't know if it was because it was costing me or because there was no short term benefit.

Another man talked of attending counselling for a few years following the ongoing violence and threat of violence that he experienced in Belfast during the Troubles.

*I did have to get psychiatric help. I went to see [a counsellor] for quite a while and was taking these tablets, these happy pills [...] It eventually kind of got to, you just couldn't settle and couldn't content yourself and I wasn't sleeping and as I say I went to see [the doctor]. I used to go and see her and she had me on different sorts of drugs and things, not that they worked anyway [...] That would have been before I left work, I think or around that sort of time. We are talking maybe 15 years ago. Probably for a couple of years I was going [to counselling]. Yes. It was sort of counselling. I would have sat and talked to her for about half an hour.

Another participant also spoke of voluntary agencies that her children turned to for support and services following the death of their sister.

*I know one of them went for counselling. He was at University but he eventually told me that he went for counselling after [our daughter] died because he couldn't process what had happened [...]When I think back on it now I mean whenever [she] died my [other daughter] went to that [voluntary organisation] place, that bereavement [service]. Now she went to that and thought it was a great help now. She even went to counselling about that too.

6.6.4 Lack of support or services

While a number of individuals spoke of receiving some form of professional help, and a fewer number received professional help that was effective, the most prominent view expressed by the participants in relation to professional services or treatment was that 'there wasn't any'.

Some participants also expressed their disillusionment with, what they viewed as, the apparent indifference of public services.

*You know it was just hard to take and some of the things too, [they] never ever came to talk to you about these things. [...] As I say you always get the feeling in a way that nobody was doing too much about it, you were just another statistic.

*I don't think there were too many people. The feeling that I got was that nobody really cared. You know the police didn't seem to be investigating. You know the night I got shot at and we rang the police and I could see them driving past one end of the street and the other but obviously they had to be careful in case they were being set up to be shot at themselves but they sort of more or less said that I should be more careful when I was going out.

A number of participants expressed their grievances at the lack of practical support to help them with various financial difficulties they faced as a result of the Troubles, which also added to the emotional strain.

One man described the lack of financial support despite the devastating situation that his family found themselves in after their house was completely destroyed by a bomb.

*We got stuck in emergency housing for about seven years. When you think about (and I really have to say I don't think about it) [...] for my parents it must have been hell on earth because everything they owned was gone. That was a house that we owned and yes there was a bit of insurance but you know the reality was the [public body] weren't paying out in those days for bombed houses. It was an act of God so they didn't get a penny and we didn't have any furniture cause it was burnt and lying on the ground. We didn't have any clothes. I remember things like that. What we were wearing when we came home from the town and what we had in our pockets. That was the total of our possessions after that bomb went off.

Seven interviewees talked specifically about the lack of, or their lack of awareness of, professional services for emotional problems during the Troubles.

*There weren't any. Whether there weren't any or we were just totally unaware of them I don't honestly know but I would imagine that what we would look at today in terms of treatment of stress or treatment of mental illness, things have moved on in thirty years so support for any traumatic experiences either didn't exist or we weren't aware of it, 'cause we didn't have any.

Another participant compares the lack of awareness of services during the Troubles compared to the availability of services today.

*You definitely hadn't got the support you would get now if you were suffering from stress or where you would actually know yourself. Maybe again that comes with age. You would know where to go or to get help or if you just thought that you wanted to talk to somebody or if you thought you needed a prescription or some kind of anti-depressant or something like that, you would obviously go to your doctor.

6.7 What would have been helpful?

Having talked about their support, services, treatment and their opinion of any help they received, participants were then asked to think about what would have been helpful in this respect. The overwhelming response was that more services to help with emotional problems such as counselling and other professional services would have helped.

One woman told the researcher that there should have been more awareness among general health professional in terms of help and treatment available for trauma related symptoms.

*She felt that even GPs should have been aware and able to offer advice, guidance or direction on where they should go or what they should do for help. They were just left to deal with it in whatever way they wanted. She compared the situation to today where if young people are so much as spoken to in the wrong way, they are getting counselled. There is so much available now.⁷

Other interviewees spoke about being able to talk with someone professionally about their experience and how this might have helped.

*There was no help whatsoever, mentally.

*I don't know but maybe if there was it might have been a good thing. Because sometimes I think there are things that you can talk to strangers about more so than your family. I mean, I'd say that we would be a reasonably close knit family. But there are some things that I could have talked, that I could have talked more about [our daughter] than I would to my family; because you were keeping away from maybe upsetting them.

*I'm a great believer in trying to understand, accept and understand the stress that people have in their lives. [...] If we had have been able to talk to someone with a dispassionate view, who stood back and said, 'look you know it was a bit of a random thing really. They weren't really picking on you and you just happened to be in the wrong place at the wrong time. It's unlikely to happen again, it's done and dusted. Get on with it. Here's how to deal with it.' I think that would have been useful. It would have been much more useful for my parents I think than for me.

Given that a number of the participants in this study have reported still experiencing symptoms related to traumatic events in their lives many years ago, these comments have implications in terms of gaps in service provision for those who suffer as a result of trauma.

7. Conclusions and Recommendations

This study investigated the presence and level of psychological trauma in the Northern Ireland adult population. The study involved the secondary analysis of data obtained from the Northern Ireland Study of Health and Stress (NISHS). The current study had to operate within the design of the primary study. However, it also had the advantage that it could draw upon the huge amount of data available to the research team, and hence allow unexpected areas of enquiry, adding considerably to the findings. The study also examined in detail the accounts from individuals who had experienced a traumatic event related to the Northern Ireland conflict and explored the effects of trauma on their mental and physical health

A direct population based investigation of the prevalence or psychological trauma related disorders has never before been undertaken in Northern Ireland and it was this gap that prompted the research. That said, previous research such as the Cost of the Troubles Study (1999), O'Reilly and Stevenson's secondary analysis of the Northern Ireland Health and Wellbeing Survey (2003) and Cairns et al 2003 Report, "Who are the Victims?" had previously provided robust indications that the conflict had resulted in a specific and additional health impact. From the findings of the current study, it has been possible to assess the likely impact of the conflict with some caveats. Partly these relate to the data set defined for the NISHS. They also relate to the fact that many people who have experienced one or more conflict related events have experienced additional, non-conflict related events too. We also wanted to investigate the relationship between trauma related disorders and other mental health problems. In addition we were able to investigate the impact on daily living (through the examination of data captured in the NISHS and the qualitative study undertaken with the assistance of a group of fifteen NISHS participants who had endorsed trauma related symptoms). As the findings were examined it was also possible to enquire into the relationship between the presence of trauma related disorders and physical health problems. We have examined the ways in which people seem to have managed their traumatic experiences and trauma related life consequences. Finally, we have been able to enquire into the efforts by people with trauma related disorders to seek help.

In looking for trauma related psychological health problems we used post traumatic stress disorder (PTSD) as the main target of investigation. PTSD is unique in its classification as a disorder in that a person can only be regarded as having met the criteria for PTSD if they have experienced a traumatic event. Also, whilst there are some more general symptoms within the range of symptoms that are included in PTSD, those that relate to the traumatic experience such as flashbacks, nightmares, and avoidance are clearly anchored in the traumatic event. It is well known that traumatic experiences can lead to other mental health and psychological disorders and problems although most of these are not connected explicitly, by definition, to a traumatic experience. For example, depression is one possible outcome of a traumatic experience; but depression can also arise due to other events or circumstances in a person's life. PTSD is therefore a helpful investigative tool for assessing not only the level of the disorder itself, but as a marker which can help us get a sense of the scale of the wider range of trauma related psychological and mental health problems in the community. One Israeli study illustrates this well. Shalev and Yehuda (1998), investigated the psychological profile of people admitted to emergency departments following accidents and other traumatic events. The casualties were assessed within 48 hours for psychological problems and again at four months. The study revealed the following profile of trauma related problems at four months. Another unpublished study by McFarlane et al (1997) suggests that this profile changes over a longer period of time, as we might expect. The point here is that if we can determine the population level of PTSD, linked by definition to traumatic experiences, we might also be able to obtain an indication of the level of trauma related depression and other anxiety disorders.

Outcome of traumatic experience at 4 months after traumatic experience Israeli ER; Shalev & Yehuda; 1998



Key conclusions

The findings of the study confirm that PTSD is a specific and significant health need in Northern Ireland's adult population. Estimates of lifetime PTSD from previous epidemiological studies (outside the WMH Survey Initiative) range from 1.0% (Helzer 1987) to 9.2% (Breslau 1991). This study is reporting a lifetime prevalence of 8.5%. Across the WMH Surveys (of which the NISHS is one) the PTSD level for Northern Ireland is the highest. Further investigation is required to provide an understanding of the reasons for this. Accounts from qualitative study participants provide a valuable insight into the experience and impact of PTSD symptoms and reveal the extent of the suffering associated with this debilitating disorder.

The findings of this study indicate that men are more at risk of being exposed to traumatic experiences. On the other hand we also found that women seem much more at risk of developing PTSD (3 times more likely in the previous 12 months; and twice for lifetime prevalence) to a degree that PTSD in women could be considered a gender related health need. While this difference is statistically significant, it might be moderated by the anecdotal observations that men are less likely to talk about their experiences and needs in a way that reveals problems, and less likely to seek help. These are fruitful areas for further investigation.

Our findings concur with those from previous studies which have also reported an increased risk of men being exposed to traumatic events compared to women. (Some studies also point to the different types of traumatic events experienced by men and women.) Other studies have also reported that women seem significantly more at risk of developing PTSD following traumatic experiences. (Kessler et al 1995; Frans et al 2005)

We found that when participants in the study met the criteria for lifetime PTSD they are much more likely to have, or have had, one or more additional mental health disorders. A number of interview participants spoke of their symptoms of depression and other emotional symptoms associated with their experience of trauma. An examination of the link with Major Depressive Disorder (MDD) suggests that only one third of those who met the criteria for both PTSD and MDD had MDD prior to the relevant traumatic experience. The remainder (65%) developed MDD after the traumatic event, either before, simultaneously with, or after developing PTSD. This analysis gives us important insight into the nature of the relationship between PTSD and depression, and important clues on how best to proceed with therapeutic interventions for PTSD sufferers. Similar investigations of the data in relation to other mental health disorders may help us understand the relationship between them and PTSD.

The study found that of those who met the criteria for PTSD, one fifth suffered at some time from MDD. This is an important finding. It suggests that one in five of those receiving psychological therapy and medical services for major depression have, or have had, PTSD. In this study we found that 34.8% of individuals that met the criteria for PTSD and depression had depression first; 43.5% had PTSD first; while the remaining 21.7% had simultaneous onset of PTSD and depression. The experience of the NICTT in treating trauma related disorders suggests that generally MDD is considerably relieved by addressing PTSD, although with specific individuals it might be determined that the MDD should first be addressed. These considerations together suggest that it would be helpful if people presenting with major depressive disorder were routinely assessed and treated for PTSD.

As noted previously, one of the clusters of symptoms included in the PTSD classification relates to avoidance and numbing. It is hardly surprising therefore that people suffering PTSD (or indeed avoidance and numbing symptoms that fall short of a full PTSD diagnosis) are reluctant to seek help. There is evidence that by building a trusting and supportive therapeutic relationship, using a trauma focused approach, it is possible to talk safely about the experience and effects of trauma. (Foa et al 2000).

The study has provided important qualitative insight into the association between on the one hand, meeting the criteria for PTSD and on the other, the criteria for one or more chronic physical health conditions. Clinical experience has hinted at such a link and other studies have identified associations between PTSD and adverse physical health, more so than the apparent effect of other mental health disorders (e.g. Friedman & Schnurr 1995; Schnurr & Jankowski 1999). More work needs to be done in this area, but this study is identifying statistically significant associations between PTSD and chronic physical health disorders, in comparison to the links with Major Depressive Disorder for example. Further, the number of days in which people with one or more chronic physical health conditions were unable to carry out normal daily activities almost doubles for those who also met the criteria for PTSD.

The study reveals that only one third of people who met the criteria for PTSD sought help, of which only half found services that was considered by them to be helpful. Put another way, only one in six sufferers gets the help they feel is required. The perceived lack of services or lack of awareness of services for trauma related conditions, particularly during the Troubles, emerged as a clear theme from the qualitative study. For a disorder that affects so many people, it must be a matter of concern that PTSD appears to be so relatively poorly addressed, and there is a clear need for progress to be made in developing services. Research suggests that people suffering trauma-related needs may benefit from a proactive outreach service that encourages help seeking and supports them as they consider, and engage in, therapy. The therapy itself must be characterised by supportive and trust building measures.

PTSD sufferers also need effective, evidence based services. The body of knowledge on how best to treat a wide range of psychological disorders is developing and there is now well-established guidance on the preferred approaches to treating such disorders, including PTSD (NICE 2005), with the prospect of important developments in the future as new research demonstrates the role and power of other approaches.

Exposure to the Troubles

A key aim was to find out what impact the civil conflict has had on the mental health of the adult population in Northern Ireland. In order to do this we had to find out from the range of 28 event types which were likely to be Troubles or conflict related. As noted already there were a number of challenges in undertaking this exercise. First, people who have had one or more Troubles related experience might also have had one or more non-Troubles traumatic experience. Second the classification of traumatic experiences used in the NISHS, whilst derived from DSM-IV, did not enable the event types to be explicitly attributed to the conflict or otherwise. A further complication arises when considering that some acts of violence may not in any case be easily attributable to the 'Troubles' because there is a lack of clarity about who perpetrated the act of violence, or there is a debate over whether the incident is Troubles related, related to internecine conflicts within paramilitary groups, related to organised crime (which might or might not have its roots in the Troubles) etc. After consideration of the pattern of violence in the Northern Ireland conflict over the past 30 - 40 years, and of the trauma events used in the NISHS, the following groupings of trauma event types were constructed.

- 1. War, conflict, social violence, man-made disaster;
- 2. Accident or natural disaster;
- 3. Domestic violence; sexual violence; relationship abuse;
- 4. Sudden death of, or trauma to, a loved one;
- 5. Other or private event.

The first group included event types that could be Troubles related, but also included events that could be applied to social violence, wars or combat, or man-made disasters (both of which could also be used to denote experiences related to the Troubles). Overall, we believe that this grouping gets us closest to those events widely understood as Troubles related. Accidents and natural disaster experiences are usually not considered to be Troubles related. Sexual abuse, domestic violence and other relationship violence were separated into a distinct group, as these forms of violence were not recorded as being used as a means of conflict violence in Northern Ireland. Sudden death of, or trauma to a loved one, could be Troubles-related but it was not possible to distinguish between conflict and non-conflict events. This was one of the larger groups so it was considered that it should form a separate group, mindful that a proportion would be Troubles related. Private and other experiences form the fifth group.

As reported earlier the distribution of 5918 event types reported by 3100 participants in the NISHS across the five groups was as follows.

- (1) War, conflict, social violence, man-made disaster (45.7%);
- (2) Accident or natural disaster (15.0%);
- (3) Domestic violence; sexual violence; relationship abuse (12.1%);
- (4) Sudden death of, or trauma to, a loved one (21.0%);
- (5) Other or private event (6.2%).

Given the fact that we can attribute a proportion of Group 4 (sudden death etc.) to Troubles-related causes, we have concluded that in the region of 50% of event types experienced by participants are related to the conflict in Northern Ireland.

Another way to look at these findings is that half of the traumatic events are related to non-conflict experiences. This draws attention to the impact of everyday events in the lives of people in the community and to the abusive and violent assaults people experience within relationships. Given the prevalence of PTSD in the population (the second most prevalent anxiety disorder after Specific Phobia) the significance of the psychological, wider personal, family and social impacts of trauma related disorders arising from non-conflict related causes should not be overlooked as a public health concern. Accounts from qualitative interviews provide graphic illustrations of the experience of both Troubles and non-Troubles related trauma and the devastating impact that these experiences have had on all aspects of the participants' lives.

Taking the five trauma groupings described above, the prevalence of PTSD within each of these categories ranged from 2.2% to 15.8%. The prevalence of PTSD in the war, conflict etc. group was 7.9%. Given the fact that almost half of the participants in the population that have experienced a traumatic event are in this trauma category; this percentage accounts for a significant proportion of the overall lifetime prevalence of PTSD in the population.

We conclude that conflict and social violence has had a significant additional health impact on the NI adult population.

Recommendations

- 1. Improved public information for people involved in traumatic experiences, their families, schools, employers etc. to improve detection of PTSD and promote and support early help seeking.
- 2. The development of service pathways to ensure people with trauma related needs are referred to trauma focused and related services.
- 3. Support for primary and community care services (statutory and non-statutory) in detecting trauma related disorders, treating where effective services exist at this level and referring appropriately to specialist trauma related services.
- 4. Continue and enhance the development of mental health services to identify, assess and effectively treat trauma related disorders and to support people with trauma related needs before, during and after therapy.
- 5. Continue and enhance the development of specialist evidence based trauma services including the provision of support for people with trauma related needs before, during and after therapy.
- 6. The development of early trauma intervention services in line with the developing evidence base.
- 7. Services treating adults with Major Depressive Disorder should routinely assess for PTSD and provide effective trauma focused treatments where found.
- 8. Services and employers should be mindful of the additional risk for women in developing PTSD.
- 9. Primary and secondary care services should take into consideration the possibility of a link between the presence of specific chronic physical health conditions and PTSD, and refer for assessment where indicated.
- 10. Services and employers should be aware of the link between PTSD and impaired daily living functioning.

Appendices

Appendix 1

DSM-IV-TR criteria for PTSD

In 2000, the American Psychiatric Association revised the PTSD diagnostic criteria in the fourth edition of its Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR). The diagnostic criteria (Criterion A-F) are specified below.

Diagnostic criteria for PTSD include a history of exposure to a traumatic event meeting two criteria and symptoms from each of three symptom clusters: intrusive recollections, avoidant/numbing symptoms, and hyper-arousal symptoms. A fifth criterion concerns duration of symptoms and a sixth assesses functioning.

Criterion A: stressor

The person has been exposed to a traumatic event in which both of the following have been present:

- 1. The person has experienced, witnessed, or been confronted with an event or events that involve actual or threatened death or serious injury, or a threat to the physical integrity of oneself or others.
- 2. The person's response involved intense fear, helplessness, or horror. Note: in children, it may be expressed instead by disorganized or agitated behavior.

Criterion B: intrusive recollection

The traumatic event is persistently re-experienced in at least one of the following ways:

- 1. Recurrent and intrusive distressing recollections of the event, including images, thoughts, or perceptions. Note: in young children, repetitive play may occur in which themes or aspects of the trauma are expressed.
- 2. Recurrent distressing dreams of the event. Note: in children, there may be frightening dreams without recognizable content
- 3. Acting or feeling as if the traumatic event were recurring (includes a sense of reliving the experience, illusions, hallucinations, and dissociative flashback episodes, including those that occur upon awakening or when intoxicated). Note: in children, trauma-specific re-enactment may occur.
- 4. Intense psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event.
- 5. Physiologic reactivity upon exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event

Criterion C: avoidant/numbing

Persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (not present before the trauma), as indicated by at least three of the following:

1. Efforts to avoid thoughts, feelings, or conversations associated with the trauma

- 2. Efforts to avoid activities, places, or people that arouse recollections of the trauma
- 3. Inability to recall an important aspect of the trauma
- 4. Markedly diminished interest or participation in significant activities
- 5. Feeling of detachment or estrangement from others
- 6. Restricted range of affect (e.g., unable to have loving feelings)
- 7. Sense of foreshortened future (e.g., does not expect to have a career, marriage, children, or a normal life span)

Criterion D: hyper-arousal

Persistent symptoms of increasing arousal (not present before the trauma), indicated by at least two of the following:

- 1. Difficulty falling or staying asleep
- 2. Irritability or outbursts of anger
- 3. Difficulty concentrating
- 4. Hyper-vigilance
- 5. Exaggerated startle response

Criterion E: duration

Duration of the disturbance (symptoms in B, C, and D) is more than one month.

Criterion F: functional significance

The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

Specify if:

Acute: if duration of symptoms is less than three months

Chronic: if duration of symptoms is three months or more

Specify if:

With or Without delay onset: Onset of symptoms at least six months after the stressor

Appendix 2

Letter of Invitation to Participants

<Name> <Address line 1> <Address line 2> <Address line 3> <Postcode>

<Date>

Dear <Name>,

Some time ago you kindly took part in the Northern Ireland Study of Health and Stress. This study is already giving us a better understanding of health in the community and we are most grateful for your contribution.

You agreed that that we could contact you again if we were doing further research. We have now developed a follow-up study into the experience of trauma, with the Northern Ireland Centre for Trauma and Transformation.

We would like to speak with people who have told us they have had a traumatic experience to find out more about the effects of these experiences and how people cope.

This study involves an interview with a researcher. The interview can take place in your home or in another place. Participation is voluntary and you can refuse to answer any question. Your contribution however would be extremely valuable in helping plan services for people affected by traumatic experiences.

Should you wish to speak with someone involved in the study please contact us or leave a message on 71375088. You can also read more about the new study from the information leaflet that has been enclosed with this letter.

One of my colleagues, Finola Ferry, Siobhan McCann or Sam Murphy will contact you by telephone in a few days. Thank you for reading this letter and for giving it your attention. We hope that you will consider helping us with this important research.

Yours sincerely,

Brendan Bunting

(Professor of Psychology, University of Ulster)

Appendix 3

Participant Information Sheet

Questions you might have about the study

Conflict Related Trauma: a qualitative study to assess the effects of conflict in Northern Ireland on twenty individuals and their families.

This sheet provides answers to a number of questions that might come to mind. If you have any queries, please contact me. You will find my contact details at the end of this leaflet.

Why are we conducting this study?

We do not have enough information on the effects of traumatic events, especially events related to the conflict in Northern Ireland. The aim of the study is to find out more about the needs of people and their families who have experienced a traumatic event. This will inform the development of services to support people who have suffered as a result of the conflict.

What would we like you to do?

We would like to have an interview with you. During this interview we will ask about the effects of a traumatic event that we discussed with you in the original interview. You do not have to tell us anything you do not want to. However, we would like to know how your experience has affected you and how you have coped. In addition we would like to find out about any contact you may have had with support services and how these services have met your needs. The interview should take around an hour to complete.

What will happen to the information you give us?

If you agree, we would like to record the interview on a sound recorder. This allows the researcher and you to have a conversation, as the researcher does not have to take detailed notes. It also allows the researcher to listen to the interview later, and to pick up and check any important points. After the interview we will then type it up from the recording. We will then look at it along with the responses of other participants for key messages and put the main themes from the interviews into a report and make a series of recommendations for future services. We will not use your name, or any other details that might identify you in any reports arising from this study. However with your permission we may like to use quotations from your interview in reports and publications. Quotations can help others to better understand the views and experiences of people who take part in research.

Confidentiality

Any information we receive will be treated confidentially. Only the research team will know participants' names and personal details. As stated above, personal details or identifying features will not be used in any report arising from the study.

In studies like this it is usual for researchers to advise your GP of your involvement in the research. If you agree to participate, we will ask for your permission to do this.

It is necessary for us to tell you at this stage that confidentiality will only be broken in the following circumstances: if it is felt that you or someone else is in danger, there is an active police investigation, a serious criminal offence is suspected or alleged, or a disclosure is required by law or the court.

As stated above, we would also like to record your interview. In some cases a different researcher will

listen to the tape to check if information has been recorded correctly. The tape will be destroyed after your responses have been typed. You may refuse to have your responses recorded.

How will this research affect me?

In this research, the experiences, views and ideas of people who have had traumatic experiences is of great importance. In the first study in which you participated; we found that most people were very willing and happy to speak about their experiences and express their views and ideas. However, sometimes talking about life experiences can be difficult. For this reason you will be provided with a list of helping agencies that you can contact should you decide that you would like help and support.

What say do I have in how the information is used?

Your involvement in this study would be much appreciated. To reassure you, you can decide on what information you wish the researchers to use. For example you may withdraw from the study or stop the interview at any time. You can also ask for the recorder to be switched off and the interview deleted. After the interview is complete, you can ask that it is not used in the study by calling me on the number provided below, within one week of your interview.

The Northern Ireland Centre for Trauma and Transformation (NICTT)

This project is being conducted in collaboration with NICTT. NICTT was set up by a charitable trust in 2002 and is based in Omagh, Co. Tyrone, Northern Ireland. The Centre aims to provide treatment for posttraumatic stress disorder (PTSD) and related conditions, and to make the treatments for trauma available to people who have been affected by traumatic experiences. The Centre also undertakes research into trauma and treatment, and provides a range of educational & training programmes.

The University of Ulster (UU) and the Northern Ireland Study of Health and Stress (NISHS)

This study is a follow-up project to the NISHS that you may remember having participated in a while ago. NISHS is the largest ever population study of health in Northern Ireland. The study aims to gauge the state of physical and emotional health within family units in Northern Ireland. Interviews for the study are still ongoing but from the available information we are beginning to obtain invaluable information that will help set priorities for health service provision in the future. This would not have been possible without your contribution.

How is the research being funded?

This research project is being funded by a grant from the Big Lottery Fund.

Thank you for considering this research project. I hope you will agree to take part. Your contribution will be invaluable and much appreciated.

Please do not hesitate to contact me, Finola Ferry (Research Officer) if you have any questions or queries about this study:

Finola Ferry School of Psychology University of Ulster Magee Northland Road Londonderry BT48 7JL Telephone: 028 7137 5088 Email: f.ferry@ulster.ac.uk

Appendix 4

Qualitative Interview Schedule

Outline Topic Guide

Introduction

Researcher's background

Background to the study:

- Initial interview date
- Aim of this study- needs of people that have experienced traumatic event
- During this interview we would like to ask you about
- Any issues/anxieties about these question areas
- Time- around an hour/ no more than hour and a half
- Experiences hard to remember or bring uncomfortable feelings-normal
- Talking about them can be helpful
- Become upset/find it difficult-normal. Let me know
- Any questions- let me know. Can't do this without you. No right/wrong

Request consent for recording

- Need to check two things before I start
- Normal in interview situations to record- quality, accurate info, can have natural conversation
- Also like to use quotations from your interview with permission
- Anonymity protected, can switch the tape off/ erased

Confirm consent for study

- Second thing I need is formal consent to take part in the study
- I will ask you at the end to sign a consent form- fully aware of what you are consenting for Assure confidentiality

Note start time

General opening question

How are you/ How have you been since the first interview? How has your health been? Anything significant happen? Positive or negative **Brief summary of traumatic event** In the interview for the NISHS that took place on (date), you mentioned that you experienced (event type). Could you give me a summary of what happened? Don't feel that you need to go into great detail. A brief sketch of the event is fine. How old were you? Who else was involved? Was this a Troubles related event? How many times did this happen? Life threat? Serious injury to you or others?

Effects of the traumatic experience and its consequences

How did you respond emotionally to this traumatic event? How did you feel after this event?

Immediately, in the short term, in the long term Fear, anger, guilt, shame, anxiety, depressed/low, sad, relief- NB normalise these? When did things begin to get difficult?

Symptoms

Can you describe symptoms that you have/have had relating to the event that you described?

Re-experiencing, avoidance, detachment, numbing, increased arousal, on edge, angry outbursts (give examples if necessary).

Model: emotions, thoughts, feeling/mood, behaviour

When did you first start having these symptoms you've told me about?

How long have/did these symptoms last altogether? When did they stop?

Aspects of life affected

Overall, how much have you been bothered by these symptoms/ the traumatic event you mentioned? Did the trauma affected areas of your life (positive/negative)?

Prompts/funnelling:

Has your relationships with other people been affected? Has your social life been affected? Has your ability to work/work life been affected or finances? Any other important aspects of your life been affected? Has your view of yourself, the world, the future been affected? Has your faith/religious views been affected? Missed opportunities?

Ask about different aspects before/ after the trauma.

Support

What kind of support did you use? What methods did you use to cope with your experience? Did you seek professional help? Did you use any other (unhelpful) methods to cope? (Alcohol/drugs etc)

Medication/prescription drugs, type of therapy, treatment for physical injuries? How soon after your experience did you seek help, what made you seek help?

Get little story of their experience.

Out of all the help you used or called upon:

What was helpful? What was unhelpful? What would have been helpful? (Financial assistance, acknowledgment, practical help: housing, education, work, justice)

Traumatic Growth

Have you learned anything from your experience? Have you made changes in your life? It is clear that you are stronger person/ still hurt. Can you tell me about this?

Further support

If you need any further help or advice, I can provide you with information about services that are available. Would you like me to do this?

- Offer leaflets from NICTT and other contact info.
- If necessary: If you wish I could arrange an appointment with NICTT in Omagh who specialise in advice and treatment to those who have experienced traumatic events.
- Can I contact anyone for you?
- Reassure that what they are going through is normal and good help available and hope

Thank you Any questions?

Appendix 5

Participant Consent Form

Consent For Participation

Title of Project

Conflict Related Trauma

Sub Title where appropriate

A qualitative study to assess the effects of civil conflict in Northern Ireland on twenty selected individuals and their families.

Name of Chief Investigator

Professor Brendan Bunting (University of Ulster)

			Please initial			
•	I confirm that I have been given and have read and understood the information sheet for the above study and have asked and received answers to any questions raised					
•	I understand that my participation is voluntary and that I am free to withdraw at any time without giving a reason and without my rights being affected in any way					
•	I understand that the researchers will hold all information and data collected securely and in confidence and that all efforts will be made to ensure that I cannot be identified as a participant in the study (except as might be required by law) and I give permission for the researchers to hold relevant personal data					
•	I agree to take part in the above study					
•	I agree to have my interview recorde	d				
Nam	e of Subject	Signature	Date			
Nam	e of person taking consent	Signature	Date			
Norm	e of researcher	Cignoture	Data			
Nam	le of researcher	Signature	Date			
•	I agree to have my GP informed of m	ny participation				
Nam	ne of GP	Address	Tel			
Nam	e of person taking consent	Signature	Date			
Nam	e of researcher	Signature	Date			

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