

# **An Investigation of the Relationship Between Intimate Partner Abuse and Suicidality: A Test of a Model**

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## **Abstract**

**Objectives** This thesis aimed to investigate the relationship between intimate partner abuse and suicidality, to deepen our understanding of the factors and mechanisms involved in increasing suicide risk in this group. This investigation was carried out using the framework of the Integrated Motivational-Volitional (IMV) Model of Suicidal Behaviour (O'Connor, 2011), and this research aimed to act as a test of this theoretical model.

**Method** In order to achieve the above objectives, two major studies were conducted. These were prospective studies, with Study one being exploratory and utilising a large scale survey design, and Study two carrying out an in-depth investigation. These studies utilised a general population sample consisting of both males and females, and compared those with and without experience of intimate partner abuse. Both studies are reported over two chapters, one focusing on the relationship between intimate partner abuse and suicidality, and the other reporting the testing of the IMV Model.

**Results** This research identified a number of key aspects relating to intimate partner abuse which are involved in increasing suicide risk within this group, such as the frequency of the abuse experienced, levels of control within the abusive relationship, and severity of stalking and harassment behaviours experienced. Investigation of the key elements of the IMV Model revealed that perceptions of internal entrapment play a significant mediating role in the relationship between intimate partner abuse and suicidality. In addition, social support and future thinking were found to act as moderators of this relationship.

**Conclusions** This research makes a valuable contribution to the understanding of intimate partner abuse and suicidality, and highlights a number of important issues with regards to the conceptualisation and measurement of IPA. It has also identifies the

importance of considering aspects such as stalking, perceptions of internal entrapment, and levels of control within relationships, when investigating suicidality within this group. This research used the context of IPA and suicidality to test the IMV Model, which has significantly increased our understanding of suicidality in relation to IPA. The IMV Model was shown to be a useful framework for understanding this relationship, however limitations of the model were identified. Further research is needed to test the model further and to explore the relationship of some of the elements within the context of IPA and suicidality.

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This thesis is dedicated to the memory of

William Peacock

my Papa, and my Best Friend

*It's an amazing achievement to leave the world a better place than you found it.*

*He touched so many lives. I'll be forever thankful that one of them was mine.*

### **Publications Arising From This Thesis**

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## **Chapter 1: Introduction**

### **1.0 Structured Abstract**

#### **1.0.1 Background**

The current chapter introduces the topic of intimate partner abuse and its relationship with suicidality, it also outlines the need for this research and the structure of this thesis.

#### **1.0.2 Method**

The definition of intimate partner abuse is discussed, and related issues associated with research in this area. The prevalence of intimate partner abuse is outlined, along with its known impact upon psychological health and well-being. Specifically, the relationship between intimate partner abuse and suicidality is discussed. This chapter concludes by discussing the need for this research and outlining the structure of this thesis.

#### **1.0.3 Results**

This chapter identifies that both intimate partner abuse and suicidality are major public health issues, and outlines the strong association that exists between them. It also highlights the need for more in-depth research in this area.

#### **1.0.4 Conclusions**

The structure of this thesis was set out, indicating that the focus of the thesis will be to explore the relationship between intimate partner abuse and suicidality, investigating mediators and moderators of this relationship, within a theoretical framework.

## **1.1 Background on intimate partner abuse, why it's an important issue**

Intimate partner abuse can be defined as any “incident of threatening behaviour, violence or abuse (psychological, physical, sexual, financial or emotional) between adults who are or have been intimate partners, regardless of gender or sexuality.” (Department of Health, 2000). This definition does not cover abuse by family members or friends. It describes abuse by people who are or were intimate partners, whether in a dating, cohabiting or married/civil partnership relationship. It is important to set out this definition as it is relatively recent, and much early research in this area was carried out assuming that intimate partner abuse was synonymous with physical abuse only, between female victims and male perpetrators (e.g. Back, Post & D’Arcy, 1982). Chapter two will discuss issues with definitions of intimate partner abuse in greater detail.

Although knowledge of intimate partner abuse has progressed significantly, increasing our understanding of it as a multifaceted phenomenon, the majority of research remains focused on physical violence, most often against women (Outlaw, 2009). However, increasingly research is striving to address the complex nature of intimate partner abuse, investigating aspects such as non-physical abuse, control, and the impact of the abuse on the individual. Such research often demonstrates that different types of abuse have differing outcomes (e.g. Blasco-Ros, Sánchez-Lorente, & Martinez, 2010; Pico-Alfonso, Garcia-Linares, Celda-Navarro, Blasco-Ros, Echeburua, & Martinez, 2006; Kaslow, Thompson, Meadows, Jacobs, Gibb, & Bornstein, 1998; Thompson, Kaslow, Kingree, Puett, Thompson, & Meadows, 1999).

Research which looks beyond the traditional view of females being the victims of male perpetrators has had conflicting results, with studies finding no gender differences in partner abuse victimisation (e.g. Shorey, Cornelius, & Bell, 2008; Heru, Stuart, Rainey, Eyre, & Recupero, 2006), whilst others find higher prevalence rates of partner abuse in females and that within the male population, gay and bisexual men are twice as likely to have experienced intimate partner abuse compared to heterosexual men (e.g. Siemieniuk, Krentz, Gish, & Gill, 2010). Recent research has demonstrated that gender is one of the factors that moderates the association between intimate partner abuse and health outcomes such as anxiety and depression, finding that partner abuse victimisation was related to increased depression and anxiety symptoms in males, but not in females. (Shorey, Sherman, Kivisto, Elkins, Rhatigan & Moore, 2011). Some recent research has demonstrated similar adverse psychological effects for male and female victims of intimate partner abuse (e.g. Hines & Douglas, 2009). However, the majority of previous research has tended to find that female victims experience greater adverse effects from intimate partner abuse than male victims (Straus, 2011). It is therefore clear that investigating gender differences in relation to partner abuse is a complex issue.

Straus (1990) and Johnson (1995) suggested that differences in findings across studies with regards to gender could be resolved by taking a 'dual population' approach. Both argued that certain types of partner abuse were prevalent in the general population and were gender symmetrical, whereas other types were rare, perpetrated mainly by males against females, and were more common in clinical samples. Johnson's differentiation is based on the level of coercive control within the relationship, with lower levels of control being more prevalent in the general population and gender symmetrical. Straus

based his differentiation on the basis of the severity, frequency and levels of physical injury resulting from an assault, with lower levels again being common in the general population and viewed as being gender symmetrical. Straus (2011) discussed that research demonstrating gender symmetry in intimate partner abuse do this on the basis of perpetration rates, whilst those who deny gender symmetry do so on the basis of the effects of victimisation. The distinction between perpetration and effects is important. When the criterion for gender symmetry is whether an individual was physically attacked by a partner, then the research tends to suggest gender symmetry. However research which looks at the effects of the abuse tend to find that attacks on female victims by male partners cause a greater adverse effect on the victim. Straus (2011) has therefore argued that this 'dual population' explanation should be replaced by a 'perpetration versus effects' explanation. However, some research has shown gender symmetry when investigating intimate partner abuse victimisation (e.g. Shorey et al. 2008; Heru et al. 2006).

Intimate partner abuse is an issue that is extremely common. An analysis of 10 separate intimate partner abuse prevalence studies found consistent findings: 1 in 4 women experience intimate partner abuse over their lifetimes and between 6-10% of women suffer intimate partner abuse in any given year (Council of Europe, 2002). Research has demonstrated that among some 'high risk' samples, such as psychiatric and student populations, the prevalence rates are higher still, with 1 in 3 women reporting that they are currently experiencing domestic abuse, or they have experienced it in the past (e.g. Sansone, Chu & Wiederman, 2007; Straus, 2004). The Scottish Crime and Justice Survey on Partner Abuse (SCJS, 2010) reported that the risk of experiencing intimate partner abuse was similar for males (3%) and females (4%). This survey found that 1 in

6 adults who had a partner since the age of 16 had experienced at least one incident of abuse (psychological or physical) from a partner, with around 1 in 10 adults having experienced *both* psychological abuse and physical abuse from a partner since that age.

Researchers have highlighted the varied and often severe consequences of intimate partner abuse. Studies have shown relationships between partner abuse and physical injuries, disabilities, homicide, sexual assaults, complications of pregnancy, alcohol and drug abuse, economic losses, employment status, depression, and suicide (Abbott et al. 1995; Campbell et al. 1996; Waller et al. 1996; Tolman & Wang, 2005; Ellsberg et al. 2008). Golding (1999) conducted a meta-analysis reviewing the prevalence of mental health problems among those with a history of intimate partner abuse. This review considered criteria proposed by Hill (1965) to evaluate the extent to which associations between intimate partner abuse and mental health problems might represent causal relationships, and found strong associations. Golding (1999) concludes there is a high prevalence of mental disorders amongst those who have experienced partner abuse, and suggests that the evidence is consistent with intimate partner abuse being a risk factor for mental health problems.

Researchers have increasingly found that victims of intimate partner abuse are at risk for a variety of psychological problems and poor mental health outcomes (Mburia-Mwalili et al. 2010; Kaura & Lohman, 2007), finding particularly high rates of post-traumatic stress disorder (Golding, 1999) and also of depression (e.g. Sato-DiLorenzo & Sharps, 2007; Coker et al. 2002a, 2002b; Gleason, 1993) among victims and survivors of partner abuse. Some samples show clinically significant levels of

depression (e.g. Cascardi & O'Leary, 1992) whilst others have found accompanying suicidal ideation and suicide attempts (e.g. Bergman & Brismar, 1991).

## **1.2 Relationship between intimate partner abuse and suicidality**

Suicide and self-harm are major public health issues in the UK. It is estimated that each day two people end their lives, and it is the main cause of death for young people in Scotland. Recent research from the World Health Organisation's multi-country study on women's health (Devries et al. 2011) found a strong association between suicidality and experiences of violence, with intimate partner abuse being one of the most consistent risk factors for suicide attempts after controlling for mental health disorders.

A number of authors describe a clinical relationship between intimate partner abuse victimisation and suicide attempts (e.g. Olson, Curtis, Jason, Ferrari, Horin, & David, 2003). Kendall-Tackett and Marshall (1998) reported that up to 66% of adults who have been subjected to serious forms of abuse attempt suicide or demonstrate an obsession with killing themselves. People who experience intimate partner abuse are more likely to attempt suicide than those without such a history, with an estimated 35% to 40% making a suicide attempt at some point during or after the termination of an abusive relationship. Additionally, 20% of people who have experienced intimate partner abuse make multiple suicide attempts compared to 8% of people with no history of abuse (Stark & Flitcraft, 1996). However, despite this awareness of an association between intimate partner abuse and suicidal behaviour, few studies have empirically examined the relationship between intimate partner abuse and suicide attempts.

The few empirical studies that are available in this area (e.g. Frank & Dingle, 1999) have supported the view that individuals with histories of intimate partner abuse are significantly more likely to report suicide attempts. Importantly, despite the various sample compositions across different studies, the relationship between suicide and intimate partner abuse appears to be strong regardless of the sample employed (Sansone et al. 2007).

### **1.3 The need for this research**

In 2002, the Scottish Government launched Choose Life, the Scottish national suicide prevention strategy and action plan. This is a ten year plan which aims to reduce suicides in Scotland by 20% by 2013. A major obstacle to effective suicide prevention is a lack of understanding of the factors associated with suicide risk. Indeed, the national strategy calls for more research looking at relevant risk factors. Research has demonstrated that intimate partner abuse is one such risk factor.

However, despite this awareness of intimate partner abuse as a risk factor for suicidality, which is defined here as suicidal ideation and/or suicide attempts, it is a largely under-researched area, and the experience of intimate partner abuse is one that is not well understood. With the limited amount of research looking at intimate partner abuse in a comprehensive way, and investigating its relationship with suicidality, it is not clear which factors and mechanisms are involved in this relationship. This is an area that would benefit from a theoretical framework to aid with understanding the complex relationships involved. This research therefore aims to test a specific model of suicidal behaviour in this context.

There are some other general limitations of research in this area which this research aims to address. There is a paucity of studies investigating the temporal relationship between suicidality and intimate partner abuse, with very few prospective studies assessing the relationship between partner abuse and suicidality over time. Additionally, the majority of research tends to only investigate current or recent intimate partner abuse, rather than lifetime exposure.

Previous research has also had a tendency to rely heavily on refuge samples (e.g. Oths & Robertson, 2007; Clements & Sawhney, 2000), as well as on all female samples. As such sampling is not fully representative, with women in a refuge setting representing the minority of individuals who have experienced partner abuse, these findings are difficult to generalise to intimate partner abuse victims and survivors as a whole.

There is therefore a need for research to address these issues and to expand our current understanding of the relationship between intimate partner abuse and suicidality. The present thesis aims to address many of the limitations discussed above by investigating the factors and mechanisms involved in this relationship to give a more in-depth understanding of the relationship. The present research will also investigate the temporal relationship between intimate partner abuse and suicidality by making use of prospective study designs and investigating lifetime exposure to intimate partner abuse. In addition, this research will make use of a general population sample, including both males and females, with an aim to obtaining as wide a sample as possible, to help provide a better understanding of the relationship between intimate partner abuse and suicidality beyond the samples traditionally used in this area of research.

The present thesis therefore aims to research the relationship between intimate partner abuse and suicidality in a comprehensive and detailed manner, providing an understanding of the factors and mechanisms involved, and overall providing a more in-depth understanding of the relationship.

#### **1.4 Thesis structure**

Chapter two is a systematic review of the existing research into the relationship between intimate partner abuse and suicidality. Chapter three outlines the theoretical framework used in this research, concluding with the aims of this project. Two major studies were conducted for this thesis. Chapter four reports the findings of a large scale survey, which is an exploratory investigation of the relationship between IPA and suicidality, and relationships with the key variables of the IMV Model. Chapter five then reports the findings from an in-depth investigation into the relationship between IPA and suicidality and tests the theoretical framework of the IMV Model in greater detail. Chapter six provides a general discussion of the findings of the thesis and explores their theoretical and clinical implications. Strengths and limitations of the research are reviewed and suggestions are made for further research in the field of intimate partner abuse and suicidality.

## **Chapter 2: Systematic Review of the relationship between intimate partner abuse and suicidality**

### **2.0 Structured Abstract**

#### **2.0.1 Background**

Research has demonstrated an association between intimate partner abuse and suicidality, thereby representing a serious mental health issue. However, studies have differed widely in the samples and methodologies employed, and in the depth of the investigation. Given the level of heterogeneity in the literature, this systematic review examines, for the first time, the nature of the relationship between intimate partner abuse and suicidality.

#### **2.0.2 Method**

The three main psychological and medical databases (PsychInfo 1887-March 2011; Medline, 1966-March 2011; Web of Knowledge 1981-March 2011) were searched. Thirty-seven papers on the topic of intimate partner abuse and suicidality were found.

#### **2.0.3 Results**

With one exception, all of the studies under review found an association between intimate partner abuse and suicidality. Significantly, this relationship held irrespective of methodology, sample and measurement of abuse and suicidality, demonstrating a consistently strong relationship between intimate partner abuse and suicidality.

#### **2.0.4 Conclusions**

This review highlights that intimate partner abuse is a significant risk factor for suicidal thoughts and behaviours, which has important clinical implications.

## **2.1 Introduction**

Intimate partner abuse can be defined as any “incident of threatening behaviour, violence or abuse (psychological, physical, sexual, financial or emotional) between adults who are or have been intimate partners, regardless of gender or sexuality” (Department of Health, 2000). This definition communicates the multifaceted nature of intimate partner abuse, illustrating the challenges and difficulties of conducting research in this area. However, it is worth noting that this is a relatively recent definition, and much early research in this area was carried out with the assumptions that intimate partner abuse was synonymous with only physical abuse, with female victims and male perpetrators (e.g. Back et al. 1982). Although knowledge and understanding of intimate partner abuse has moved on significantly, the complexity of intimate partner abuse often results in researchers selecting which aspects to focus on.

IPA is a widespread issue, with 1 in 4 women experiencing IPA over their lifetimes and between 6-10% of women suffering IPA in any given year (Council of Europe, 2002). It has further been shown that among some ‘high risk’ samples, such as psychiatric, clinical, and student populations, the prevalence rates are higher still, with 1 in 3 women reporting that they are currently experiencing IPA, or they have experienced it in the past (Sansone et al. 2007a). IPA is recognised as being a major public health problem. Screening for IPA in healthcare settings is endorsed by numerous health professional organisations in the United States (Waalén, Goodwin, Spitz, Petersen & Saltzman, 2000), and although there is not currently a screening policy in the UK, the Department of Health (2000) recommends that health professionals should consider routine enquiry of female patients for a history of IPA.

Researchers have highlighted the varied and often severe consequences of IPA. Studies have shown relationships between IPA and physical injuries, disabilities, homicide, sexual assaults, complications of pregnancy, alcohol and drug abuse, economic losses, employment status, depression, and suicide (Abbott et al. 1995; Campbell et al. 1996; Waller et al. 1996; Tolman & Wang, 2005; Ellsberg et al. 2008). Researchers have increasingly found that victims of IPA are at risk of a variety of psychological problems, finding particularly high rates of post-traumatic stress disorder (Golding, 1999) and also of depression (Gleason, 1993) among victims and survivors of IPA. Some samples show clinically significant levels of depression (Cascardi & O'Leary, 1992) whilst others have found accompanying suicidal ideation and suicide attempts (Bergman & Brismar, 1991).

A number of studies have demonstrated an association between IPA and suicidality, which is defined here as suicidal ideation and/or suicidal behaviour. People who experience IPA are more likely to attempt suicide than those without such history, with an estimated 35% to 40% making a suicide attempt at some point during or after the termination of an abusive relationship (Reviere et al. 2007). Indeed, a number of studies demonstrate a higher prevalence of suicide attempts among those with histories of IPA compared to those with no such history (Seedat et al. 2005). Additionally, 20% of people who have experienced IPA make multiple suicide attempts compared to 8% of people with no history of abuse (Stark & Flitcraft, 1995).

However, despite this awareness of an association, it is a largely under-researched area, and among the existing research there is a large degree of variability in the focus and methodologies of these studies, making direct comparisons problematic. Some

literature reviews have highlighted a relationship between IPA and suicidality, such as Goldings' (1999) meta-analytic review of IPA as a risk factor for mental disorders, and Martin et al's (2007) review of the role of IPA in pregnancy-associated violent deaths. However, no systematic review has been carried out which concentrates solely on the relationship between IPA and suicidality. Given the diversity of research in this area, the clear clinical implications, and the importance of advancing knowledge and understanding in this area, a review that focuses on this relationship is overdue. Therefore, this systematic review was carried out in order to determine and clarify the relationship between IPA and suicidality.

## **2.2 Method**

### *Selection of Studies*

A literature review of the three main psychological and medical databases was conducted: Psychinfo (1887-March 2011), Medline (1966-March 2011), and Web of Knowledge (1981-March 2011). Key word searches using the following terms were employed: (i) suicid\* and domestic or partner and violen\* or abuse; (ii) self-harm and domestic or partner and violen\* or abuse; (iii) self-injur\* and domestic or partner and violen\* or abuse; (iv) parasuicid\* and domestic or partner and violen\* or abuse; (v) self-cut\* and domestic or partner and violen\* or abuse. These searches generated a total of 664 studies.

The abstracts of all studies generated by this search were read in order to select appropriate studies that met the following inclusion criteria:

- (i) Only original and published journal articles were included in the analyses;
- (ii) A measure of intimate partner abuse was used;
- (iii) Suicidal ideation and/or suicidal behaviors were recorded;
- (iv) The relationship between intimate partner abuse and suicidality was recorded;
- (v) The article was written in English.

The reference sections of all selected articles were hand searched and followed up to ensure that no relevant studies were missed. The review yielded 37 published empirical papers which are presented in the proceeding sections, following O'Connor (2007): (i) cross-sectional studies investigating the relationship between intimate partner abuse and suicidality; (ii) case-control studies comparing groups of individuals with experience of intimate partner abuse with controls or comparing groups of individuals with suicidal ideation/behavior with controls; and (iii) longitudinal (prospective) studies of intimate partner abuse and suicidality. Given the large variety of study designs, it was not feasible to conduct a meta-analysis, and therefore a narrative systematic review was conducted.

## 2.3 Results

### *Cross-Sectional Studies*

The majority of the studies (n=23) were cross-sectional (see Table 2.1, Appendix 1). Thirteen of these studies were conducted with general population samples, with two of these studies recruiting participants from IPA shelters (Weaver et al, 2000; Wingood et al. 2000). All of these studies were conducted outwith the UK, with the majority (n= 7) being carried out in the USA. Only two of these studies utilised a sample including both sexes (Calder et al. 2010; Afifi et al. 2009), with the others using female only samples. With regard to the measures of IPA used, a variety of different measures were employed. The definitions of IPA that are employed by the researchers have a significant impact on the measures that are used, and often influence which aspects of IPA are focused on. These studies varied in which aspects of IPA were measured, with the majority of studies focused solely on the physical aspects of abuse, whilst only three studies (Ishida et al. 2010; Vachher & Sharma, 2010; Vitanza et al. 1995) also included psychological abuse. The measures of suicidality used were also varied, and often limited, with many studies using a single item to assess either suicidal ideation or suicide attempts, and only three studies including a more detailed measure of suicidality (Golding, 1999; Ellsberg et al. 2008; Naved & Akhtar, 2008). Measures of both IPA and suicidality also varied largely with regards to the time period being investigated, with some studies measuring recent exposure between one week and one year, and some measuring lifetime exposure, whilst others enquired as to current and lifetime experiences. However, despite these differences, all studies demonstrated a relationship between IPA and suicidality, with eight studies finding an association between IPA and suicidal ideation, three demonstrating an association between IPA and suicide attempts (Vitanza et al. 1995; Wingood et al. 2000; Seedat et al. 2005), and two which

demonstrated an association between IPA and both suicidal ideation and suicide attempts (Vachher & Sharma, 2010; Haarr, 2010). Additional findings of particular interest included results demonstrating a dose-response effect between the severity of abuse experienced and suicidality (Vitanza et al, 1995; Wingood et al, 2000; Naved & Akhtar, 2008). Renner and Markward (2009) reported that suicidal ideation was associated with a short duration (under 1 year) of IPA, as opposed to a longer duration as predicted. This is particularly interesting, as previous research has suggested that prolonged trauma where the individual feels under the control of the perpetrator contributes significantly to increased suicidal ideation (Herman, 1992). We would therefore expect individuals exposed to IPA over a longer period of time to exhibit higher suicidal ideation than those exposed for a shorter duration.

The cross-sectional studies also included those conducted with clinical samples (n=10). The majority (n=4) of these recruited samples from emergency departments of hospitals, whilst the others recruited from psychiatric inpatients (n=2), HIV clinics (n=2), antenatal clinics (n=1) or general medical practices (n=1). The majority of these studies were conducted within the USA, with only three studies being carried out in other countries (Asad et al. 2010; Siemieniuk et al. 2010; Boyle & Todd, 2003). As with the general population studies, the majority were carried out with all female samples, with one study using an all male sample (Pantalone et al. 2010) and only three studies using men and women (Siemieniuk et al. 2010; Boyle & Todd, 2003; Heru et al. 2006). As opposed to the general population studies, the majority (n=8) of clinical studies included measures of psychological abuse as well as the physical aspects of abuse, however, there was substantial variation with regards to the measures employed. Additionally, only one study (Heru et al. 2006) investigated both IPA victimisation and

perpetration. The extensive heterogeneity of measures employed was extended to the selection of the suicidality measures. Whilst some studies made use of more detailed measures such as the Beck Scale for Suicide Ideation (BSI; Beck & Steer, 1991) or the Self Harm Inventory (SHI; Sansone et al. 1998), others established suicidality by presentation at hospital emergency departments following self-injury or a suicide attempt, or by relying on self-report, or details from the participants' medical history. Once again, there was variation in the time periods covered by the measures, with some studies investigating experiences over the lifetime, and others focusing on more recent experiences.

Despite these differences, all studies demonstrated a relationship between IPA and suicidality, finding associations between IPA and suicide attempts (n=3), suicidal ideation (n=2) and self-harm (n=2). Other findings of interest included results demonstrating that abused women were significantly more likely than non-abused women to be pregnant at the time of the suicide attempt (Stark & Flitcraft, 1995). Also, Heru et al (2006) demonstrated a high rate (90%) of IPA among suicidal psychiatric inpatients, and further showed no significant differences in males and females for either perpetration or victimisation. However, Siemieniuk, et al (2010) found that females were more likely than males to have experienced IPA, and that within the male population, gay and bisexual men were twice as likely to have experienced IPA compared to heterosexual men. These findings are particularly interesting as there is a dearth of research examining sex differences in IPA in general, and in the relationship between IPA victimisation and suicidality, with a tendency to focus on all female samples.

In summary, it is clear that one of the key issues present across the cross-sectional studies is a lack of consistency in the measures used. However, irrespective of substantial heterogeneity in the methodologies and samples employed, all of the cross-sectional studies in this review reported an association between IPA and suicidality, illustrating the strength of this association.

#### *Case-Control Studies*

Nine of the studies under review were case-control studies (see Table 2.2, Appendix 2). The majority (n=7) of these were carried out with clinical samples, all of which were conducted in the USA. Five of these recruited participants from hospitals, whilst two recruited from a psychiatric inpatient sample (Back et al. 1982; Sansone et al. 2007a). All of the studies recruiting from hospitals compared females presenting to the hospital following a non-fatal suicide attempt, to those who had no history of suicidal behavior and were presenting for medical care. Two of these studies additionally specified that both groups had a history of IPA within the previous year (Kaslow et al. 2002; Reviere et al. 2007). It is also worth noting that four of these five studies used an African American sample (Kaslow et al. 1998; Thompson et al. 1999; Kaslow et al. 2000; Kaslow et al. 2002).

Of the two studies with a psychiatric inpatient sample, one compared groups with and without experience of physical abuse (Back et al. 1982), whilst the other compared groups with and without a history of suicide attempts (Sansone et al. 2007a). The majority of clinical studies measured both physical and non-physical abuse, with only one study measuring physical abuse alone (Back et al. 1982). Within these studies there was also greater consistency with regards to the measure of IPA used, with the majority

(n=5) utilising the Index of Spouse Abuse (ISA; Hudson & McIntosh, 1981). This is an appropriate measure as it has excellent internal consistency reliability, good discriminant validity for the subscales, and excellent construct and factorial validity with the samples used in these studies (Hudson & McIntosh, 1981).

All of the hospital-based studies measured suicidality by presentation to the hospital with a non-fatal suicide attempt, with one study (Kaslow et al. 2002) additionally using a Risk-Rescue Ratio (Weissman & Worden, 1972) to assess suicide attempt lethality. The Risk-Rescue rating is a 10-item scale that yields a risk-rescue ratio score equivalent to a lethality rating. Questions assess both the level of risk and the probability of rescue involved in the attempt. These scores are transformed into a risk-rescue ratio, with higher scores indicating more lethal attempts. Of the remaining two studies, one measured suicidality by investigating the patients' medical records (Back et al. 1982) and the other by using a self-report measure of suicide attempts (Sansone et al. 2007a).

Four of the clinical studies demonstrated an association between IPA and suicide attempts, with an additional two studies demonstrating risk and protective factors for suicidal behaviors in an IPA sample. Only one study (Back et al. 1982) did not find supporting evidence for a relationship between IPA and suicidality. In this study, a significantly higher prevalence of suicide attempts was found in participants with a history of physical abuse. However, this case group was also significantly younger than the control group, and when participants were matched for age, this association became non-significant. Back et al (1982) concluded that age was a stronger risk factor in this sample than experience of physical abuse.

The findings of the clinical studies were also particularly interesting as some investigated the relationship between IPA and suicidality in greater depth. The findings of such studies were highly consistent, on the whole demonstrating that psychological distress, hopelessness, substance use, coping skills and social support are key factors involved in the relationship between IPA and suicide attempts (Kaslow et al. 1998; Kaslow et al. 2002; Reviere et al. 2007). Additionally non-physical partner abuse may play an important role in this relationship (Kaslow et al. 1998; Thompson et al. 1999).

The case-control studies also included two studies conducted with general population samples. Both of these studies recruited participants from IPA shelters, and utilised control groups with no history of abuse. Both studies consisted of all female samples. One study was conducted in the UK (Scottgliba et al. 1995), and the other in Spain (Pico-Alfonso et al. 2006). With regard to the measures of IPA used, neither used an established measure, but both obtained detailed information through interviews with the participants. However, Scott-Gliba et al (1995) focused on physical aspects of abuse, whilst Pico-Alfonso et al (2006) used two groups, one with experience of physical and psychological abuse, and the other with experience of psychological abuse alone. The measures of suicidality used also differed. Scott-Gliba et al (1995) assessed this by reviewing participants' medical and psychiatric history as well as administering the Beck Depression Inventory (BDI), whilst Pico-Alfonso et al (2006) used a self-report measure of participants' lifetime incidence of thoughts and attempts of suicide. Both studies found higher rates of suicidal ideation in the case groups, with Pico-Alfonso et al (2006) additionally showing that within IPA relationships, sexual abuse increases the risk of suicide attempts when it is concomitant with both physical and psychological abuse.

Overall, the case-control studies in this review provided a more in-depth investigation of the relationship between IPA and suicidality, highlighting risk and protective factors, as well as potential mediating and moderating variables, with a large degree of consistency. Once again, in spite of substantial differences in methodologies, the majority of these studies consistently established a clear association between IPA and suicidality.

#### *Longitudinal/Prospective Studies*

Five of the studies under review were longitudinal/prospective studies (see Table 2.3, Appendix 3). Three of these were carried out with a general population sample, one of which was conducted in the USA (Parsons & Harper, 1999), with the others conducted in India (Chowdhary & Patel, 2008), and in Spain (Blasco-Ros et al, 2010). All three studies used all female samples. Parsons and Harper (1999) conducted a follow-up investigation of injury-related maternal deaths over a two-year period. Deaths were classified according to mechanism and intent, and questionnaires were sent to the medical examiner and obstetric provider to enquire about their knowledge of IPA in each case. Chowdhary and Patel (2008) assessed participants at baseline, with a six and twelve month follow-up. Self-report information was obtained regarding lifetime and recent (past 3 months) exposure to IPA, and the Revised Clinical Interview Schedule (CIS-R; Lewis et al. 1992) was used to assess suicidal behaviour. Blasco-Ros et al (2010) used a follow up period of 3 years, comparing those with no experience of IPA, those with experience of psychological abuse, and those with experience of both physical and psychological abuse. Detailed information was taken about the pattern of IPA over time, and suicidality was measured by enquiring about the incidence of

suicidal thoughts and suicide attempts over the lifetime, as well as over the follow up period.

All studies yielded important findings. Parsons and Harper (1999) was the only study in this review that was able to provide prevalence data on completed suicides, finding that of twenty-one women known to have experienced IPA, two completed suicide. Chowdhary and Patel (2008) found that both their cross-sectional and longitudinal data demonstrated that IPA was an independent risk factor for suicide attempts. Blasco-Ros et al (2010) found an association between IPA and suicidal thoughts and attempts. Another interesting finding from this study was that those with experience of both physical and psychological abuse showed a recovery in their mental health status over time, with a decrease in anxiety, depressive, and PTSD symptoms. However those with experience of psychological abuse alone showed no such recovery. It was found that cessation of physical abuse and perceived social support contributed to mental health recovery. Therefore, it may be that those experiencing both physical and psychological abuse are more likely to end the relationship, and the end of the abuse, along with the support they perceive they have in that process, leads to an improvement in their mental health. However, those experiencing psychological abuse alone may be more likely to continue the relationship, and have continued exposure to the abuse. These findings also lend support to other research in this area which shows that different aspects of IPA have differential effects (e.g. Pico-Alfonso et al. 2006; Kaslow et al. 1998; Thompson et al. 1999).

The longitudinal/prospective analysis also included two studies conducted with clinical samples. Both of these studies recruited participants from individuals presenting at

hospital emergency departments as a result of IPA. Both studies also employed two control groups. Bergman and Brismar (1991) used women selected through the population register and also women who had presented at the hospital following a suicide attempt, for their control groups. Boyle et al (2006) used two controls for each case, one matched for age, month and year of presentation, and one additionally matched for postcode sector to help control for the effects of socio-economic deprivation. Whilst Bergman and Brismar (1991) used an all female sample, Boyle et al (2006) reported both males and females. One study was conducted in the UK (Boyle et al. 2006), and the other in Sweden (Bergman & Brismar, 1991). With regard to the measures of IPA used, both studies used presentation at hospital with injuries resulting from IPA, and therefore assessed physical abuse only. Bergman and Brismar (1991) measured IPA and suicidality by investigating medical records for ten years prior to recruitment, and six years following recruitment. Boyle et al (2006) assessed suicidality by presentation to an emergency department as a result of self-harm over a follow-up period of eight years. Both studies found an association between IPA and suicidality, with Bergman and Brismar (1991) further suggesting that this relationship may be mediated by substance use. These studies also supported the findings of some of the cross-sectional general population studies (Vitanza et al. 1995; Wingood et al, 2000; Naved & Akhtar, 2008) which suggested a possible dose-response effect between IPA and suicidality, Boyle et al (2006) found a moderate positive correlation between the number of episodes of self-harm, and the number of presentations at emergency departments as a result of IPA.

In summary, although the majority of these longitudinal/prospective studies were limited by their focus on physical measures of IPA and suicidality, taken together, they again yield a consistent association between IPA and suicidality.

## **2.4 Discussion**

With only one exception (Back et al. 1982), all of the studies under review found an association between IPA and suicidality. Importantly, this latter relationship held irrespective of method, sample and measurement of IPA and suicidality. Consequently, the degree of consistency in findings across these studies confirms a strong relationship between IPA and suicidality.

All of the studies reviewed made a significant contribution to our understanding of the relationship between IPA and suicidality. Some key findings had particular clinical relevance. A dose-response effect between IPA severity and suicide risk was established (e.g. Vitanza et al. 1995; Wingood et al. 2000; Naved & Akhtar, 2008), highlighting that in addition to screening for the presence of IPA, it is clinically relevant to also assess the severity of the abuse experienced.

It is also relevant to consider the types of abuse experienced. A number of studies demonstrated that different aspects of abuse had differential effects (e.g. Blasco-Ros et al. 2010; Pico-Alfonso et al. 2006; Kaslow et al. 1998; Thompson et al. 1999) on suicidality and on mental health. This highlights the importance of considering all aspects of IPA.

Stark & Flitcraft's (1995) findings that abused women were significantly more likely than non-abused women to be pregnant at the time of the suicide attempt, highlights a group at increased risk. Indeed, whilst females are not routinely screened in healthcare settings for IPA in the UK, a screening programme does exist for pregnant women. Additionally, studies which included male samples (e.g. Heru et al. 2006; Siemieniuk, et al, 2010) found that IPA is not an issue with clinical relevance only for females. Therefore, the existing research in this area highlights the importance of screening for IPA and identifying those at greatest risk, regardless of their gender or sexuality.

### *Methodological Considerations*

Taken individually, and collectively, the studies reviewed had a number of limitations. The first area of concern is with the samples used. The majority of studies (n=30) used all female samples, contributing to a dearth of literature including male victims of IPA. One study used an all male sample (Pantalone et al. 2010), concluding that IPA played a significant role in the mental health of men living with HIV/AIDS. Of the remaining six studies, two reported some differences across sexes in the relationship between IPA and suicidality (Boyle & Todd, 2003; Afifi et al. 2009), whilst one reported no significant sex differences (Heru et al. 2006), and three did not investigate the effect of sex (Boyle et al. 2006; Siemieniuk et al. 2010; Calder et al. 2010). Clearly, further research is required to investigate the effect of sex on the relationship between IPA and suicidality. In addition, the existing research in this area does not adequately investigate issues such as the role of the participants' ethnicity or sexual orientation in this relationship. Therefore, it can be observed that the research literature often focuses

on specific demographic groups, thereby limiting the generalisability of the findings, and the depth in which we can understand the relationship between IPA and suicidality.

There were also limitations concerning the measures of IPA utilised in the studies. Many studies did not use a comprehensive definition of IPA which encompassed its multifaceted nature. Indeed, the majority of studies did not investigate the issue in a way that fits with the UK Department of Health's (2000) definition of IPA, as described previously. Many of the studies (n=14) investigated physical violence alone, and of these, many measures were biased towards detecting more severe forms of physical abuse. A few studies only considered physical and sexual abuse (n=2). Among the remaining studies, some aspects of IPA, such as sexual abuse, were often not investigated, or the questions asked were highly specific, such as those asked by Chowdhary and Patel (2008) where sexual violence referred only to forced sexual intercourse. Therefore, many studies were not able to investigate all of the aspects of IPA, or at least could not investigate them all in equal depth. When a full range of IPA behaviors were measured, it was demonstrated that the psychological aspects of abuse played a key role, and also that the combinations of different types of abuse presented different levels of risk. Therefore, including measures of all aspects of IPA can considerably enhance our understanding of the relationship between IPA and suicidality. However, there are additional aspects of IPA which none of the studies under review measured. For example, previous research has demonstrated a link between IPA and stalking (Tjaden & Thoennes, 2000), which has led many to conclude that stalking during or after the conclusion of an intimate relationship is a form of IPA. Given that studies have demonstrated an association between severity of abuse and suicidality (Vitanza et al. 1995; Wingood et al. 2000; Naved & Akhtar, 2008), and

severity of abuse has been reported to be associated with severity of stalking behaviours (Mechanic et al. 2000), this may be an important aspect of IPA to consider. Another aspect which is gaining increasing attention is that of control within the relationship (e.g. Tanha et al. 2010; Johnson, 2006; Straus 2006). This is a pattern of control and manipulation, where actions, relationships and activities are controlled by the abusive partner. This type of abuse can include surveillance, and the victim is often punished when they fail to follow the rules established by the abusive partner (Kelly & Johnson, 2008). Using Johnson's (2006) conceptualisation, Stark (2006) further discusses what he calls coercive control as a pattern of violence, intimidation, isolation and control where the main goal is to restrict the other person's liberties. Stark (2006) argues that levels of control should be measured in order to determine the context in which IPA occurs.

Therefore, it can be seen that differences in how IPA itself is defined can be problematic for research. However, even when researchers are using the same definition, and agree on which aspects of IPA to investigate, there can still be further differences in how these individual aspects are defined. For example, psychological abuse has been defined as verbal and nonverbal acts which symbolically hurt the other, or the use of threats (Straus, 1979), as a type of abuse with the purpose of undermining the victim's own logic and reasoning (Miller, 1995), and also as involving threats, isolation and control (Follingstad & Dehard, 2000). Some of these definitions create further confusion by including aspects that others would call emotional or social abuse (Outlaw, 2009). Further, research often does not differentiate between psychological abuse and emotional abuse, either conceptually or empirically (Follingstad, Rutledge, Berg, Hause & Polek, 1990; Swan & Snow, 2002). O'Leary (2001) argued that there is

no adequate definition of psychological abuse, and many researchers have supported the view that it is an aspect of abuse which has been inadequately conceptualised (e.g. DeHart, Follingstad & Fields, 2020; Follingstad, 2007), and there is therefore a lack of valid measures of psychological abuse.

Even among aspects of IPA that one might consider to be more clear, such as physical abuse, there are significant variations in how this is measured in research. For example, some studies may only consider that IPA is present when an individual presents at a hospital emergency department with injuries resulting from this abuse (e.g. Stark & Flitcraft, 1995; Bergman & Brismar, 1991; Boyle et al. 2006), others will ask participants to self-report incidences of various types of physical abuse, whilst others still will ask these questions in a far more open-ended manner to capture all experiences the participant feels were physically abusive (e.g. Scottgliba et al. 1995; Pico-Alfonso et al. 2006; Blasco-Ros et al. 2010).

Across all aspects of IPA, research also varies widely on the type of information that is measured about the abuse. For example, incidence, frequency, severity, duration and impact are all factors which may be measured, and studies vary significantly in which of these are investigated. Some studies record incidence alone i.e. whether this type of abuse has occurred or not (e.g. Stark & Flitcraft, 1995), and others measure a far wider range of factors.

Also with regard to the measures of IPA, it was noted that there was considerable variance in the time period measured. Experience of IPA was recorded for anywhere from one week prior to the study to at any point over the participants' lifetime. The

measures which investigate recent or current abuse *only* are problematic, as obviously abuse before that time will not be recorded, but may affect the results. For example, it has been demonstrated that those with past experience of IPA demonstrate poorer social functioning (McCaw et al. 2007), higher emotional distress, suicidal ideation, and suicidal behaviours, than those with no experience of abuse (Ellsberg et al. 2008). This is a particularly relevant issue in the case-control studies, where it may present a significant confounding factor in those defined as ‘non-abused’. In addition, investigating IPA experience over the lifetime enables a better understanding of the long term impact of IPA on the individual, and of the temporal relationship between IPA and suicidality. This review has helped to highlight that these are issues which are not adequately addressed by the existing literature.

The measures of suicidality also presented some limitations. Some studies measured only suicidal ideation, or suicide attempts, whilst only a few measured both of these. This variability makes it difficult to compare the findings of many of these studies. Many studies relied on single self-report items or on presentation to hospital emergency departments to assess suicidality, with only thirteen studies using a more formalised measure to measure suicidal ideation, and only one of these studies assessed the lethality of the suicide attempt (Kaslow et al. 2002). In addition, as with the IPA measures, the measures of suicidality recorded varying time periods, from recent to lifetime exposure. Once again, this presents issues for control groups, and in general serves as a confounding variable. Overall, the assessment of suicidality in the studies reviewed would not have met the standards suggested by O’Carroll et al (1996); that lethality and intent should be routinely measured.

Other measures used by the studies also varied widely, with some using a number of additional measures of relevant variables to help analyse the relationship in more detail, and others using a minimum of measures. Overall, consistent across the majority of the studies, there was a lack of investigation into potential mediating and moderating variables. The consistency with which some variables (e.g. PTSD, psychological distress, hopelessness, substance use, coping skills and social support) have been found to play a role in the relationship between IPA and suicidality, suggests that these are key variables which should be investigated further.

#### *Future research*

There are several areas on which future research could improve. Collectively, this review suggests a dose-response relationship between IPA and suicidality, however it is unclear whether this relates to severity, frequency, or types of abuse experienced, and this is an area which requires more in-depth research to establish the nature of the link. In addition, it is important that future research endeavours to include measures which assess all aspects of IPA, and ideally both suicidal ideation and suicidal behaviours, as well as measures of variables which may mediate or moderate the relationship between these two factors. This review has also noted the variance in the time periods investigated by the studies, which makes it particularly difficult to investigate the temporal relationship between IPA and suicidality. Future research could contribute to our understanding of this issue by recording lifetime exposure to both IPA and suicidality, and their relative timing. Future prospective and longitudinal studies could also contribute significantly to this area. Overall, it is important that research into IPA and suicidality broadens its focus and attempts to provide a more in-depth understanding of this relationship.

*How this thesis will address the limitations of previous research*

With regards to the sample, this research will not limit the sample by gender, sexuality or other demographics. It aims to include both male and females to allow investigation of the effect of gender on the relationship between IPA and suicidality. By not limiting the focus to specific demographic groups, this research will obtain findings with greater generalisability, which will help to deepen our understanding of the relationship between intimate partner abuse and suicide risk.

In relation to limitations concerning measures, this research will aim to collect data on a number of aspects of intimate partner abuse, and will also include factors which are closely related to partner abuse, such as stalking and harassment, in order to obtain as comprehensive a view of intimate partner abuse as possible. This will also allow a better understanding of the possible dose-response relationship between intimate partner abuse and suicidality. The research will also measure lifetime experience of intimate partner abuse, covering not only current and recent experiences, but abuse experienced at any point over the lifetime. This will help to provide a better understanding of the long term impact of intimate partner abuse on the individual, and of the temporal relationship between partner abuse and suicidality. With regard to suicidality, this research will measure both suicidal ideation and suicide attempts. It will also use a prospective approach to help determine what factors predict suicidality. This research will not measure intimate partner abuse and suicidality in isolation, rather it will investigate variables which may mediate or moderate the relationship between these.

By addressing the key limitations of existing research in this way, this piece of research will result in a far more in-depth understanding of the relationship between intimate partner abuse and suicidality, as opposed to merely establishing an association between the two.

### *Clinical Implications*

It can be seen throughout this review that IPA is an issue that has significant clinical implications. In addition to its association with suicidality, this review has highlighted that IPA has wide ranging and often severe consequences including physical injuries, disabilities, complications of pregnancy, alcohol and drug abuse, depression, and poor mental health. This review has highlighted the relevance and importance of screening for IPA in healthcare settings, and suggested that consideration of the severity of abuse experienced could be an important part of this process. Research has also suggested that it is important to identify all those at risk, and not to confine efforts to females for example. The strong association between IPA and suicidality that has been demonstrated further highlights that those who are identified as having experience of IPA should additionally be screened for suicidal thoughts and behaviors.

### *Conclusion*

Despite the variability among the studies, the consistency of the findings serves to demonstrate the strong relationship between IPA and suicidality. The studies reviewed have made a significant contribution to our understanding of this relationship, and taken together, their findings show the importance of continuing to develop this understanding and exploring the relationship between IPA and suicidality in greater depth.

## **Chapter 3: Theoretical Framework**

### **3.0 Structured Abstract**

#### **3.0.1 Background**

This Chapter discusses relevant theories and models of suicidal behaviour and outlines the theoretical framework that will be utilised in this thesis.

#### **3.0.2 Method**

This Chapter outlines the background to the theoretical framework, discussing some of the key theories and models that have led to the development of the Integrated Motivational-Volitional Model of Suicidal Behaviour (IMV Model). It then outlines this model, and discusses the use of the model within this thesis. The chapter concludes with the aims of this thesis.

#### **3.0.3 Results**

Relevant theories and models of suicidal behaviour are discussed, and key factors are highlighted. The need for the development of a model such as the IMV model was identified. The IMV model was described, and its use as a theoretical framework within this thesis discussed. The aims of the thesis were outlined, highlighting the main aim to investigate the relationship between intimate partner abuse and suicidality, and specifically to explore the mediators and moderators of that relationship.

#### **3.0.4 Conclusions**

This chapter concludes that the IMV model is a relevant and useful framework to investigate the relationship between intimate partner abuse and suicidality.

### **3.1 Background to the theoretical framework**

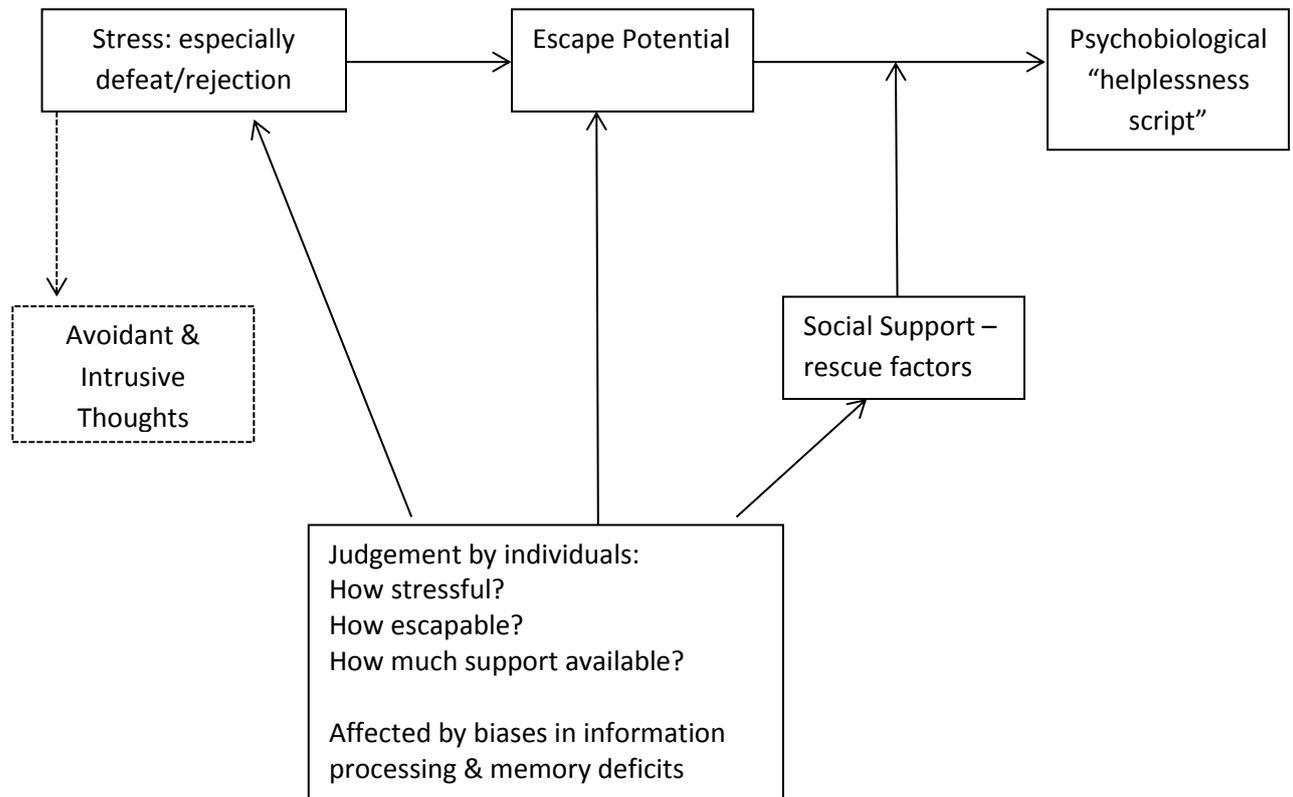
Suicidal ideation and suicide attempts are complex behaviours, and a large number of proximal and distal risk factors have been identified (Hawton & van Heeringen, 2009). Over the years, various theories and models have been proposed, which have helped to increase our understanding of suicidal behaviour. One of the earliest models was Shneidman's (1985) cubic model of suicide which highlighted the relationship between a stressor and psychological pain leading to suicide risk. However, stress models of suicide cannot explain the fact that even severe levels of stress do not lead to suicidal behaviours in every individual. This limitation led to a view that the development of suicidal behaviours involves a vulnerability, or diathesis, which predisposes the individual to suicidal behaviour when faced with stress. Schotte and Clum (1987) developed one of the first diathesis-stress models of suicidal behaviour. This attempted to take a more comprehensive view of suicide, including background factors and pre-existing cognitive vulnerabilities to explain the link between stress and suicide risk. Over the years other diathesis-stress models have been developed such as Mann et al's (1999) clinical model of suicidal behaviour based on the integration of neurobiology and psychopathology, and Wenzel and Beck's (2008) model which places particular emphasis on cognitive processes. Such models suggest that a diathesis may consist of one single factor or involve multiple components. Most importantly these models demonstrate that suicidal behaviour is not a result of a stressor alone, but that pre-dispositional factors, including genetic, cognitive, psychological and social factors, are necessary to explain the relationship between the two.

Over the years there has been an accumulation of evidence suggesting that suicidal behaviour is best understood as a desire to escape from unbearable psychological pain. Baechler (1979, 1980) developed one of the first models of suicide-as-escape, which viewed suicide as a form of problem solving. Baumeister (1990) aimed to expand understanding of suicide risk by including social and personality theory into his theory of Suicide as Escape from Self. This model viewed suicide as the final step in a series of events where the individual is escaping from painful self awareness.

In more recent years, Leenaars reported that escape was a key theme which arises in suicide notes, regardless of gender or nationality (Leenaars, 1996, 1999, 2002; O'Connor & Leenaars, 2003), and escape has often been viewed as a key component in understanding suicidal behaviour from both social and clinical perspectives (e.g. Baumeister, 1990; Williams, 1997, 2001; Williams & Pollock, 2001). Research conducted with college students (O'Connor & O'Connor, 2003; Tassava & Ruderman, 1999) and clinical patients (Dean & Range, 1999; Hunter & O'Connor, 2003) have also produced findings consistent with escape theory, suggesting that it continues to be a useful framework for understanding suicide risk.

Williams (1997, 2001; Williams & Pollock, 2001) developed the arrested flight model, which expanded beyond escape theory (see Figure 4.1 below). Based on the arrested flight phenomenon, it is argued that suicidal behaviours are a result of perceptions of being trapped in a stressful situation from which there is no escape and no rescue (Williams, 2001; Williams & Pollock, 2001). One's ability to flee from the stressful situation is arrested. The model therefore suggests that when an individual experiences a stressful situation that results in feelings of defeat, individuals are motivated to escape

from this painful situation, and so make judgments as to how escapable the situation is and about the rescue factors (e.g., social support) that are available to them.



**Figure 3.1: Arrested Flight hypothesis (adapted from Williams & Pollock, 2001 by O’Connor, 2003)**

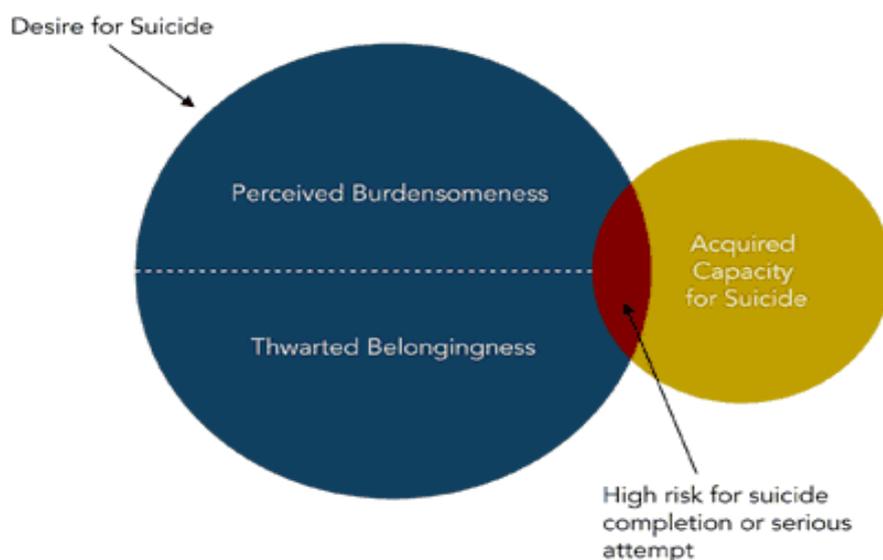
Whether or not someone acts upon this is determined by factors such as capability, impulsivity, and access to means. It has been argued that the judgements regarding defeat, escape and rescue are determined, at least in part, by personality and cognitive factors (O’Connor & Noyce, 2008; Rasmussen, O’Connor & Brodie, 2008). Indeed, research has identified a range of personality and cognitive factors which increase risk of repeat self harm and completed suicide. (e.g. Brezo, Paris, & Turecki, 2006; Ellis & Rutherford 2008; O’Connor, 2010). For example, problem solving capacity (Pollock & Williams, 1998; Schotte & Clum, 1987), the generality of autobiographical memory

(Pollock & Williams, 2001; Williams & Broadbent, 1986), the quality of future cognitions (MacLeod, Pankhania, Lee et al., 1997; O'Connor, Connery, Cheyne, 2000; Rasmussen et al, 2009) and perceived standards (Hewitt, Norton, Flett et al. 1998; Hunter & O'Connor, 2003).

Therefore, when the individual perceives feelings of defeat, views the situation as inescapable, and perceives there to be no rescue factors, this activates a helplessness script (Williams & Pollock 2001) which in turn leads to increased suicide risk. In addition, the model proposes that judgments regarding escape and entrapment mediate the relationship between defeat and suicidal behaviour, whilst rescue factors moderate the relationship between entrapment and suicidal behavior (Rasmussen et al. 2008; O'Connor, 2003).

There is growing empirical evidence for the key elements of the arrested flight model of suicidal behaviour (O'Connor 2003, Rasmussen et al, 2010, Williams, Barnhofer, Crane & Beck, 2005; Williams, Crane, Barnhofer & Duggan, 2005). For example, O'Connor (2003) found that suicidal patients reported significantly higher levels of defeat, along with lower levels of escape potential and rescue factors than controls. In addition, social support was found to moderate the effect of escape potential on suicide risk. More recently, Rasmussen et al (2009) conducted a study investigating the arrested flight model variables, finding that entrapment mediated the relationship between defeat and suicidal ideation.

Another key model to highlight is Joiner's (2005) interpersonal-psychological model (see Figure 4.2 below). This model suggests that suicide risk is greatest when individuals have the desire to die, and this in turn is influenced by two psychological factors: thwarted belongingness and perceived burdensomeness. Thwarted belongingness is a psychological state which involves feelings of social isolation, alienation, and being detached from social networks, whilst perceived burdensomeness is the belief that one is a liability or a burden on others (Ribeiro & Joiner, 2011). Each of these states can increase suicide risk, and research has demonstrated significant positive correlations between each of these states independently and suicidal ideation (e.g. Conner, Britton, Sworts & Joiner, 2007; Van Orden, Witte, Gordon, Bender, & Joiner, 2008). However Joiner (2005) argues that the experience of both states together significantly increases risk, and this has been demonstrated in a number of studies (e.g. Van Orden et al, 2008; Joiner, Van Orden, Witte, Selby, Ribeiro, Lewis & Rudd, 2009). In addition, the individual must also have the capability to act on this desire.



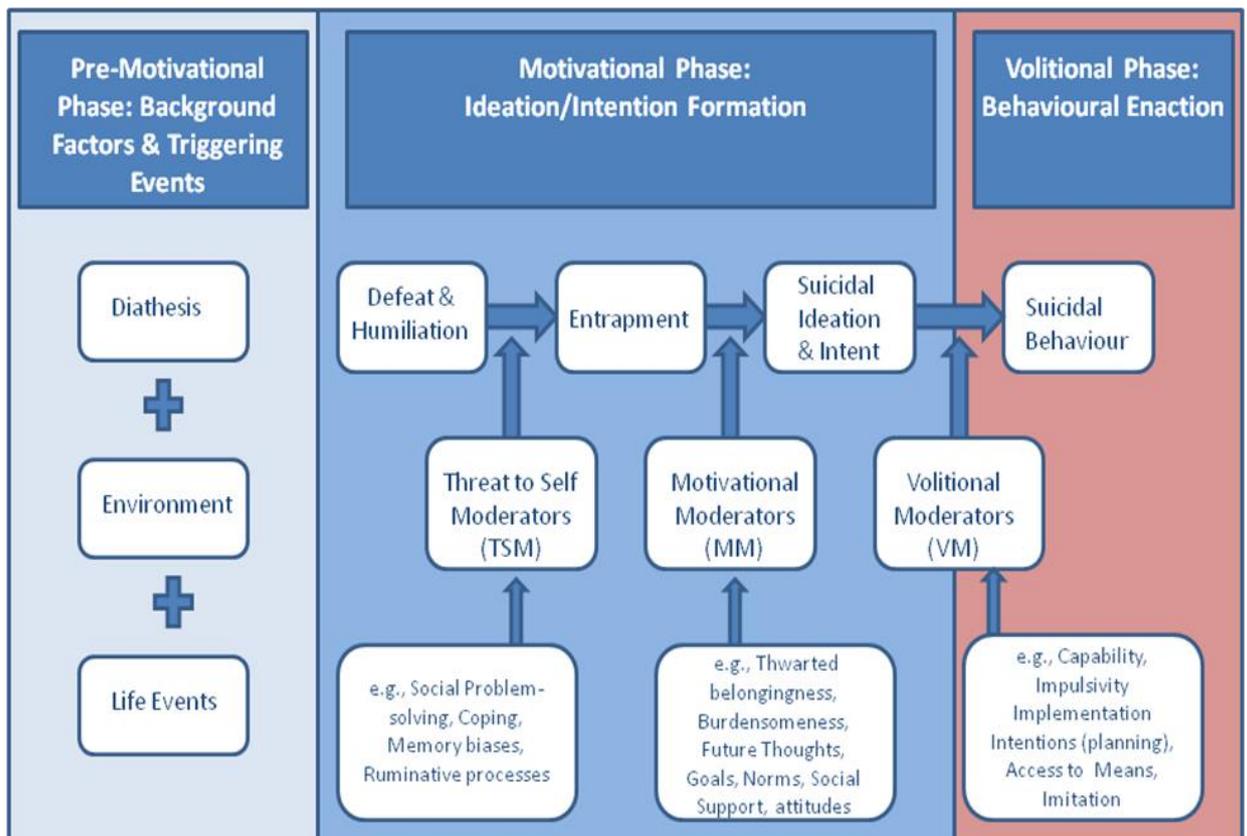
**Figure 3.2: Joiner's Interpersonal-Psychological Model of Suicide**

Joiner (2005) suggests that the ability to overcome self-preservation instincts is developed over time, with repeated exposure to painful and provocative events increasing pain tolerance and reducing the individual's fear of death. This is supported by Nock, Joiner, Gordon, Lloyd-Richardson and Prinstein (2006) who found that those who reported a longer history of non-suicidal self-injury, and reported less pain during the self-injury, were twice as likely to have a history of suicide attempts. Ribeiro and Joiner (2011) suggest that the model is further supported by the fact that a past history of suicide attempts is a significant predictor of suicide risk (Brown, Beck, Steer & Grisham, 2000). Van Orden et al (2008) demonstrated that past attempt history was predictive of level of capability. The more painful and provocative the stimuli, the greater the risk of suicidal behaviours. The interaction of these factors, i.e. a high desire to die, high levels of thwarted belongingness and perceived burdensomeness, and the capability to commit suicide, results in the greatest risk (Joiner et al. 2009). However, it is important to note that only a small amount of studies have investigated this interaction aspect of the model i.e. the interaction between perceived burdensomeness thwarted belongingness and capability. Another limitation of this model is that it does not clearly explain the processes involved in moving from suicidal ideation to suicide attempt. The model would seem to suggest that capability is the main factor in understanding this, however, there may also be other factors involved in this process that the model cannot account for. For example, the arrested flight model highlights the importance of factors such as social support, or rescue factors, in suicide risk. Therefore, whilst this appears to be a promising model of suicide, further research is needed to establish its utility.

All of the models and theories discussed above have made a valuable contribution to our understanding of suicidality. However, one of the limitations of the models and theories discussed so far is that not all of them can distinguish between suicidal ideation and suicidal behaviours. Completed suicides are extremely difficult to predict. Whilst thoughts about suicide, or suicidal ideation, is common, the majority of individuals will not engage in suicidal behaviours, and whilst a history of suicide attempts is a significant risk factor for suicide, the majority of people with such history will not progress to a completed suicide (Ribeiro & Joiner, 2011). It can also be seen from what has been discussed above, that there is significant evidence in support of many different aspects of suicidality. The next model to be discussed is the integrated motivational-volitional (IMV) model of suicidal behavior (O'Connor, 2011). This model aimed to address these concerns by bringing together the existing evidence, and suggesting testable pathways leading to suicidal ideation, and to suicide attempts.

### **3.2 The Integrated Motivational-Volitional Model of Suicidal Behaviour**

The Integrated Motivational-Volitional Model of suicidal behaviour (IMV Model: O'Connor, 2011) brings together the evidence demonstrated by the predominant models of suicide, and provides a framework which aims to discriminate between those who experience suicidal ideation and those who attempt suicide.



**Figure 3.3: Integrated Motivational-Volitional Model of suicidal behaviour (O'Connor, 2011)**

This model proposes that suicidal behaviour results from a complex interaction of factors, with the key predictor being the individuals' intention to engage in suicidal behaviour. The model consists of a pre-motivational phase which includes background factors and triggering events, including diathesis, the individuals' environment, and the life events they have experienced, giving the broader biosocial context for suicide. In this context 'diathesis' includes any genetic predispositional factors or other variables which may present a predisposition to perceptions of defeat, entrapment or suicidality such as personality factors. In regard to this model, the experience of IPA would fit into the pre-motivational phase as this would be classed as a life event, and may also be related to the individuals' environment.

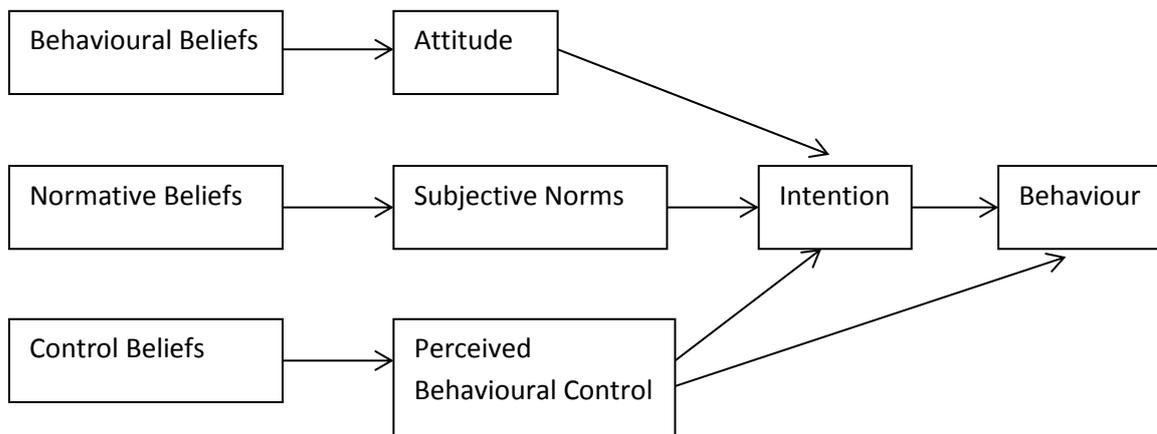
The motivational phase focuses on how suicidal ideation and intention form. This is determined by some of the key elements of the arrested flight model (Williams (1997, 2001; Williams & Pollock, 2000, 2001); the individuals' perceptions of defeat and entrapment. Therefore, factors within the pre-motivational phase can lead to perceptions of defeat and entrapment in response to stress. Higher perceptions of defeat and entrapment can then lead to suicidal ideation and suicidal behaviours. Within the motivational phase, entrapment and suicidal ideation act as mediators. Entrapment mediates the relationship between defeat and suicidal ideation, whilst ideation mediates the relationship between entrapment and suicidal behaviour. Therefore, the presence of the mediating variable along with the other factors increases the risk of the outcome i.e. suicidal ideation or suicidal behaviour.

The pathways within the model (i.e. defeat to entrapment, entrapment to suicidal ideation, and suicidal ideation to suicidal behaviour) are influenced by moderators. Factors such as social problem solving, coping, memory biases and rumination, are known as threat to self moderators, which moderate the pathway between defeat and entrapment. Therefore, when an individual experiences perceptions of defeat, if they also have, for example, low social problem solving skills and a high tendency to ruminate, they will experience higher perceptions of entrapment, whilst high social problem solving skills and the use of effective coping strategies for example, will lead to lower perceptions of entrapment.

There are also motivational moderators such as future thinking, goals, and thwarted belongingness, perceived burdensomeness, and social support, which moderate the pathway between entrapment and suicidal ideation and intent. Therefore, when an

individual experiences perceptions of entrapment, if they also have, for example, low social support, and are not able to generate positive thoughts in relation to the future, there is a greater likelihood that they will experience suicidal ideation.

The model is based around the structure of the Theory of Planned Behaviour (TPB) (Ajzen, 1991).



**Figure 3.4: The Theory of Planned Behaviour (Ajzen, 1991)**

The TPB argues that intention is the key predictor of behaviour, with attitudes, subjective norms and perceived behavioural control acting to influence this intention. This theory provides a useful framework as it makes the distinction between forming intentions and actual behaviours. However, it must be noted that whilst the TPB has been demonstrated to be a good predictor of intentions, it has not been successful in predicting actual behaviours. Whilst there is a pathway between intention and behaviour, the model does not suggest what factors may affect this pathway. The IMV model attempts to address this issue within the final phase of the model, the volitional phase, which forms the pathway between suicidal ideation and intent to suicidal

behaviour. The model suggests volitional moderators such as capability, impulsivity, and access to means, which can influence this pathway.

The IMV model therefore aims to take into account the key factors involved in suicidality as evidenced by previous research, and specifically aims to distinguish between the formation of suicidal ideation and progression to suicidal behaviours. However, this is a new model of suicidality, and whilst there is evidence regarding many of the individual components of the model and their relationship with suicide risk, the structure of the model as a whole, and the interactions between the key variables and the moderators, has not been tested. This thesis aims to address this, providing a test of the model within the context of intimate partner abuse and suicidality.

### **3.3 How the IMV model will be used within the thesis**

The IMV model will be used in this thesis as a framework to guide the focus of the research. It will provide a theoretical basis for the variables that are investigated, and provide a structure for the research. For example, in considering the pre-motivational phase, this informs the research that it is important to include contextual variables such as sociodemographic factors to give an idea of the person's environment. In considering the diathesis element of the model, this research will measure personality factors which can lead to a predisposition towards suicidality, such as socially prescribed perfectionism and self-criticism. It will also measure factors such as post-traumatic stress disorder (PTSD) and depression, as these have been shown to be associated with IPA (Golding, 1999; Gleason, 2003) and can also independently increase suicide risk. Lastly within the pre-motivational phase, this research will

measure relevant life events, including IPA, detailed aspects of IPA, and related events such as experiences of stalking and harassment.

The motivational phase of the Model informs us that defeat and entrapment are key variables that affect the relationship between the factors in the pre-motivational phase and suicidal ideation and behaviours. Therefore, these are key variables which are measured throughout this thesis. The motivational phase also clarifies the role of entrapment as a mediator which increases the risk of suicidal ideation, and this is therefore investigated throughout. The motivational phase also suggests factors which are thought to moderate the pathways within the model, and this is important in guiding the selection of potential moderators for investigation in the current research.

The IMV model will also allow the development of testable hypotheses, as the various pathways and moderators can be tested within the context of this research. It is hoped that making use of the model in this way will allow not only a better understanding of the relationship between intimate partner abuse and suicidality, but it will also allow the model to be tested, allowing conclusions to be drawn regarding its utility in helping us to understand suicidality.

### **3.4 Aims of this thesis**

This thesis aims to investigate the relationship between intimate partner abuse and suicidality, using the IMV Model (O'Connor 2011) as a theoretical framework. Specifically it aims to investigate the mediators and moderators that are involved in increasing suicide risk in those with experience of intimate partner abuse. It will use

the key mediators and moderators suggested by the model, and test the relevance of these in the context of the relationship between IPA and suicidality.

Further, the IMV model does not specify what the temporal relationship may be between the different variables. This is therefore an aspect that this research hopes to clarify. For example, if we take the structure of the model to be linear, then we would assume that IPA occurs within the pre-motivational phase, and along with other factors there, influences the individual's perceptions of defeat. From that point in the model on therefore, the experience of IPA would not have an influence. Alternatively, it may be that IPA is not confined to the pre-motivational phase, but acts at various points throughout the model. The model would also imply that suicidality should not arise if both perceptions of defeat and entrapment are not present, and that suicidality is ultimately an outcome following the experience of IPA and perceptions of both defeat and entrapment. This research aims to clarify these relationships and to be able to comment on the temporal relationships involved.

In addition, the thesis aims to increase our understanding of intimate partner abuse by addressing some of the limitations of the existing literature, as outlined in Chapter 2. It will focus on addressing issues with definitions and comprehensiveness of measures, and samples, whilst aiming to go beyond establishing an association between IPA and suicidality, to look at this relationship in greater depth and provide a more detailed understanding.

With these aims, this thesis will be able to gain a deeper understanding of the relationship between IPA and suicide risk, as well as comment on the usefulness and comprehensiveness of the IMV model in explaining and understanding suicidality.

## **Chapter 4: The relationship between intimate partner abuse and suicidality: An exploratory study**

### **4.0. Structured Abstract**

**4.0.1 Background:** This study aimed to conduct an in-depth investigation of the relationship between intimate partner abuse (IPA) and suicidality, within the context of the Integrated Motivational-Volitional (IMV) Model of Suicidal Behaviour (O'Connor, 2011). This study was largely exploratory to enhance knowledge of the relationship between IPA and suicidality and help determine the utility of the IMV Model in understanding this relationship. This study also aimed to inform the design of the later study reported in chapter five.

**4.0.2 Method:** A prospective survey design was implemented to measure lifetime experience of IPA, experience of stalking and harassment behaviours, suicidal thoughts and behaviours, as well as a number of key variables related to the IMV Model, across two time periods, 3 months apart. Participants were recruited from a wide variety of sources using a range of techniques. Male and female participants with and without experience of IPA were recruited using a mix of opportunistic and targeted sampling, as well as snowballing techniques. Participants with (n=219) and without (n=484) experience of IPA were compared.

**4.0.3 Results:** Participants with experience of IPA were more likely to report having experienced stalking and harassment, and to report more severe levels of such behaviours. Those with experience of IPA also reported higher suicidal ideation and a higher incidence of suicide attempts. Importantly, this was demonstrated for those who had experienced IPA in the past, as well as for those with current IPA experience. The incidence of injury or sexual coercion within the relationship was found to be predictive

of suicidal ideation at Time 2. The relationship between IPA and suicidality was mediated by the frequency of IPA and the severity of stalking experienced. A number of findings were also established with regards to the testing of the IMV Model and the relationship of its key variables with IPA. Those with experience of IPA demonstrated higher levels of socially prescribed perfectionism (SPP), self-criticism (SC) and rumination than those with no IPA experience. In addition, these variables were associated with higher suicidal ideation. SPP and SC were also associated with perceptions of defeat and entrapment. Those with experience of IPA demonstrated significantly higher levels of internal entrapment than those with no experience of IPA, and the frequency of IPA was found to be predictive of internal entrapment. Entrapment acted as a partial mediator of the relationship between defeat and suicidal ideation.

**4.0.4 Conclusion:** This study found a strong association between IPA and suicidality, and expands on previous research in this area by investigating the mechanisms by which suicide risk is increased in this group. This study demonstrated that both internal entrapment and the frequency of IPA play an important mediating role in the relationship between IPA and suicidality. This study highlights the importance of taking into account a range of IPA behaviours in this type of research, and it also highlights the continuing poor outcomes faced by those who have had a previous abusive relationship. The strong association found between IPA experience and suicidality suggests that this is a high risk group, and that screening for suicidality is indicated. When screening for IPA, it is relevant to investigate lifetime exposure as well as current or recent exposure as this is a group that continues to be at increased risk. Further, this study found support for the IMV Model of Suicidal Behaviour,

demonstrating that it is a useful framework for understanding the relationship between IPA and suicidality.

## **4.1 Introduction**

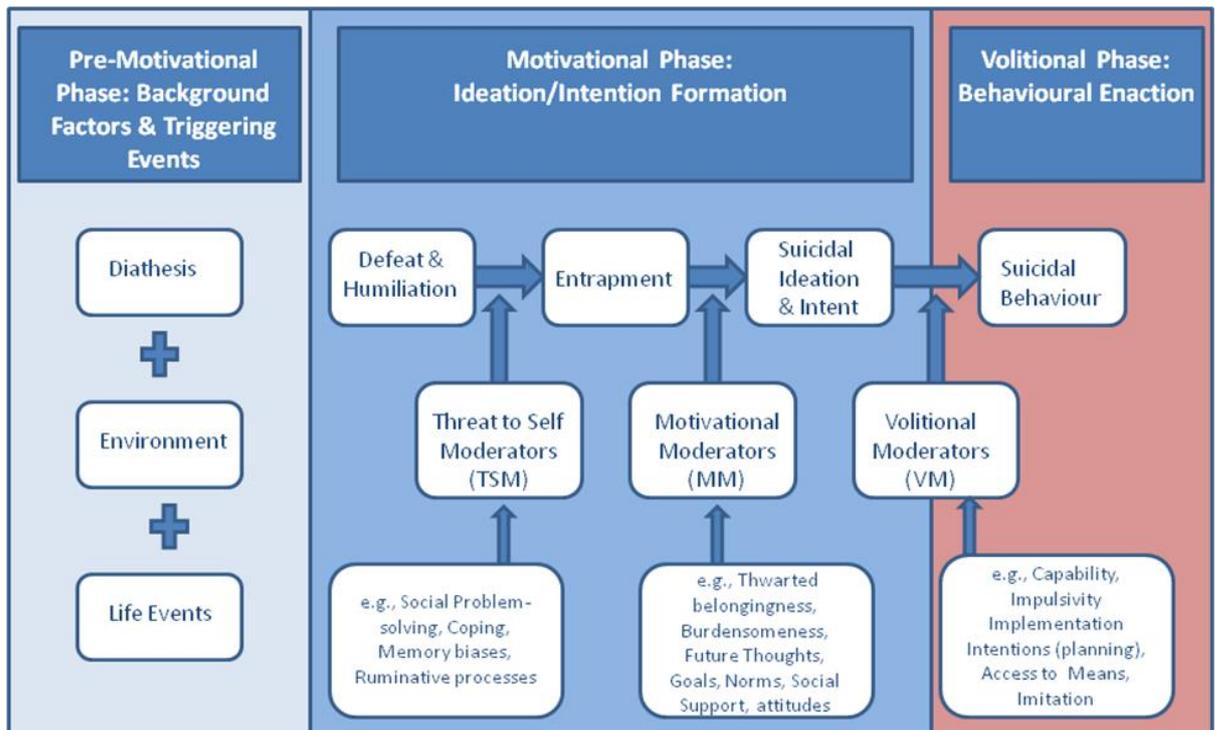
### **4.1.0 The relationship between Intimate Partner Abuse and Suicidality**

Previous chapters have highlighted that the existing literature in this area demonstrates a strong relationship between intimate partner abuse and suicidality. However, it has also been discussed that the factors and mechanisms involved in this relationship need further investigation. The systematic review (see Chapter 2) discussed a number of areas where future research could investigate to expand on our understanding of this relationship.

This chapter presents the first study to be conducted within this PhD, investigating the relationship between IPA and suicidality, within the context of the IMV Model of Suicidal Behaviour (O'Connor, 2011). The chapter will introduce the variables involved, covering IPA and stalking and harassment behaviours, and the various potential mediators and moderators of the relationship between IPA and suicidality suggested by the IMV Model. The introduction concludes by presenting the aims of this study, and the research questions and hypotheses investigated. The method section then outlines the sample used in this study. Each of the measures employed and the study procedure are then detailed. The method section concludes with an overview of the analytic strategy used in the data analysis. The results of this study will then be

presented and discussed. The chapter concludes with consideration of the limitations of the study, along with its implications, and directions for future research.

Before outlining the variables under investigation, it would be useful at this stage to refer back to the structure of the IMV Model (described in detail in Chapter 3), as this has been used as a framework to guide this research.



**Figure 4.1: The Integrated Motivational Volitional (IMV) Model of Suicidal Behaviour, (O'Connor, 2011).**

#### 4.1.1 The IMV Model

The IMV Model views IPA as a life event within the pre-motivational phase. In addition, various different aspects relating to IPA such as severity or forms of abuse experienced could act to further influence suicide risk at this stage. The model would then posit that feelings of defeat and entrapment may be experienced. The extent to which these are experienced is influenced by factors within the pre-motivational phase, and a number of personality and cognitive factors. The pathways between defeat and

entrapment, and between these and suicidal ideation can be moderated by a variety of factors i.e. such factors can interact within these relationships to reduce or increase perceptions of entrapment (threat-to-self moderators) or suicidal ideation (motivational moderators). There are also a number of factors which can act to moderate the pathway between suicidal ideation and suicidal behavior (volitional moderators), thereby increasing or reducing the risk that suicidal ideation will be formulated into actual suicidal behaviors.

The IMV Model proposes that it is unlikely that there is a direct relationship between the experience of IPA and suicidality. First of all it illustrates the importance of context within the pre-motivational phase, supporting the view that a more in-depth understanding of IPA would be beneficial in understanding its relationship with suicide risk. The motivational phase then suggests a number of key factors which must be considered when attempting to understand the pathway to suicidality. Therefore, key elements of this model such as pre-motivational factors independent of IPA, and motivational factors such as defeat and entrapment, are investigated, along with factors that may act as mediators or moderators within the intimate partner abuse-suicidality relationship. The next section will outline the factors under investigation.

#### **4.1.2 Intimate Partner Abuse**

The IMV Model views IPA as a life event within the pre-motivational phase. In addition, various different aspects relating to IPA such as severity or forms of abuse experienced could act to further influence suicide risk at this stage. In relation to the

investigation of the Model, it is of interest whether the influence of such life events is indeed confined to the pre-motivational phase.

In previous chapters one of the main areas of concern within IPA research which was discussed is how IPA is conceptualised and measured. Consequently, this is a key issue that this thesis aims to address. There are a few aspects which must be focused on to advance our understanding of the conceptualisation and measurement of IPA in research.

One aspect highlighted is the samples that are generally used in this area of research. For example, one important aspect is the paucity of research including both males and females with experience of IPA, with the vast majority of research focusing on female-only samples. The few studies which have included males (e.g. Heru et al. 2006; Siemieniuk et al. 2010) have demonstrated that IPA increases suicide risk in this group also. The systematic review (see Chapter 2) highlights the importance of investigating suicide risk in relation to IPA, regardless of sex or sexual orientation.

Also related to sample selection, it is important to address that a large amount of research in IPA focused on clinical or refuge-based populations, perhaps representing a small sub-group of those who have experienced IPA. This is understandable as they represent those at greatest risk, however, as the majority of people who have experienced IPA do not fall within these commonly used sample groups, there is a limited understanding of the relationship between IPA and suicidality in the wider population.

Another key area of focus concerns how IPA itself is measured, and the aspects of IPA which tend to be included in research. Aspects of IPA refers to different forms that IPA can take. For example, IPA most commonly involves psychological abuse. Psychological abuse can be described as any non-physical behaviour designed to control, intimidate, subjugate, demean, punish, or isolate the individual (Women's Aid, 2012). This can encompass a wide variety of behaviours such as physical and psychological isolation from others, verbal abuse, threats, and blaming the individual. This type of abuse can have serious consequences as it may erode factors such as self-esteem over time, and the control and isolation involved could potentially lead to feelings of defeat and entrapment and significantly limit the individuals' ability to access sources of help or support. People may experience psychological abuse alone, or it may be concomitant with other forms of abuse.

IPA may also involve physical abuse which can be understood to include any behaviour which does, or is designed to, cause actual physical harm or have a physical impact on the individual. Physical abuse can include a range of behaviours such as pushing, physical restraint, slapping, kicking, punching, throwing objects, and the use of weapons. Whilst people may experience psychological abuse alone, physical abuse rarely occurs in isolation. Many victims of IPA discussed that when physical abuse occurs they assume the blame, feeling it was their own fault and in some cases, that it was deserved (McLaughlin, O'Carroll, Dickson, O'Connor, submitted). This illustrates that the psychological abuse experienced can affect the individuals' interpretation and perception of any physical abuse, perhaps making the behaviour seem in some way valid or understandable to the victim, allowing the continuation and escalation of the abuse by the perpetrator.

Sexual abuse, described as any sexual encounter that occurs without consent or that is unwanted can also be described as IPA. This can include a range of behaviours such as touching, forced sexual activity, painful or degrading acts, and exploitation. Coercion or manipulation in the form of threats, or psychological abuse, are often used in this context to lead the individual to submit to unwanted sexual acts. It may also be that fear of physical abuse, or the escalation of abuse, puts the individual in a position where they feel that enduring unwanted sexual behaviours is their best option.

Therefore, psychological, physical and sexual abuse are some of the key aspects of IPA. It may be that an individual only experiences one of these aspects, or all of them to differing degrees. It is also clear from the brief descriptions above, how these different aspects of IPA can overlap and interact with each other. As such, measuring any of these aspects in isolation cannot give a complete view of IPA. The systematic review (see Chapter 2) highlights that many studies often focus on only one aspect of IPA (such as physical abuse) and do not use a comprehensive definition or measure of IPA. Very few empirical studies investigate the different forms of IPA (Hall, Walters & Basile, 2012). Those which have taken a more comprehensive approach have found that various aspects of IPA impact on suicide risk differently (Blasco-Ros et al. 2010; Pico-Alfonso et al. 2006; Kaslow et al. 1998; Thompson et al. 1999). For example, these studies have demonstrated that non-physical IPA plays an important role in suicide risk (Kaslow et al. 1998; Thompson et al. 1999), finding that psychological abuse can have a significant impact on mental health (Blasco-Ros et al. 2010). Indeed, Blasco-Ros et al (2010) found that those who had experienced only psychological abuse demonstrated poorer mental health recovery over time than those who had experienced both psychological and physical abuse (see systematic review in Chapter 2 for a more

detailed discussion). Pico-Alfonso et al (2006) further demonstrated that sexual abuse increases suicide risk when it is concomitant with both physical and psychological abuse. Therefore, when a more detailed measure of IPA is used, psychological aspects of IPA appear to play a key role in increasing suicide risk, and that combinations of different aspects of IPA have a differential impact on risk. What is more, recent research has stressed the importance of investigating risk factors and health outcomes associated with different aspects of IPA (Hall et al. 2012; Leone, 2011). It is therefore important to measure IPA as a multi-faceted phenomenon in order to deepen our understanding of the experience of IPA itself, as well as its relationship with suicidality.

Due to the fact that IPA is being measured in the current research using a survey methodology, it has been suggested by researchers (e.g. Straus & Douglas, 2004) using a similar approach that a measure of social desirability bias should also be taken. This can then assess whether participants tend to answer personal questions with a socially desirable response bias i.e. they will be more likely to answer questions in a way they see as socially acceptable. The authors suggest using such a measure and testing for differences between those with and without experience of IPA. If there is a significant difference on socially desirable response bias, then this can be controlled for in the analysis. Therefore, a brief measure of social desirability bias has been included in the current research.

#### **4.1.3 Stalking**

Other than the distinctions between physical, psychological and sexual abuse, there are other aspects of IPA which are important to consider. Research has demonstrated a link

between stalking and IPA (e.g. Tjaden & Thoennes, 2000). The IMV Model views experiences of stalking as a life event within the pre-motivational phase. In relation to the investigation of the Model, it is of interest whether the influence of such life events is indeed confined to the pre-motivational phase, and what their relationship with the other key variables within the model may be.

Stalking is generally defined as repeated unwanted attention or contact, which can take a variety of forms and be carried out in numerous ways such as in person, by letters or telephone, or online. Stalking can involve a wide range of behaviours such as persistent contact, following, monitoring the person's activities, making threats, damaging property, verbal abuse, and causing physical or sexual harm. However, another important aspect of defining stalking is how the actions are perceived by the recipient. Mullen, Pathe, Purcell and Stuart (1999) suggest that the person's perceptions of being harassed and experiencing fear as a result of the behaviour are just as important as the intentions and behaviour of the perpetrator in defining stalking. Indeed many measures of stalking and harassment include items to assess how disturbed, intimidated, distressed or scared the person felt as a result of the stalking experienced (e.g. The Stalking & Harassment Behaviour Scale; Turmanis & Brown, 2006).

The majority of stalking incidents involve individuals who are or were intimate partners, and a high correlation exists between IPA and stalking (e.g. Baldry, 2002; Coleman, 1997; Davis, Ace, & Andra, 2000; Mechanic et al, 2000; Logan, Leukefeld, & Walker, 2000). Within the context of IPA, stalking has not received a great deal of attention, however a few recent studies have treated stalking as a distinct component of IPA (e.g. Basile & Hall, 2010; Logan, Shannon & Cole, 2007). Indeed, recent work has

empirically demonstrated the validity of models positing that stalking by intimate partners forms a distinct set of behaviours (Hall et al. 2012), and researchers have argued that stalking should be considered as an aspect of IPA (e.g. Hall et al. 2012; Norris & Huss, 2011; Tjaden & Thoennes, 2000). Given that studies have demonstrated an association between severity of abuse and suicidality (Vitanza et al. 1995; Wingood et al. 2000; Naved & Akhtar, 2008), and severity of abuse has been reported to be associated with severity of stalking behaviours (Norris & Huss, 2011; Mechanic et al. 2000), this may be an important aspect of IPA to consider when investigating suicidality.

#### **4.1.4 Post-Traumatic Stress Disorder**

A factor that is important to consider when investigating IPA is Post-Traumatic Stress Disorder (PTSD), as IPA could clearly be considered a traumatic experience. Golding et al. (1999) and Cascardi et al. (1999) reviewed studies reporting PTSD in women exposed to IPA, and found that all studies demonstrated high levels of PTSD in this population, ranging from 31% - 84% (e.g. Gleason, 1993; Kemp et al. 1995). The variation found was due to where the sample was recruited from, with higher rates found in refuge samples than from community samples. However, as there has been little research on non-refuge samples in the UK, there is a need to consider PTSD in relation to the current research.

This is also important as PTSD is a factor which can independently increase suicide risk. A strong relationship between PTSD and suicidality has been demonstrated across a large number of studies (e.g. Davidson, Hughes, Blazer, & George, 1991; Tarrier &

Gregg, 2004; Sareen et al. 2007; Sareen, Houlahan, Cox & Asmundson, 2005). A review (Panagioti, Gooding, & Tarrier, 2009) of the relationship between PTSD and suicidality concluded that there is a strong positive association between the two, and this is consistent despite variations across the studies, such as population or type of trauma experienced.

It is unclear where PTSD may sit within the IMV Model. It may act as a life event or diathesis within the pre-motivational phase, or it could act within the motivational phase, interacting with perceptions of defeat and entrapment. Previous research has suggested that defeat and entrapment may mediate the relationship between PTSD and suicidality (Panagioti, Gooding, Taylor & Tarrier, 2012), therefore implying that PTSD may be a pre-motivational factor within the model. However, this has not been tested. Therefore, it is important for this research to firstly establish whether levels of PTSD are higher in those with experience of IPA, and if so, to determine how this fits within the IMV Model and how it interacts with the variables involved.

#### **4.1.5 Depression**

A factor that is important to consider when investigating IPA is depression. A recent systematic review and meta-analysis (Beydoun, Beydoun, Kaufman, Lo, & Zonderman, 2012) found an increased risk of major depressive disorder, elevated depressive symptoms, and postpartum depression in those who had experienced IPA. Beydoun et al. (2012) concluded that a sizeable proportion of depressive disorders and symptoms can be attributed to lifetime exposure to IPA. The majority of research into the relationship between IPA and suicidality does not measure or control for levels of

depression in the sample, but this is clearly a relevant and important variable to include in relation to IPA.

This is also important as depression is a factor which can independently increase suicide risk. An untreated major depressive episode is one of the most important risk factors for suicidality (Rihmer, 2011), with 15% of patients with such disorders dying by suicide and around half of them making at least one suicide attempt during their lifetime.

It is unclear where depression may sit within the IMV Model. It may act as a life event or diathesis within the pre-motivational phase, or it could act within the motivational phase, interacting with perceptions of defeat and entrapment. Therefore, it is important for this research to firstly establish whether levels of depression are higher in those with experience of IPA, and if so, to determine how this fits within the IMV Model and how it interacts with the variables involved.

#### **4.1.6 Self-Criticism**

Self-criticism is viewed as a stable personality factor, and therefore acts as a background factor within the pre-motivational phase. The IMV model posits that predisposing personality vulnerabilities, such as self-criticism, can predict suicidality when activated by a stressor. Self-criticism can be described as overly critical self-evaluation. Research has demonstrated that self-criticism is correlated with suicidality (e.g. O'Connor, 2007; O'Connor & Noyce, 2008). However, little empirical research has been conducted in relation to IPA and self-criticism. Existing qualitative research

in this area suggests that self-critical evaluations are a significant factor within IPA relationships, being strongly associated with the psychological abuse experienced (e.g. Sev'er, 2002). Therefore whilst there is research to support the role of self-criticism within suicidality, further research is needed to investigate how this factor affects the relationship between IPA and suicidality. The IMV model posits that self-criticism would act as a predisposing factor for perceiving defeat and entrapment (i.e. it increases sensitivity to defeat), meaning that those who are overly self-critical are more likely to experience greater perceptions of defeat and entrapment when exposed to a stressor. Research is needed to investigate the role of self-criticism within the IPA-suicidality relationship.

#### **4.1.7. Socially Prescribed Perfectionism**

Perfectionism is a further personality factor which acts within the pre-motivational phase. The IMV model posits that predisposing personality vulnerabilities, such as perfectionism, can predict suicidality when activated by a stressor. Perfectionism is an important factor to consider as it is particularly concerned with sensitivity to signals of defeat (O'Connor, 2007). Perfectionism is viewed as a multi-dimensional construct, and certain dimensions of perfectionism have been consistently implicated in increased hopelessness, depression and suicidal behaviour (Rasmussen, O'Connor & Brodie, 2008). Socially prescribed perfectionism is associated with suicidality (O'Connor, 2007; Rasmussen, 2004). Socially prescribed perfectionism can be described as a belief that others hold unrealistic and exaggerated expectations of us that must be met in order to gain acceptance and approval. This may therefore be a particularly relevant factor to consider in relation to IPA, as part of the psychological abuse experienced can involve

feeling the need to reach unrealistic standards to gain approval from the abusive partner (Sev'er, 2002). However, no empirical research has been conducted in relation to IPA and perfectionism. Therefore whilst there is research to support the role of socially prescribed perfectionism within suicidality, research is needed to investigate how this factor affects the relationship between IPA and suicidality. The IMV model posits that perfectionism would act as a predisposing factor for perceiving defeat and entrapment, meaning that those who are perfectionistic, particularly those scoring highly on socially prescribed perfectionism, would experience greater perceptions of defeat and entrapment when exposed to a stressor. Research is needed to investigate the role of socially prescribed perfectionism within the IPA-suicidality relationship.

#### **4.1.8 Defeat**

The first stage within the motivational phase of the IMV model involves the individual making appraisals regarding the extent to which they feel defeated by the factors in the pre-motivational phase. This may be a particularly relevant stage to those with experience of IPA as the on-going nature of IPA and the psychological abuse experienced could result in feelings of defeat. Indeed, a recent qualitative study found that feelings of defeat were one of the key themes discussed by those who had experienced IPA (McLaughlin et al, submitted). However, to our knowledge, this is the first piece of empirical research to consider defeat in relation to IPA. In relation to suicidality, Williams and Pollock (2001) suggest that defeat can increase suicide risk, and previous research has demonstrated that defeat is positively correlated with suicidal ideation (e.g. Rasmussen et al. 2010). Therefore whilst there is research to support the role of defeat within suicidality and within the IMV Model, further research is needed

to investigate how this factor affects the relationship between IPA and suicidality. The IMV model posits that defeat would act as a mediating variable between the stressor and suicidality, meaning that defeat is the mechanism which increases suicide risk. This suggests to this author that IPA may not have a direct effect on suicidality, but suicide risk in this group is increased through perceptions of defeat. Research is needed to test this relationship.

#### **4.1.9 Entrapment**

The second stage within the motivational phase of the IMV model involves the individual making appraisals regarding the extent to which they feel trapped. A recent qualitative study found that feelings of entrapment were one of the key themes discussed by those who had experienced IPA (McLaughlin et al, submitted). However, this is the only piece of research to consider entrapment in relation to IPA and its association with suicidality. In relation to suicidality, Williams and Pollock (2001) suggest that entrapment can increase suicide risk, and previous research has demonstrated that perceptions of entrapment mediate the relationship between defeat and suicidal ideation (e.g. Rasmussen et al. 2010). Therefore whilst there is research to support the role of entrapment in the aetiology of suicidality, research is needed to investigate how this factor affects the relationship between IPA and suicidality. The IMV model posits that entrapment would act as a mediating variable between defeat and suicidal ideation, meaning that entrapment is the mechanism by which defeat increases suicide risk. This suggests that defeat does not have a direct effect on suicidal ideation, but ideation is increased through perceptions of entrapment. Research is needed to investigate the role of entrapment within the IPA-suicidality relationship.

#### **4.1.10 Rumination**

Threat-to-self moderators act to moderate the defeat-entrapment pathway. One such moderator is rumination. The IMV model posits that predisposing cognitive vulnerabilities, such as rumination, can predict suicidality when activated by a stressor. Rumination can be described as enduring, repetitive and self-focused thinking which is a frequent reaction to depressed mood (Rippere, 1977). Rumination has been associated with proximal predictors of suicidality such as depression (e.g. Robinson & Alloy, 2003; Nolen-Hoeksema, McBride & Larson, 1997), with a systematic review establishing a clear association between rumination and suicidality (Morrison & O'Connor, 2008). However, no research has been conducted in relation to IPA and rumination. Therefore whilst there is research to support the role of rumination within suicidality, research is needed to investigate how this factor interacts within the relationship between IPA and suicidality. The IMV model posits that rumination would act as a moderating variable between defeat and entrapment, meaning that those who are predisposed to ruminate when their mood is low would experience higher perceptions of entrapment, i.e. they may be more likely to view the situation as inescapable. However, lower levels of rumination could reduce perceptions of being trapped. Research is needed to investigate the role of rumination within the IPA-suicidality relationship.

#### **4.1.11 Aims**

This study is the first of its kind, investigating the relationship between IPA and suicidality, within the context of the IMV Model of Suicidal Behaviour. This study was largely exploratory to help inform the design of the later study reported in chapter

five. It aimed to address many of the limitations within IPA research which have been discussed previously, such as issues with sample composition, conceptualisation and measurement. This study aimed to investigate the IPA in some depth, and explore the factors and mechanisms involved in the relationship between IPA and suicidality.

#### **4.1.12 Research Questions & Hypotheses**

This study addressed a number of research questions and hypotheses derived from previous research in order to explore the relationship between IPA and suicidality in more depth, and to test the utility of the IMV Model in helping us to understand this relationship.

**Table 4.1: Research questions and related hypotheses**

<b>Research Area</b>	<b>Research Question</b>	<b>Hypotheses</b>
<b>Impact of social desirability IPA &amp; Suicidality</b>	RQ1: are there differences in levels of social desirability between those with and without IPA experience?	H1: There will be no significant differences in levels of social desirability in those with and without IPA experience
	RQ2: Is the experience of IPA related to suicidality?	H2: Those with experience of IPA will demonstrate higher suicidality than those with no experience of IPA.
	RQ3: Is the relationship between IPA and suicidality mediated by the severity or frequency of IPA, or the presence of any of the different forms of IPA?	H3: The different forms of IPA will have differential impacts on suicidality.  H3a: The relationship between IPA experience and suicidality is mediated by IPA severity, IPA frequency, and the presence of different aspects of IPA.
	RQ4: Are there any differences in suicidality relating to whether IPA is current or in the past?	H4: There will be a significant difference in suicidal ideation between those experiencing IPA currently and those who have experienced it in the past, with higher levels among those with current IPA experience.
<b>IPA &amp; Stalking</b>	RQ5: Is the experience of stalking related to the experience of IPA?	H5: Those with experience of IPA will demonstrate higher level of stalking scores
<b>IPA, Stalking, Suicidality</b>	RQ6: To which extent does stalking mediate the IPA-suicidality relationship?	H6: The relationship between IPA and suicidality will be mediated by Level of Stalking
<b>IPA &amp; Suicidality – relationships with PTSD and depression</b>	RQ7 – do those with experience of IPA demonstrate higher levels of PTSD and depression, and does this impact on suicidality?	H7a: those with experience of IPA will demonstrate higher levels of PTSD and depression.
		H7b: in those with experience of IPA, PTSD and depression will mediate the relationship between IPA and suicidality
<b>IPA &amp; Suicidality – relationships with Socially Prescribed Perfectionism (SPP), Self-Criticism (SC)and Rumination</b>	RQ8: What is the relationship of SPP, SC and rumination with IPA and suicidality?	H8a: Those with experience of IPA will demonstrate higher scores on SPP, SC and rumination than those with no experience of IPA
		H8b: High scores on SPP, SC and rumination will be associated with higher suicidal ideation

	RQ9: Are SC and SPP associated with defeat and entrapment?	H9: SC and SPP will be associated with higher perceptions of defeat and entrapment
	RQ10: does rumination act as a threat-to-self moderator, moderating the defeat-entrapment relationship?	H10: Rumination will moderate the defeat-entrapment relationship.
<b>IPA experience &amp; Defeat and Entrapment</b>	RQ11: What is the relationship between IPA experience and defeat, internal and external entrapment scores?	H11: there will be a relationship between IPA experience and defeat and entrapment scores, with those having experienced IPA demonstrating higher defeat and entrapment scores.
		H11a: There will be an association between frequency of IPA and defeat and entrapment scores, with more frequent IPA being associated with higher defeat and entrapment scores.
		H11b: There will be an association between severity of IPA and defeat and entrapment scores.
	RQ12: Does defeat mediate the relationship between IPA and suicidality?	H12: defeat will mediate the relationship between IPA and suicidal ideation.
	RQ13: Does entrapment mediate the defeat-suicidality relationship?	H13: entrapment will mediate the defeat-suicidality relationship.

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Key: IPA=intimate partner abuse; SPP=socially prescribed perfectionism; SC=self-criticism, PTSD=post-traumatic stress disorder

## **4.2 Methods**

This section will describe the participants, measures and procedure used within this study, and will conclude with an overview of the analytic strategy used in the data analysis.

### **4.2.0 Participants**

Participants were recruited from a wide variety of sources using a range of techniques. As it is estimated that around 1 in 4 women in the general population will experience IPA at some point in their lives, and the prevalence amongst men in the general population is not known, male and female participants with and without experience of IPA were recruited using a mix of opportunistic and targeted sampling, as well as snowballing techniques. Participants were recruited through placing flyers advertising the project in a range of public places such as libraries, leisure centres, health centres, and family planning clinics in Stirlingshire and Lanarkshire in order to reach a wide sample of the general population. Adverts were also placed in local newspapers. A range of more targeted recruitment strategies were also used, and are described below.

Students have been identified as a high risk group for IPA. As such, participants were recruited from outside of university campuses throughout Lanarkshire by the researcher. Within the University of Stirling, participants were also recruited by placing an advert for the project on the students' web portal home page, and also by running the project on the Psychweb system. This is an online experiment management system which allows first and second year undergraduates to take part in research projects for course credit.

In order to specifically target those with experience of IPA, participants were recruited through Women's Aid branches throughout Stirlingshire and Lanarkshire. The researcher liaised with Women's Aid workers who identified women interested in taking part through their community outreach work, and put them in touch with the researcher. The researcher also worked with Men's Aid in Scotland specifically to recruit male victims of IPA.

To target a wider range of people with experience of IPA, a number of online sources were used such as Facebook groups (e.g. Women and Men Against Domestic Partner Abuse, Domestic Abuse group) and chat forums concerning IPA. The researcher advertised the project on group notice boards and in forum threads.

In order to reach a range of individuals, snowballing techniques were also used, with participants encouraged to pass on the researchers' details to anyone they knew who they felt may be interested in taking part.

There were 703 participants (561F, 142M) retained in the study at Time 2. Only 4 individuals dropped out between Time 1 and Time 2. It is recognised that this is a very good retention rate. This may be down to a number of reasons. Firstly that the majority of people participating in the research showed interest in the project and many commented that they found it enjoyable to take part in. There is also the aspect that the follow up period of 3 months was a relatively short period of time, and almost everyone kept the same contact details throughout the study. The researcher also played an active role to keep the project in the minds of the participants and to keep up good contacts

with organisations which had helped with recruitment, to maintain their interest at follow up. For example, emails were sent to participants (with their permission) each month, thanking them for taking part and for their interest in the project, and reminding them when the researcher would be in touch again for the second phase of the project. The researcher also regularly visited the various organisations and sites where recruitment had taken place, to thank them and keep them up to date. Some organisations such as various branches of Women's Aid requested a summary of the findings on completion of the project in order that they could use the findings and the fact that they had participated in research to support future bids for funding. Therefore, a close relationship with the researcher appeared to provide benefits for both sides.

The 703 participants were made up of 33 nationalities, the majority of which were British (n=581 (83%)), and lived across 12 countries, with the majority residing in the UK (n=662 (94%)). The age range was 16-95, with the mean age being 26 years old (SD=10).

In respect of sexual orientation, the majority were heterosexual (n=645 (91%)), with 5% (n=34) being bisexual, and 3% homosexual (n=22). Less than 1% chose not to specify their sexual orientation.

With regard to the current or most recent occupations of the participants, these covered a wide range of occupations. The majority were students (n=442 (62%)). 6.4% (n=45) were academics, and just under 5% were in sales/retail. Categories which described between 2% - 4% of the sample each, were administrative, medical, management, social care, education, and leisure industry workers. A number of other categories made up

less than 1% of the sample each, these being customer services, marketing, psychologists, voluntary sector, driving occupations, security, scientists, manual labourers, carers, and local government workers.

With regard to the highest level of education they had obtained, the majority were education to high school level (n=310 (44%)). 23% (n=159) were educated to college level, 19% (n=137) to degree level, and 14% (n=97) had postgraduate qualifications.

The majority of the sample were currently employed at the time of the study (n=377 (53%)), with the second highest employment status being those in full time education (n=268 (38%)). 8.2% (n=58) were unemployed.

With regard to experiences of intimate partner abuse (IPA), the majority of participants had no experience of IPA (n=484 (69%)). Participants with experience of IPA could be divided into three groups; those with experience of IPA in the past (n=171 (24%)); participants currently experiencing IPA (n=32 (5%)); and participants with experience of IPA both in the past and currently (n=16 (2%)).

The majority of those with experience of IPA were female (86%) with only 14% being male. Of those with experience of IPA, 88% were heterosexual, 8% were bisexual and 5% were homosexual. Due to the small number of male participants with experience of IPA, and the small numbers of those with a sexual orientation other than heterosexual who had experienced IPA, the data was not analysed to look at differences across gender or sexual orientation.

### **4.2.1. Measures**

This section will outline the measures employed in this study. All measures were completed at both time points.

This section will firstly give an overview of the measures of life events i.e. IPA and stalking and harassment behaviours. There will then be an overview of the study outcome measures, measures relating to the pre-motivational phase of the model, and measures relating to potential mediators and moderators of the relationship between IPA and suicidality. The section will conclude with any additional measures.

#### **4.2.1.0 Life Events**

##### **4.2.1.0.0 Intimate Partner Abuse**

Intimate partner abuse was measured using a modified version of the Conflicts Tactics Scale 2 Short Form (Straus & Douglas, 2004). This is a 16 item measure covering the tactics of psychological aggression (e.g. my partner insulted or swore or shouted or yelled at me), physical assault (e.g. my partner pushed, shoved or slapped me), injury from assault (e.g. I had a sprain, bruise, cut or felt pain the next day because of a fight with my partner), and sexual coercion (e.g. my partner insisted on sex when I did not want to, or insisted on unsafe sex). In addition, the measure allows classification of the behaviours according to level of severity. For example, under the psychological aggression category, ‘my partner insulted or swore or shouted or yelled at me’ is classed as a minor level of severity, whilst “my partner destroyed something belonging to me or threatened me’ is classed as severe. The frequency of abusive behaviours is also measured.

Items were rated on a 5-point Likert type scale, ranging from ‘Never happened’ to ‘More than 5 times in the past year’. Participants selected a point on this scale, both for their own behaviour towards a partner, and for the partner’s behaviour towards them. This was completed for both current and previous relationships, by all participants, regardless of IPA experience. This results in a frequency score for each subscale (psychological aggression, physical assault, injury, and sexual coercion). Summing these scales also gives a view of whether IPA was present or not, with any score of 1 or above indicating an incidence of IPA. By summing the items classed as minor, and those as severe, it is also possible to categorise the highest level of severity that each participant experienced.

Before completing the measure for current and previous relationships, participants were given a definition of IPA and asked whether they considered that IPA was present in those relationships, indicating their response as ‘yes’, ‘no’ or ‘unsure’.

This measure therefore provides information on the types of abusive behaviours experienced across the lifetime, along with the frequency and severity of those behaviours. See Appendix 4 for the measure.

Straus, Hamby, Boney-McCoy, and Sugarman (1996) reported normative data for this measure, based on a sample of students, including prevalence and chronicity. The prevalence rate is the percentage of the sample who reported one or more instances of the acts in each subscale (psychological aggression, physical assault, injury, and sexual coercion). Straus et al (1996) suggested that this was not a meaningful statistic for the

psychological aggression scale as almost everyone reported at least one instance. For the other subscales, around 35% reported having been a victim of physical assault, 18% reported sexual coercion, and 9% reported injuries. Chronicity indicates how often the behaviours measured by each scale occurred, given as a mean number of times that the behavior occurred in the last year. Psychological aggression was the most frequent, then sexual coercion followed by physical assault and finally injury as the most infrequent type of abuse.

According to Straus et al. (1996), the CTS2 has good internal consistency. The Cronbach's  $\alpha$  reported for each of the four sub-scales was as follows; psychological aggression = .79; physical assault = .86; injury = .95; sexual coercion = .87. In the current study, the details for each subscale were as follows; psychological aggression  $\alpha$  = .43; physical assault  $\alpha$  = .76; injury  $\alpha$  = .52; sexual coercion  $\alpha$  = .50.

#### **4.2.1.0.1 Stalking and Harassment**

The Stalking and Harassment Behaviour Scale (SHBS; Turmanis & Brown, 2006) measured the incidence, nature and severity of stalking and harassment experienced by the participant along with the psychological effects of those behaviours. The measure consists of 42 stalking behaviours that were assembled by Turmanis and Brown (2006) from the literature and from six scales: Stalking Behaviour Checklist (Coleman, 1997); the Pathe and Mullen (1997) questionnaire; the Stalking Incident Checklist (Wright et al, 1996); the Unwanted Pursuit Behaviour Inventory (Palarea & Langhinrichsen-Rohling, 1998); Obsessive Relational Intrusion-Participant Short form (Spitzberg & Cupach, 1998); and the Courtship Behaviour Items (Sinclair & Frieze, 2000).

The participant is firstly asked whether they have ever received unwanted attention, more than once, be letters, notes, emails, phone calls, faxes, following them, attempts to approach them, driving by their home, sending them gifts, or finding out information about them. If they have not, this measure is skipped, and the participant proceeds to the next section. If they indicate that they have experienced such behaviours, then the rest of the measure is completed.

Participants are presented with the list of 42 behaviours, and for each item participants were asked to indicate if they had ever experienced each behavior. For example, behaviours include being approached in public, having their home broken into, being followed, and being threatened. If the behavior has not been experienced, the participant simply leaves that item blank. For each behavior the participant has experienced, they are asked to rate the frequency with which this behaviour occurred on a scale from one (hardly ever) to ten (all the time). Participants also rated the degree of distress experienced as a result of the behaviours from one (not at all disturbed/scared) to ten (extremely disturbed/scared). The SHBS therefore comprised of two scales, the total amount of harassing behaviours (THB) and the subjective distress scores (SDS). Ratings for each are summed to give two scores. Higher ratings indicated greater frequency and greater degrees of distress. The resulting scores are used to calculate a score representing the severity of the stalking and harassment experienced (level of stalking (LOS) score), following the procedure set out by Turmanis and Brown (2006). This is calculated by multiplying the frequency of each of the reported behaviours by the level of subjective distress that each of these behaviours caused, and then summing

these scores. Therefore the formula for the LOS score = sum of the frequency of the behavior x the sum of the level of distress. See Appendix 5 for the measure.

Turmanis and Brown (2006) reported normative data for this measure, based on a sample of students and office employees. 78% of the sample were found to have experienced stalking and/or harassment behaviours. Predominantly mild stalking and harassment behaviours were most frequently reported, with more severe and disturbing behaviours recorded infrequently.

According to Turmanis and Brown (2006) the SHBS has good internal consistency, reporting a Cronbach's  $\alpha$  averaging above .90 for both the TBH and SDS items. In the current study, the Cronbach's  $\alpha$  was .87 for both the THB scale and the SDS scale.

#### **4.2.1.1 Outcome Measures**

##### **4.2.1.1.0 Suicidality**

Suicidality was measured using the Beck Scale for Suicidal Ideation (SSI; Beck et al, 1979). This scale has 21 items. There are two main subsections. The first subsection consists of the first five items. Participants are given 3 statements for each item, and asked to select the statement in each group that best describes how they have been feeling for the past week. Items are scored between 0 and 3. Scores for this subsection can then be totalled to give a suicidal ideation score, with higher scores representing higher suicidal ideation. Depending on the participant's responses within this first section, they are asked to complete the next subsection. This second sub-section consists of 14 items, and is scored in the same way. This section contains items relating

to intent and capability, with higher scores representing higher degrees of content and a greater level of capability. All participants then complete item 20 relating to the amount of times the participant has attempted suicide (never, once, or more than once). Throughout these analyses, this suicide attempt variable is treated as a scale variable. If they have attempted suicide before, they are asked to complete the final item relating to the strength of their wish to die during the suicide attempt. The capability scale data was not analysed in the current study due to the small number of participants who had attempted suicide. See Appendix 6 for the measure.

Beck, Steer & Ranieri (1988) reported normative data for this measure when completed on a computer, based on a sample of inpatients and outpatients with psychiatric or affective disorders. The mean rating for suicidal ideation in this sample was .62. Normative data for the presence and number of suicide attempts was not reported.

According to Beck et al (1979) the BSI has good internal consistency, showing a Cronbach's  $\alpha$  of .89 for both the sub-sections. In the current study, the Cronbach's  $\alpha$  for the first sub-section was .91, and .86 for the second sub-section, showing good internal consistency. The two scales together showed a Cronbach's  $\alpha$  of .90, demonstrating very good internal consistency.

#### **4.2.1.1.1 Depression**

The Patient Health Questionnaire (PHQ-9; Kroenke et al, 2001) is designed as a screening measure for depression. It is a 9 item measure, assessing the current state of depressive thinking. Items ask how often participants have been bothered by specific

problems over the past two weeks. Examples of the problems are “little interest or pleasure in doing things”, and “trouble falling or staying asleep, or sleeping too much”. Responses are on a 4-point scale, indicating the frequency with which the problem has been experienced, from 0 (not at all) to 3 (nearly every day), with higher scores representing greater frequency. There is an additional final question in the PHQ-9 which asks, “If you have been bothered by any of these problems in the last two weeks, how difficult have these problems made it for you to do your work, take care of things at home or get along with other people?” This item is also rated on a 4-point scale, which runs from ‘not difficult at all’ to ‘extremely difficult’, but is treated as a stand-alone item.

A depression score is reached by summing the total score of items 1-9. A score of more than ten indicates moderate to severe depression, whereas a score of ten or less indicates mild or no depression. See Appendix 7 for the measure.

The PHQ-9 had the benefit of not significantly adding to the number of questions the participant had to answer. In addition it has a higher level of validity and sensitivity to symptom severity than that reported by other screening and diagnostic instruments (Bjelland, Dahl, Haug & Neckelmann, 2002). According to Kroenke et al, (2001) the PHQ-9 has very good internal consistency, showing a Cronbach’s  $\alpha$  of .88. In the current study, the Cronbach’s  $\alpha$  was .89.

#### **4.2.1.1.2 Post Traumatic Stress**

Post-traumatic stress disorder was assessed using The Posttraumatic Diagnostic Scale (Foa et al, 1997). This measure firstly gives a checklist of 12 traumatic events, for example, a serious accident, non-sexual assault by someone they know, or a life threatening illness. This also includes an 'other' category. The participant is asked to select all the events which they have experienced or witnessed. Participants are then asked, out of the items they have selected, which event has bothered them the most, and to briefly describe that event. The remainder of the measure is then completed with regard to that event. The participant then completes 6 yes/no questions relating to physical injuries to themselves or someone else, and how the participant felt at the time of the event. Participants are then asked to complete 17 items, corresponding to the DSM-IV PTSD symptoms: 5 questions on re-experiencing (e.g. 'having upsetting thoughts or images about the traumatic event that came into your head when you didn't want them to'), 7 on avoidance (e.g. 'trying not to think about, talk about, or have feelings about the traumatic event'), and 5 on arousal (e.g. 'being jumpy or easily startled'). The frequency of each symptom in the past month is rated on a 4-point scale, with 0 being 'not at all or only once' and 3 being 'five or more times a week/almost always'. The final section of the scale includes 9 yes/no items assessing impairment in different areas of life (e.g. work, family relationships, relationships with friends, general satisfaction with life).

The diagnosis of PTSD requires that the participant's responses meet the following criteria: presence of physical injury or perception of life threat; a sense of feeling helpless or being terrified during the event; endorsement (rating of 1 or higher) of at

least one re-experiencing symptom, three avoidance symptoms, and two arousal symptoms; duration of at least 1 month, and impairment in at least one area of functioning. The scale also provides a symptom severity score which is obtained by summing the scores of the 17 symptom items. Whilst the scale does include guidelines for assessing whether a participant meets the criteria for a diagnosis of PTSD or not, only a very small amount of participants in the current study met all of the criteria. Therefore the symptom severity score is used throughout these analyses. See Appendix 8 for measure.

According to Foa et al, (1997) the PTSD scale has good internal consistency. Foa et al (1997) demonstrated good internal consistency for the PTSD total score and for each of the scores of the three symptom clusters; total symptom severity  $\alpha = .92$ ; re-experiencing  $\alpha = .78$ ; avoidance  $\alpha = .84$ ; and arousal  $\alpha = .84$ . In the current study, the Cronbach's  $\alpha$  were as follows; total symptom severity  $\alpha = .93$ ; re-experiencing  $\alpha = .86$ ; avoidance  $\alpha = .86$ ; and arousal  $\alpha = .84$ , demonstrating very good internal consistency.

#### **4.2.1.2 Measures relating to the Pre-Motivational Stage of the IMV Model**

##### **4.2.1.2.0 Self-criticism**

Self-criticism was measured using the 18 items from the McGill Revised Depressive Experiences Questionnaire (Santor et al, 1997). Items concerned personal characteristics and traits, and included statements such as “I often find that I don't live up to my own standards or ideals” and “Often I feel I have disappointed others”.

Participants were asked to read each item and decide whether they agreed or disagreed and to what extent. Participants selected their response from a 7-point scale, ranging from “strongly disagree” (1) to “strong agree” (7). All scores were summed to obtain a self-criticism score, with higher scores representing greater self-criticism. See Appendix 9 for the measure.

Previous research (e.g. O’Connor & Noyce, 2008) has demonstrated that the self-criticism items from the McGill Revised Depressive Experiences Questionnaire have good internal consistency ( $\alpha = .82$ ). In the current study, the Cronbach’s  $\alpha$  was .89, demonstrating very good internal consistency.

#### **4.2.1.2.1 Socially Prescribed Perfectionism**

The socially prescribed perfectionism items from the Multidimensional Perfectionism Scale (MPS-H; Hewitt & Flett, 1991) were used, resulting in a 15-item measure. Items included statements such as “I find it difficult to meet others’ expectations of me”, and “Anything I do that is less than excellent will be seen as poor work by those around me”.

Participants were asked to read each statement and decide to what extent they agreed or disagreed with them. Responses were selected from a 7-point scale. All scores were summed to obtain a socially prescribed perfectionism score, with higher scores indicating greater degrees of socially prescribed perfectionism. See Appendix 10 for the measure.

Previous research (e.g. Rasmussen et al, 2008) has demonstrated that the socially prescribed perfectionism items from the Multidimensional Perfectionism Scale have very good internal consistency ( $\alpha = .88$ ). In the current study, the Cronbach's  $\alpha$  was .87, demonstrating very good internal consistency.

#### **4.2.1.3 Mediators & Moderators of the relationship between IPA and suicidality**

##### **4.2.1.3.0 Defeat**

A short version of the defeat scale (Gilbert & Allan, 1998) was used. Only the top three items with the highest factor loadings on the scale were used (“I feel that I have sunk to the bottom of the ladder”; “I feel completely knocked out of action”; I feel that I am one of life's losers”). Two additional items from the scale worded from a positive perspective were used as filler items to provide balance, but these two items were not used in any analysis.

Participants were asked to choose the statement that best described how they felt in the past 7 days by selecting a response from a 5-point scale, ranging from 0 (‘never’) to 4 (‘always’). A defeat score is obtained by summing the item scores, with a higher score indicating greater perceptions of defeat. See Appendix 11 for the measure.

Gilbert and Allan (1998) reported normative data for this measure based on a sample of students and patients with depression. The mean score for defeat for the student group was 17, with a mean of 47 in the depressed group. However, it must be noted that this normative data was based on the full measure and not the short version used in the current study.

According to Gilbert and Allan (1998) the defeat scale has good internal consistency in relation to non-clinical samples ( $\alpha = .94$ ). In the current study, the Cronbach alpha coefficient for the 3 highest loading factors was .93.

#### **4.2.1.3.1 Entrapment**

Short versions of Gilbert and Allan's (1998) Internal and External Entrapment scales were used. Only the top three items with the highest factor loadings were used for both internal and external entrapment.

Participants were given statements and asked to indicate the extent to which they thought it represented their own view of themselves, selecting the option that best described the degree to which each statement was like them on a 5-point scale, ranging from 0 ('not at all like me') to 4 ('extremely like me').

The three items from each scale are summed separately to provide an internal entrapment score and an external entrapment score. The two totals can also be summed to give an overall entrapment score. Higher scores represent greater perceptions of entrapment. See Appendix 12 for the measure.

Gilbert and Allan (1998) reported normative data for this measure based on a sample of students and patients with depression. The mean score for internal entrapment for the student group was 5, with a mean of 19 in the depressed group. The mean score for external entrapment for the student group was 10, with a mean of 25 in the depressed

group. However, it must be noted that this normative data was based on the full measure and not the short version used in the current study.

According to Gilbert and Allan (1998) the entrapment scale has good internal consistency in relation to non-clinical samples, showing a Cronbach's  $\alpha$  of .93 for the Internal Entrapment scale, and .88 for the External Entrapment scale. In the current study, the Cronbach's  $\alpha$  for the three highest loading items on the Internal and External Entrapment scales was .93.

#### **4.2.1.3.2 Rumination**

To measure rumination, the 10-item Response Styles Summary was used (Treynor et al, 2003) which relates to brooding and reflective pondering. Reflective rumination is seen as a form of active problem solving to deal with stress. Brooding rumination however is thought of as a more passive behaviour which doesn't aim to resolve the problem.

Participants are asked to read the items and indicate how often they do or think each one when they feel sad, down or depressed. 5 of the items on the measure related to brooding rumination (for example, "think, what am I doing to deserve this?") whilst the other 5 relate to reflective pondering (for example, "write down what you are thinking and analyse it"). Participants rate each item on a 4-point scale ranging from 'almost never' to 'almost always'.

The 5 scores in each subsection can be summed to give a score for brooding rumination, and a score for reflective pondering. All ten items can also be summed to give an

overall rumination score. Higher scores represent greater levels of rumination. See Appendix 13 for the measure.

According to Treynor et al, (2003) the rumination scale has good internal consistency, showing a Cronbach's  $\alpha$  of .72 for the reflective scale, and .77 for the brooding scale. In the current study, the Cronbach's  $\alpha$  for the reflective scale was .82 and .81 for the brooding scale. The Cronbach's  $\alpha$  for the total rumination score was .86, demonstrating very good internal consistency.

#### **4.2.1.4 Additional Measures**

##### **4.2.1.4.0 Social Desirability**

Socially desirable responses were assessed using Hays et al, (1989) 5-item measure of socially desirable response set (SDRS-5). It is recommended to use this measure alongside the IPA measure when a survey design is being utilised. This is due to the view of Straus and Douglas (2004) that when answering questions relating to IPA in a survey format, participants may be more likely to answer the questions with a social desirability bias i.e. they will be more likely to respond to the questions in such a way as they view as socially desirable. This measure therefore allows investigation of whether the groups differ significantly on their tendency towards socially desirable responses, and if so, this can be taken into account in the analyses and interpretation of the results.

This measure assesses the extent to which participants are likely to give socially desirable responses to questions when completing self-report measures. The measure

includes items such as “I am always courteous even to people who are disagreeable” and “There have been occasions when I took advantage of someone”.

Participants are asked to read the statements and indicate how much each statement is true or false for them. Participants select from a 5-point scale ranging from “definitely true” to “definitely false”. For each item, either the “definitely true” or “definitely false” scale point represents a socially desirable response, which is scored as 1. Any other response is scored as 0. These scores are then summed to give an overall total score between 0 and 5. The overall total can also be multiplied by 20 to give a percentage. Higher scores indicate that the participant is more likely to give socially desirable responses. See Appendix 14 for measure.

According to Hays et al, (1989) the social desirability scale has reasonable internal consistency, showing a Cronbach’s  $\alpha$  of .66. The current study found a Cronbach’s  $\alpha$  of .51.

#### **4.2.2 Procedure**

Prior to the collection of any data, ethical approval was obtained from the University Psychology Department’s ethics committee. Participants were given information on the study. Participants were advised that the study would be completed over two time points, 3 months apart, and if they wished to take part in the second phase of the study, they should provide the researcher with contact details. Participants then completed a consent form (Appendix 25). Participants then completed all measures either online or

in a hard-copy format. 52 participants chose to complete a hard-copy version of the questionnaire, with the majority completing the study online.

At the beginning of the study, participants were given the opportunity to review the study information again, and they were given the researcher's contact details. Participants were invited to contact the researcher at any time if they had any questions or required any further information. The participants' demographic information was then recorded.

The measures were then administered in the following order;

- Modified version of CTS2 for current and then previous partners to measure IPA
- Stalking & Harassment Behaviour Scale (SHBS)
- Self-criticism (SC)
- Rumination
- PHQ-9
- Beck Scale for Suicidal Ideation (BSS)
- Defeat
- External Entrapment
- Internal Entrapment
- Post-traumatic stress disorder (PTSD)
- Socially desirable response scale (SDRS)

The social desirability measure was placed as the last measure in order to end the study with items that were not negatively valanced. The measures took approximately 20-30 minutes to complete. On completion, participants were thanked for taking part, debriefed and given contact details for a variety of organisations that could offer help and support with any issues that may be raised by the study. The researcher's contact details were again presented on conclusion of the study.

Participants were then sent reminders by email, post or phone, after 3 months to complete the second phase of the study. A 3 month gap between Time 1 and Time 2 was desired, as this research wished to establish which factors predicted suicidality at Time 2, and also collect data at two time points to act as a control for each participant. 3 months was thought to be an appropriate time gap for this, and it was also the maximum period of time that could be utilised in this first study without impacting on the deadlines for the rest of the project.

The above procedure was repeated for the second phase, with all measures completed again at Time 2.

#### **4.2.3 Power Calculation**

The study based the power calculation on the largest analysis, i.e the analysis with the most factors, which was a regression with 4 predictors. The study aimed to detect a small effect size, based on the effect sizes typically found in this area of research (see Systematic Review in Chapter 2), and to reach a power of .8. A G Power calculation based on these criteria established that to achieve this, the study would require  $n=602$ .

#### **4.2.4 Analytic Strategy**

A variety of statistical methods and techniques were employed in order to analyse the data in this study. This section will outline the strategies used to address the research questions and hypotheses. These research questions and hypotheses are detailed in full earlier in this chapter, in section 6.1.4.

Throughout these analyses, Time 1 variables are used in order to determine their relationship with suicidality at Time 2.

##### **4.2.4.0 Demographics**

In these analyses, one way ANOVAs were used to test whether there were any significant differences in suicidal ideation across the demographic variables (employment status, level of education, and sexual orientation). The IV is the demographic variable, and the DV is the suicidal ideation score. Tukey post-hoc tests were utilised. Cross-tabs were used to determine if there were any differences between those with and without IPA experience on the demographic variables, both using Cramer's V as a measure of effect size as each of the demographic variables had more than two groups.

#### **4.2.4.1 Suicidality at Time 1 and Time 2**

Paired-samples t-tests were conducted to test whether there were any differences in suicidality between Time 1 and Time 2. This was of interest in order to direct the following analyses with regard to whether there was any relevance to conducting each analysis on suicidality for both time points.

#### **4.2.4.2 Analysis relating to investigating the relationship between IPA & Suicidality**

##### **4.2.4.2.0 Social desirability bias**

In these analyses, IPA experience was operationalised as a categorical variable, defined as ‘yes’ (1) or ‘no’ (0) IPA experience over the lifetime. The social desirability bias score is a continuous variable representing the number of responses the participant gave to the social desirability measure which are classed as highly socially desirable responses.

An independent samples t-test was conducted in order to investigate whether there were any significant differences in the level of socially desirable responses given by those with and without experience of IPA.

##### **4.2.4.2.1 IPA & Suicidality**

In these analyses, IPA experience was operationalised as a categorical variable, defined as ‘yes’ (1) or ‘no’ (0) IPA experience over the lifetime. The different forms of IPA are

operationalised as categorical variables (0=no incidences, 1=1 or more incidences). There are 4 such categorical variables: psychological aggression, injury, physical assault and sexual coercion. Suicidality at Time 2 was operationalised in two ways, as a continuous variable for suicide attempts over the lifetime, and as a continuous variable for suicidal ideation.

To address H2, testing differences between those with and without IPA experience on two dependent variables (DVs): suicidal ideation and suicide attempts, a MANOVA was used. A MANOVA was selected in order to control for the increased risk of a Type 1 error due to testing multiple DVs. The results for the combined DVs were examined. The results for each of the dependent variables were considered separately to identify which specific variables differed significantly across the two groups. Means and standard deviations for the measures were also presented.

To address H3a, investigating the differential impacts of different forms of IPA, a multiple regression was used. This analysis was selected in order to provide an understanding of the contribution of the different forms of IPA to explaining suicidal ideation. Firstly the analysis examines the correlations between each of the forms of IPA and suicidal ideation, before investigating the extent to which the forms of IPA predict suicidal ideation using a stepwise regression.

H3b utilised a multiple mediation analysis in order to determine which factors play a mediating role between IPA and suicidality. Firstly a multiple regression was carried out to determine which of the variables of interest were significant predictors of suicidal

ideation. Only those which were significant predictors were included in the multiple mediation model, in order to enhance the power of the analysis.

As the IPA experience variable is defined as 'yes' or 'no', the potential mediators in this analysis would only apply to those who have experienced IPA. To address this issue, the select cases option was utilised in SPSS to filter out those with no experience of IPA. In this way, the mediation analysis was only conducted for those who had experienced IPA. Therefore, for this analysis, the variable IPA experience refers to those who have experienced IPA only.

Regression analysis was conducted to examine mediation effects in a multiple mediator model, following the procedure described in Preacher & Hayes (2008). The procedure involved calculating the total effect of the independent variable (IV) on a dependent variable (DV), given as a regression coefficient; the direct effect of an IV on a DV after factoring out the effect of the mediators on the DV, given as a regression coefficient; and then calculating the effect of the mediators on the DV (total effect of IV on DV – direct effect of IV on DV). Mediation is considered to have occurred when the difference between the total and direct effects is significant.

Baseline measures for all variables were entered as covariates in the model. Bootstrapping techniques were used to estimate the indirect effect of the IV on the DV, based on 5000 bootstrap samples. Bootstrapping is recommended when using small samples in multiple mediator models, as the assumption of normality of the sampling distribution of the total and specific indirect effects may not be met (Preacher & Hayes, 2008).

The results were then examined to determine whether the mediators, when taken as a complete set, mediate the relationship. The total effect and the direct effect were then reported, and the significance of the total indirect effect through the mediators (the difference between the total and direct effects) was considered. The specific indirect effects were then examined to determine which specific variables are significant mediators of the relationship.

H4 was concerned with determining whether there were differences in suicidal ideation between participants experiencing IPA currently and those who had experienced IPA in the past. In testing H4, a one-way ANOVA was used to investigate the differences between groups on a DV. The means were examined, and then post-hoc tests (Bonferroni) were carried out to determine where the significant differences lay between the three groups.

#### **4.2.4.2.2 IPA & Stalking**

In this analysis, IPA experience is operationalised as a categorical variable, defined as 'yes' or 'no' IPA experience over the lifetime. Stalking is operationalised as a categorical variable for stalking experience: 'yes' or 'no' over the lifetime. Stalking is also operationalized as a continuous variable as a level of stalking (LOS) score. The LOS score was derived from participant responses to the Stalking and Harassment Behaviour Scale (SHBS) and represents the severity of stalking or harassment they had experienced. Specifically, participants' LOS scores were calculated by multiplying the frequency of each of the reported harassing behaviours by the level of subjective distress that each of these behaviours caused them, and then summing these scores,

from the formula: LOS score = sum of (the frequency of behaviour x the level of distress).

This analysis aimed to establish whether there was an association between the experience of IPA and experience of stalking and harassment. To investigate RQ5, a chi-square test was used to determine the association between two categorical variables. Descriptives were also examined to investigate the numbers and percentages of participants across the four categories.

In H5, an Independent samples t-test was carried out to investigate the differences between those with and without experience of IPA on LOS score. Results of the t-test were presented alongside the means and standard deviations for LOS score across the two groups.

#### **4.2.4.2.3 IPA, Stalking & Suicidality**

In these analyses, stalking is operationalised as a continuous variable for level of stalking (LOS) score. The LOS score was derived from participant responses to the Stalking and Harassment Behaviour Scale (SHBS) and represents the severity of stalking or harassment they had experienced. Specifically, participants' LOS scores were calculated by multiplying the frequency of each of the reported harassing behaviours by the level of subjective distress that each of these behaviours caused them, and then summing these scores, from the formula: LOS score = sum of (the frequency of behaviour x the level of distress). Suicidality at Time 2 was operationalised as a continuous variable for suicidal ideation.

To investigate H6, a mediation analysis was carried out to determine whether LOS score mediated the IPA-suicidality relationship. To test this hypothesis, a series of regressions were carried out. In mediation analysis, it is important first of all to determine that there are significant relationships between each of the variables involved. First, a standard regression was conducted to determine whether the IV predicted the mediator. A hierarchical regression was then carried out with the IV and the mediator predicted the DV.

Within the hierarchical regression, the IV was entered at step 1, and the mediator at step 2. The total variance explained by the model as a whole was examined. The R squared change was considered to determine how much of the variance in the DV was explained by the mediator, after controlling for the effects of the IV. The final regression model was examined along with the betas, to determine whether the beta weight of the IV was reduced, indicating mediation. A Sobel test was then conducted to test whether any reduction in the beta weight of the IV was significant, which would indicate whether there was a significant mediating effect.

#### **4.2.4.3 Analysis relating to testing the utility of the IMV Model of Suicidal Behaviour**

In these analyses, IPA experience is a categorical variable (yes, no). PTSD is a continuous score representing the number of post-traumatic stress symptoms experienced by the participant. Depression is a continuous score representing the incidence and frequency of depressive symptoms experienced by the participant.

#### **4.2.4.3.0 PTSD and depression**

To determine the relationships of PTSD and depression with IPA and suicidality, two analyses were conducted.

Firstly, to investigate H7a, a MANOVA was conducted to look at differences in scores on these 2 measures across those with and without experience of IPA. A MANOVA was selected in order to control for the increased risk of a Type 1 error due to testing multiple DVs. The results for the combined DVs were examined. The results for each of the dependent variables were considered separately to identify which specific variables differed significantly across the two groups. Means and standard deviations for the measures were also presented.

H7b planned a multiple mediation analysis in order to determine whether higher levels of PTSD and/or depression in those with IPA experience play a mediating role between IPA and suicidality. The procedure set out for H7b was planned. However, this was not conducted as the analysis in H6a demonstrated no significant relationship between IPA and PTSD or depression.

#### **4.2.4.3.1 IPA & Suicidality – Relationships with Socially Prescribed Perfectionism (SPP), Self-Criticism (SC), and Rumination**

To determine the relationships of SPP, SC and rumination with IPA and suicidality, two analyses were conducted.

Firstly, to investigate H8a, a MANOVA was conducted to look at differences in scores on these 3 measures across those with and without experience of IPA. A MANOVA was selected in order to control for the increased risk of a Type 1 error due to testing multiple DVs. The results for the combined DVs were examined. The results for each of the dependent variables were considered separately to identify which specific variables differed significantly across the two groups. Means and standard deviations for the measures were also presented.

To test H8b, correlations were then carried out to determine whether SPP, SC and rumination scores were associated with suicidal ideation, and the correlation matrix presented.

Analyses were then conducted to determine whether SPP, SC and rumination acted within the IMV Model of Suicidal Behaviour as expected. The model considers SC and SPP as pre-dispositional factors within the pre-motivational phase, suggesting that they are associated with a greater likelihood of perceptions of defeat and entrapment. Therefore, H9 tested this relationship by conducting correlations of SPP, SC and rumination with defeat and entrapment. The correlation matrix was presented.

The model also views rumination as a threat-to-self moderator, suggesting that it would moderate the defeat-entrapment pathway. H10 was therefore tested with moderation analysis. Firstly, the data was checked for skewness and transformed if necessary. The IV and the Moderator were then mean centred, and the mean centred variables used for this analysis. A new variable was also calculated, multiplying the IV and the moderator to create an interaction variable.

A hierarchical regression was then carried out. The IV and moderator were entered in step 1, and the interaction at step 2. R squared change was selected under the statistics option. The coefficients for the individual variables were examined to determine which ones made a significant unique contribution to explaining the variance in entrapment scores.

In order to present the moderation in a graph format, four dummy participants were formed to represent 1SD above and below the mean for the IV and the moderator. Therefore, the four participants showed the following score patterns; high moderator – high IV; high moderator – low IV; low moderator – high IV; low moderator – low IV. The interaction variable was then re-calculated, and unstandardized predictor variables were created, giving predicted scores for the 4 dummy participants. The 4 dummy participants were then selected and a multiple line graph constructed to present the moderation.

Post-hoc analyses were then conducted on the high and low moderator lines of the graph to determine if they differed significantly from zero. The procedure outlined by Aitken and West (1991) was followed. This involved computing 4 variables, *zabove*, *zbelow*, *xzabove* and *xzbelow*, to represent the high and low IV and interaction. Two regressions were then carried out. The first regression examined the high line, entering the IV and *zabove* in step 1, and *xzabove* in step 2. The second regression examined the low line, entering the IV and *zbelow* in step 1, and *xzbelow* in step 2. The results revealed whether the high and low lines on the graph were significantly different from zero.

#### **4.2.4.3.2 IPA Experience and Defeat and Entrapment**

Analyses were conducted to determine the relationship of IPA and suicidality to defeat and entrapment.

H11a firstly investigated whether there was a relationship between the experience of IPA and defeat and entrapment. A MANOVA was therefore conducted to determine the differences in these scores across the two groups. The MANOVA was conducted and presented as described previously.

It was then of interest if any aspects of IPA had any association with defeat and entrapment. H11b investigated whether there was an association between the frequency of IPA experienced and defeat and entrapment using correlations. A MANOVA was then conducted for H11c to establish whether there were any differences on defeat or entrapment scores across different levels of IPA severity. The MANOVA was conducted and presented as described previously.

This study then investigated whether defeat and entrapment acted within the IMV model of suicidal behaviour as expected. The IMV model views defeat as the first stage of the motivational phase, mediating the relationship between the stressor and suicidal ideation. H12 therefore tested whether defeat mediated the IPA-suicidal ideation relationship. This was carried out using mediation analysis.

To test this mediation, a series of regressions were carried out. In mediation analysis, it is important first of all to determine that there are significant relationships between each of the variables involved. First, a standard regression was conducted to determine whether the IV predicted the mediator. A hierarchical regression was then carried out with the IV and the mediator predicted the DV.

Within the hierarchical regression, the IV was entered at step 1, and the mediator at step 2. The total variance explained by the model as a whole was examined. The R squared change was considered to determine how much of the variance in the DV was explained by the mediator, after controlling for the effects of the IV. The final regression model was examined along with the betas, to determine whether the beta weight of the IV was reduced, indicating mediation. A Sobel test was then conducted to test whether any reduction in the beta weight of the IV was significant, which would indicate whether there was a significant mediating effect.

Finally, the IMV Model further suggests that entrapment mediates the defeat-suicidality relationship, and this is tested in H13 through mediation analysis. This is again conducted as described previously.

### **4.3. Results**

The data analysis conducted will now be presented, following the analytic strategy outlined in section 4.2.4.

#### **4.3.0 Analysis**

##### **4.3.0.0. Demographics**

A one-way ANOVA was carried out to determine whether suicidal ideation varied across the employment status variable (unemployed, employed, in full time education). There was no significant difference in suicidal ideation scores for the three employment status groups:  $F(2, 7.43) = 1.33, p = .27$ .

A one-way ANOVA was then carried out to determine whether suicidal ideation varied across the highest qualification variable (high school, college, degree, post-graduate). There was no significant difference in suicidal ideation scores for the four qualification groups:  $F(3, 42.14) = 2.10, p = .12$ .

A one-way ANOVA was not carried out to determine whether suicidal ideation varied across the sexual orientation categories, due to the limited number of cases across this variable, with only 8% of the sample falling into a category other than heterosexual.

It was then of interest whether IPA experience varied across any of the demographic variables. Cross-tabs were conducted on the demographic variables.

Cross-tabs were carried out to look at any differences in IPA experience (yes, no) across employment status (employed, unemployed, in full time education). There was a significant association between whether people had experienced IPA or not and employment status,  $\chi^2(2, n=703) = 16.85, p <.001, \text{Cramers } V = .16$ . This shows that there is a small effect size between IPA experience and employment status. Table 4.2 below shows the percentages of each employment status category according to IPA experience.

**Table 4.2 : Percentages of employment status categories according to IPA experience**

	<b>Experience of IPA (N=219)</b>	<b>No Experience of IPA (N=484)</b>
<b>Employed</b>	61%	50%
<b>Unemployed</b>	11%	7%
<b>Full time education</b>	28%	43%

Key: IPA=Intimate Partner Abuse;

The table above shows that the majority of those with experience of IPA are in employment. It can also be seen that the most notable difference between those with and without experience of IPA, is that there are more people without experience of IPA currently in full time education. Slightly more people with experience of IPA are currently unemployed, however there is also slightly more people with experience of IPA currently in employment compared to those with no experience of IPA.

Cross-tabs were then carried out to look at any differences in IPA experience (yes, no) across level of education (high school, college, degree, post-graduate). There was a significant association between whether people had experienced IPA or not and education level,  $\chi^2(3, n=703) = 41.35, p <.001, \text{Cramers } V = .24$ . This shows that there

is a medium effect size between IPA experience and education level. Table 4.3 below shows the percentages of each education level category according to IPA experience.

**Table 4.3 : Percentages of education level categories according to IPA experience**

	<b>Experience of IPA (N=219)</b>	<b>No Experience of IPA (N=484)</b>
<b>High School</b>	27%	52%
<b>College</b>	33%	18%
<b>Degree</b>	23%	17%
<b>Post-graduate</b>	16%	13%

Key: IPA=Intimate Partner Abuse;

It can be seen from the table above that the majority of those with experience of IPA are educated to College level. It can also be seen that the most notable difference between those with and without experience of IPA, is that there are more people without experience of IPA currently educated to high school level. More people with experience of IPA are educated to college, degree and post-graduate levels than those without experience of IPA. However, the differences between the two groups for degree and post-graduate level of education are small.

Cross-tabs were also carried out to look at any differences in IPA experience (yes, no) across sexual orientation (heterosexual, homosexual, bisexual). There was a significant association between whether people had experienced IPA or not and sexual orientation,  $\chi^2 (3, n=703) = 8.75, p = .03, \text{Cramers } V = .11$ . This shows that there is a small effect size between IPA experience and sexual orientation. Table 4.4 below shows the percentages of each sexual orientation category according to IPA experience

**Table 4.4: Percentages of sexual orientation categories according to IPA experience**

	<b>Experience of IPA (N=219)</b>	<b>No Experience of IPA (N=484)</b>
<b>Heterosexual</b>	88%	94%
<b>Homosexual</b>	4.6%	2.5%
<b>Bisexual</b>	7.8%	3.5%

Key: IPA=Intimate Partner Abuse;

It can be seen from the table above that the majority of those with experience of IPA are heterosexual. It can also be seen that the most notable difference between those with and without experience of IPA, is that there are more people with experience of IPA who are either homosexual or bisexual. However, as noted above, the effect size of these differences is small.

#### **4.3.0.1 Suicidality**

To test whether there were any differences in suicidality between Time 1 and Time 2, a paired-samples t-test was conducted. There was no significant difference in the suicidal ideation scores from Time 1 (mean =.63) to Time 2 (mean =.64),  $t(700) = -1.00, p=.32$ . A paired-samples t-test was also conducted to test whether there were any significant differences in the suicide attempt variable between Time 1 and Time 2. The test could not be computed as there were no differences at all in whether people had attempted suicide or not between Time 1 and Time 2.

## **4.3.0.2 Results relating to the investigation of the relationship between IPA and Suicidality**

### **4.3.0.2.0 Impact of social desirability bias**

#### **4.3.0.2.0.0 RQ1: Are there differences in levels of socially desirable responses between those with and without IPA experience?**

Previous research had suggested that when using a self-report measure of IPA in a survey design, it is useful to assess social desirability bias in the sample. This helps to make a judgement as to whether the answers given on the IPA measure may be influenced by such a factor.

#### **4.3.0.2.0.0.0 H1: There will be no significant differences in levels of social desirability in those with and without IPA experience**

An independent samples t-test was conducted in order to investigate whether there were any significant differences in the level of socially desirable responses given by those with and without experience of IPA. There was no significant difference in scores for those with experience of IPA (mean = 1.14, SD = 1.15) and those without IPA experience (mean = 1.02, SD = 1.17),  $t(701) = 1.25, p = .21$ .

Therefore, neither group was more likely to give socially desirable responses to the IPA questions, and indeed the means for social desirability bias across the sample were low.

### 4.3.0.3 IPA & Suicidality

#### 4.3.0.3.0 RQ2: Is the experience of IPA related to suicidality?

##### 4.3.0.3.0.0 H2: Those with experience of IPA will demonstrate higher suicidality than those with no experience of IPA.

To test hypothesis 2, a MANOVA was conducted to investigate differences in suicide attempts and suicidal ideation between those with and without IPA experience.

There was a significant difference between those who had and had not experienced IPA on the combined dependent variables,  $F(2, 700) = 26.25, p < 0.001$ . When the results for the dependent variables were considered separately, both variables were found to differ significantly across IPA experience. (Suicide attempts,  $F(1) = 34.88, p < 0.001, \eta^2 = .05$ ; suicidal ideation,  $F(1) = 34.81, p < 0.001, \eta^2 = .05$ ).

Therefore those with and without experience of IPA differed significantly on suicidal ideation and suicide attempts. Table 4.5 below shows the means and standard deviations for suicide attempts and suicidal ideation across IPA experience.

**Table 4.5: Mean suicide attempts and suicidal ideation across IPA experience**

	<b>Experience of IPA (N=219)</b>	<b>No Experience of IPA (N=484)</b>	<b>F</b>	<b>p</b>
<b>Suicide attempts</b>	0.36 (SD=0.64)	0.12 (SD =0.40)	34.88	<0.001
<b>Suicidal Ideation</b>	1.18 (SD=2.37)	0.39 (SD =1.16)	34.81	<0.001

Key: IPA=Intimate Partner Abuse; SD=Standard Deviation

Therefore, those with experience of IPA demonstrated significantly higher mean scores on the measures of suicidal ideation and suicide attempts than those with no experience of IPA, supporting H2. A medium effect size was shown for both suicide attempts and suicidal ideation.

**4.3.0.3.1 RQ3: Is the relationship between IPA and suicidality mediated by the severity or frequency of IPA, or the presence of any of the different forms of IPA?**

To address H3, investigating the differential impacts of different aspects of IPA, a multiple regression was used. This analysis was selected in order to provide an understanding of the contribution of the different aspects of IPA to explaining suicidal ideation.

**4.3.0.3.1.0 H3a: The different forms of IPA will have differential impacts on suicidality.**

It was investigated which forms of IPA were predictive of suicidal ideation. To test whether the incidence of forms of IPA would predict suicidal ideation, a stepwise multiple regression was carried out. The multiple regression included the incidence of each category of IPA predicting suicidal ideation. Before proceeding to the regression, the zero order correlations are presented below. All four category variables showed significant correlations with suicidal ideation. Table 4.6 below shows the correlation matrix.

**Table 4.6: Correlation matrix of IPA category incidence and suicidal ideation**

	<b>Suicidal Ideation</b>	<b>Psychological Aggression</b>	<b>Injury</b>	<b>Physical Assault</b>	<b>Sexual Coercion</b>
<b>Suicidal Ideation</b>	1	0.10**	0.29**	0.20**	0.25**
<b>Psychological Aggression</b>		1	0.32**	0.41**	0.20**
<b>Injury</b>			1	0.65**	0.39**
<b>Physical Assault</b>				1	0.36**
<b>Sexual Coercion</b>					1

\*\*p<0.001 (one-tailed)

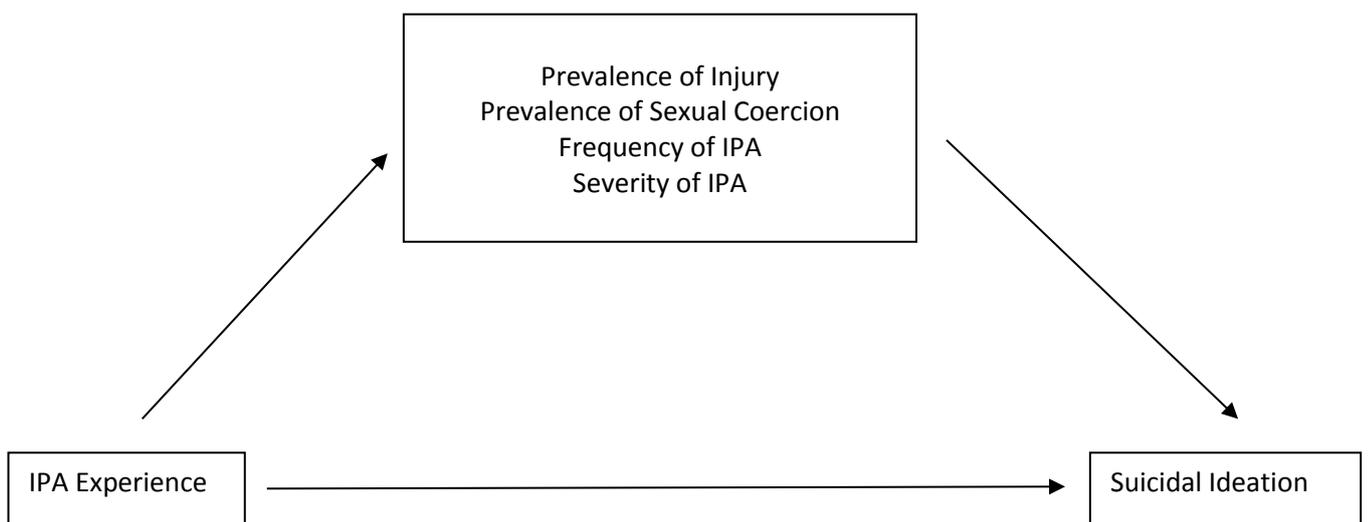
Table 4.6 shows that all the forms of IPA were positively correlated with suicidal ideation. The strongest correlations with suicidal ideation were with prevalence of injury and sexual coercion, however all of these correlations were small. All of the forms of IPA were positively correlated with each other, the strongest associations being between physical assault and injury, and physical assault and psychological aggression.

The model with the incidence of all categories of IPA predicting suicidal ideation was found to be significant ( $F(2) = 30.82, p < 0.001$ ). The  $R^2$  for the model was 0.02 ( $p < 0.001$ ), indicating that the final model explained 2% of the variance in suicidal ideation. Inspection of the final beta values found that incidence of Injury ( $\beta = 0.23, p < 0.001$ ) and incidence of Sexual Coercion ( $\beta = 0.17, p < 0.001$ ) made a significant unique contribution to explaining suicidal ideation.

Therefore, the prevalence of injury makes the largest unique contribution to explaining suicidal ideation, and the prevalence of sexual coercion also makes a significant contribution. Therefore the different forms of IPA do have different impacts on suicidal ideation, supporting H3a.

**4.3.0.3.1.1 H3b: The relationship between IPA experience and suicidality is mediated by IPA severity, IPA frequency, or the presence of different aspects of IPA.**

It was then investigated if any aspects of IPA mediated the relationship between IPA experience and suicidality. A multiple regression was carried out, and only the variables which were significant predictors were included in the multiple mediation model. Prevalence of injury, prevalence of sexual coercion, IPA frequency and IPA severity were significant predictors, and therefore these are the variables included in the multiple mediation model below.



**Figure 4.2: Multiple Mediation Model of Injury, Sexual Coercion, IPA frequency and IPA severity as mediators of the IPA experience-suicidal ideation relationship.**

Regression analysis was conducted to examine mediation effects in a multiple mediator model, following the procedure described in Preacher and Hayes (2008). The procedure involves calculating the total effect of an independent variable (IV) on a dependent variable (DV), given as a regression coefficient; the direct effect of an IV on a DV after factoring out the effect of the mediators on the DV, given as a regression coefficient; and then calculating the effect of the mediators on the DV (total effect of IV on DV – direct effect of IV on DV). Mediation is considered to have occurred when the difference between the total and direct effects is significant.

In this model, the IV was IPA experience; the DV was suicidal ideation; and the mediators were IPA frequency, IPA severity, and the prevalence of injury and sexual coercion (4 mediator variables). Baseline measures for all variables were entered as covariates in the model. Bootstrapping techniques were used to estimate the indirect effect of the IV on the DV, based on 5000 bootstrap samples. Bootstrapping is recommended when using small samples in multiple mediator models, as the assumption of normality of the sampling distribution of the total and specific indirect effects may not be met (Preacher & Hayes, 2008).

The mediation analysis showed that taken as a complete set the 4 variables mediated the relationship between IPA experience and suicidal ideation. The total effect of IPA experience on suicidal ideation was 0.8837,  $p < 0.001$ , and the direct effect of IPA experience on suicidal ideation with the mediators was 0.5021,  $p = 0.2987$ . The difference between the total and direct effects - the total indirect effect through the 4 mediators, had a point estimate of -1.3859 and a 95% bootstrap CI of -2.2117 to -0.4917 (therefore there was a significant difference between the total and the direct

effect of IPA experience on suicidal ideation). Analysis of the specific indirect effects showed that only the frequency of IPA was a significant mediator of the IPA experience-suicidal ideation relationship (bootstrap 95% CI of -1.7566 to -0.4525).

Therefore, the experience of IPA was a significant predictor of suicidal ideation. The frequency of IPA experienced was a significant mediator of the relationship between IPA experience and suicidal ideation, offering support for H3b.

#### **4.3.0.3.2 RQ4: Are there any differences in suicidality relating to whether IPA is current or in the past?**

Next, the relationship between the timing of the IPA experience and suicidal ideation was investigated; specifically testing how levels of suicidal ideation differed between those who were experiencing IPA currently, and those who had experienced IPA in the past.

##### **4.3.0.3.2.0 H4: There will be a significant difference in suicidal ideation between those experiencing IPA currently and those who have experienced it in the past, with higher levels amongst those with current IPA experience.**

A one way ANOVA was conducted to investigate differences in suicidal ideation scores across the current and previous IPA groups.

There was a significant difference between the groups on suicidal ideation scores,  $F(2) = 22.30, p < 0.001$ . Table 4.7 below shows the means and standard deviations of suicidal

ideation for those with no experience of IPA, and those with current and previous experience of IPA.

**Table 4.7: Means and standard deviations for suicidal ideation across timing of IPA**

	<b>No IPA (N=484)</b>	<b>Previous IPA (N=171)</b>	<b>Current IPA (N=48)</b>	<b>F</b>	<b>p</b>
<b>Suicidal Ideation</b>	0.39 (SD 1.16)	1.00 (SD 2.20)	1.81 (SD 2.83)	22.30	<.001

The means for suicidal ideation show that the highest means are evident in the current IPA group, with the previous IPA group showing slightly lower mean scores. Both groups demonstrate higher mean scores on suicidal ideation than those with no experience of IPA. A medium effect size of eta squared = .06 was found. Post hoc tests (Bonferroni) were carried out. All three groups differed significantly from each other on suicidal ideation scores. Those in the current IPA group demonstrate significantly higher suicidal ideation than those in the previous IPA group, and both IPA groups demonstrate significantly higher scores on suicidal ideation than those with no experience of IPA, supporting H4.

#### **4.3.0.4 IPA & Stalking**

The relationship between IPA and stalking was investigated. Firstly, the association between IPA and the experience of stalking, followed by differences in severity of stalking between those with and without experience of IPA.

#### 4.3.0.4.0 RQ5: Is the experience of stalking related to the experience of IPA?

Descriptives (see Table 4.8) showed that there was a greater incidence of stalking experience among those who had experienced IPA compared to those with no experience of IPA.

**Table 4.8: Percentage of participants' experiencing stalking as a function of IPA experience**

	<b>Experience of IPA (N=219)</b>	<b>No Experience of IPA (N=484)</b>
<b>Stalking Experience</b>	52.1% (N=114)	25.4% (N=123)
<b>No Stalking Experience</b>	47.9% (N=105)	74.6% (N=361)

The relationship between experience of IPA and experience of stalking was investigated using a Chi-Square test. This indicated a significant association between IPA experience and experience of stalking,  $\chi^2(1, n= 703) = 46.70, p <0.001$ .

#### 4.3.0.4.0.0 H5: Those with experience of IPA will demonstrate higher level of stalking scores than those with no IPA experience.

This study now investigated whether there were any differences in LOS score between those with and without IPA experience.

To test hypothesis 5, that those with experience of IPA will demonstrate higher LOS scores than those with no experience of IPA, an independent samples t-test was carried out. There was a significant difference in the LOS scores across IPA experience  $t(157.55) = 6.52, p <0.001$ . Descriptives showed that those with experience of IPA

demonstrated higher mean LOS scores (231.10, SD=221.76) compared to those with no experience of IPA (81.43, SD=105.60).

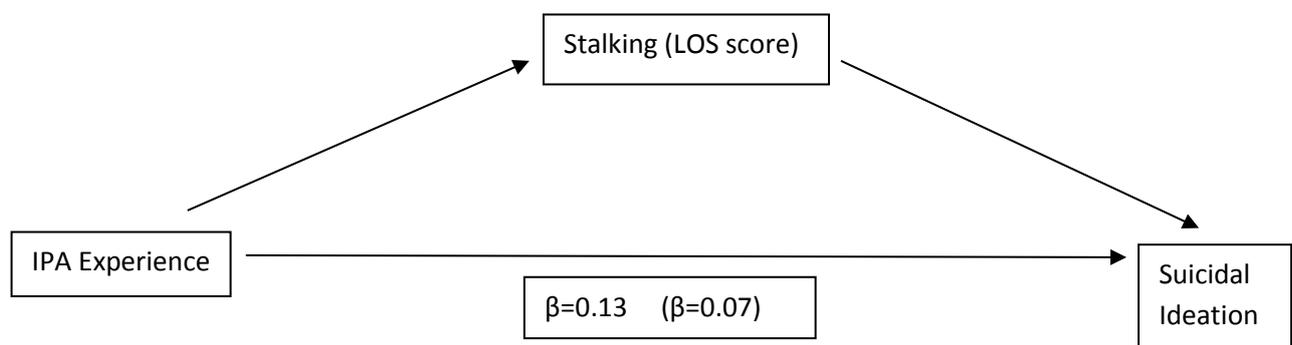
The data shows that those with experience of IPA show higher mean LOS scores. Therefore participants who have experienced IPA report more severe stalking and harassment behaviours, supporting H5.

#### 4.3.0.5 IPA, Stalking & Suicidality

As higher LOS scores were found to be associated with IPA, LOS as a mediator of the IPA-suicidal ideation relationship was investigated.

##### 4.3.0.5.0 RQ6: To what extent does stalking mediate the IPA-suicidality relationship?

##### 4.3.0.5.0.0 H6: The relationship between IPA and suicidality will be mediated by Level of Stalking



**Figure 4.3: LOS score as a mediator of the IPA experience-suicidal ideation relationship**

To test Hypothesis 6, that there will be a mediating effect of LOS on the relationship between IPA experience and suicidal ideation, a series of regressions were carried out.

A standard regression was conducted with the IV (IPA experience) predicting the mediator (LOS score). A significant association between IPA experience and LOS score was found, with IPA experience explaining 16% of the variance in LOS score:  $R^2 = 0.16$ ,  $\beta = 0.40$ ,  $p < 0.001$ .

A hierarchal regression was then conducted with the IV (IPA experience) and mediator (LOS score) predicting the DV (suicidal ideation). See Table 4.9.

**Table 4.9: Hierarchical Regression analysis of the IPA experience-suicidal ideation relationship with LOS as a mediator**

Step/Predictors	$\beta$	p	$R^2$ change for step	Total $R^2$ change
1: IPA Experience	0.13	.05*	0.02*	0.02*
2: IPA Experience	0.07	.35	0.02*	0.04*
LOS Score	0.16	.02*		

\* $P < 0.05$

IPA Experience was entered at Step 1, explaining 2% of the variance in suicidal ideation. After entry of LOS score at Step 2 the total variance explained by the model as a whole was 4%,  $F(2, 232) = 4.65$ ,  $p = 0.01$ . LOS score explained an additional 2% of the variance in suicidal ideation after controlling for the effects of IPA experience,  $R^2$  squared change = 0.02,  $F$  change (2,232) = 5.21,  $p = 0.02$ . In the final model, LOS score was significant ( $\beta = 0.16$ ,  $p = 0.02$ ), and the beta weight for IPA experience was reduced to non-significance ( $\beta = 0.07$ ,  $p = 0.35$ ), suggesting that LOS score fully mediates the relationship between IPA experience and suicidal ideation.

A Sobel test was conducted to test whether there was a significant reduction in the beta weight of IPA experience. The reduction in beta weight (0.13 to 0.07) was significant (Sobel value = -1.92,  $p=0.05$ ) suggesting a full mediating effect of LOS score on the relationship between IPA experience and suicidal ideation.

Therefore, level of stalking score does have a significant mediating effect on the relationship between IPA experience and suicidal ideation, supporting H6.

#### **4.3.0.6 Results relating to the testing of the IMV Model of Suicidal Behaviour**

##### **4.3.0.6.0 PTSD and Depression**

The role of PTSD and depression in the relationship between IPA and suicidality was investigated.

##### **4.3.0.6.0.0 RQ7: Do those with experience of IPA demonstrate higher levels of PTSD and depression, and does this impact on suicidality?**

It was of interest whether scores on PTSD and depression varied between those with and without experience of IPA, as these variables can independently increase suicide risk.

##### **4.3.0.6.0.0.0 H7a: Those with experience of IPA will demonstrate higher levels of PTSD and depression**

To test Hypothesis 7a, that those with experience of IPA will demonstrate higher scores of PTSD and depression than those with no experience of IPA, a MANOVA was conducted.

There was no significant difference between those who had and had not experienced IPA on the combined dependent variables,  $F(2, 700) = 1.96, p = .14$ , partial eta squared = 0.01. When the results for the dependent variables were considered separately, neither variable was found to differ significantly across IPA experience. (PTSD,  $F(1) = .66, p = .42$ ; depression,  $F(1) = 2.93, p = .09$ ).

Table 4.10 below shows the means and standard deviations for PTSD and depression across IPA experience.

**Table 4.10: Mean PTSD and depression scores according to IPA experience**

	<b>Experience of IPA (N=219)</b>	<b>No Experience of IPA (N=484)</b>	<b>F</b>	<b>p</b>
<b>PTSD</b>	8.86 (SD=3.4)	9.06 (SD=3.0)	.66	.42
<b>Depression</b>	3.64 (SD=1.3)	3.47 (SD=1.2)	2.93	.09

It can be seen from the means above that those without experience of IPA demonstrated slightly higher mean scores on the measures of PTSD and depression than those with experience of IPA. However, the differences between the groups were very small and this was not significant. Therefore H7a could not be supported.

H7b suggested that PTSD and depression may mediate the relationship between IPA and suicidality. However as H7a above demonstrated, there was no significant relationship between IPA and either PTSD or depression. Therefore, H7b was not able to be tested.

#### **4.3.0.7 IPA & Suicidality – Relationships with socially prescribed perfectionism (SPP), self-criticism (SC) & Rumination**

Personality and cognitive variables associated with the IMV Model were investigated.

##### **4.3.0.7.0 RQ8: What is the relationship between SPP, SC and rumination and IPA and suicidality?**

RQ8 was addressed through two hypotheses. H8a investigated differences between those with and without IPA experience on SPP, SC and rumination. H8b then investigated whether scores on SPP, SC and rumination were associated with suicidal ideation.

##### **4.3.0.7.0.0 H8a: Those with experience of IPA will demonstrate higher scores on SPP, SC and rumination than those with no experience of IPA**

To test Hypothesis 8a, that those with experience of IPA will demonstrate higher scores on SPP, SC, and rumination than those with no experience of IPA, a MANOVA was conducted.

There was a significant difference between those who had and had not experienced IPA on the combined dependent variables,  $F(4, 696) = 11.62, p < 0.001$ , partial eta squared = 0.63. When the results for the dependent variables were considered separately, all the variables were found to differ significantly across IPA experience. (SPP,  $F(1) = 22.83$ ,

p<0.001; SC, F (1) =39.59, p<0.001; reflective pondering, F (1) =13.51, p<0.001; brooding rumination, F (1) =34.54, p<0.001; rumination score, F (1) =29.06, p<0.001).

Table 4.11 below shows the means and standard deviations for SPP, SC and rumination across IPA experience.

**Table 4.11: Mean SPP, SC, & Rumination Scores according to IPA experience**

	<b>Experience of IPA (N=219)</b>	<b>No Experience of IPA (N=484)</b>	<b>F</b>	<b>p</b>
<b>SPP</b>	56.89 (SD=16.02)	50.93 (SD=15.0)	22.83	<.001
<b>SC</b>	80.42 (SD=18.30)	70.62 (SD=19.46)	39.59	<.001
<b>Reflective Pond.</b>	11.44 (SD=3.87)	10.38 (SD=3.39)	13.51	<.001
<b>Brooding Rum.</b>	12.58 (SD=3.60)	10.97 (SD=3.26)	34.54	<.001
<b>Rumination Score</b>	24.03 (SD=6.59)	21.35 (SD=5.86)	29.06	<.001

Key: SPP=socially prescribed perfectionism; SC=self-criticism; Reflective pond= reflective pondering; brooding rum=brooding rumination

It can be seen from the means above that those with experience of IPA demonstrated higher mean scores on the measures of SPP, SC, and rumination than those with no experience of IPA, with a medium effect size, supporting H8a.

#### **4.3.0.7.0.1 H8b: High scores on SPP, SC and rumination will be associated with higher suicidal ideation**

The relationship between SPP, SC and rumination and suicidal ideation was then investigated.

To test Hypothesis 8b, that high scores on the SPP, SC, and rumination measures would be associated with higher suicidal ideation, correlations were carried out. Table 4.12 below shows the correlation matrix for suicidal ideation, SPP, SC, and Rumination.

**Table 4.12: Correlation Matrix of suicidal ideation, SPP, SC & Rumination**

	<b>Suicidal Ideation</b>	<b>SPP</b>	<b>SC</b>	<b>Reflective Pondering</b>	<b>Brooding Rumination</b>	<b>Rumination Score</b>
<b>Suicidal Ideation</b>	1	0.33**	0.34**	0.24**	0.41**	0.36**
<b>SPP</b>		1	0.59**	0.26**	0.43**	0.39**
<b>SC</b>			1	0.44**	0.68**	0.63**
<b>Reflective Pondering</b>				1	0.56**	0.89**
<b>Brooding Rumination</b>					1	0.88**
<b>Rumination Score</b>						1

\*\* Correlation is significant at the 0.01 level (one-tailed)  
 Key: SPP=socially prescribed perfectionism; SC=self-criticism

The data showed that all the variables (SPP, SC, and Rumination) are significantly correlated with suicidal ideation. There was a small positive correlation between suicidal ideation and reflecting rumination, and a medium positive correlation between suicidal ideation, SPP, SC, Brooding rumination, and rumination score. Therefore, it can be seen that high levels of SPP, SC, and rumination are associated with higher levels of suicidal ideation, supporting H8b.

#### 4.3.0.7.1 RQ9: Are SC and SPP associated with defeat and entrapment?

The IMV model indicates that SC and SPP are background factors within the pre-motivational phase. The model suggests that higher scores on these variables will be associated with higher defeat and entrapment scores. H9 tests this relationship.

##### 4.3.0.7.1.0 H9: SC and SPP will be associated with higher perceptions of defeat and entrapment.

To test Hypothesis 9, that high scores on SPP and SC would be associated with higher defeat and entrapment scores, correlations were carried out.

Table 4.13 below shows the correlation matrix for SPP, SC, Defeat, External Entrapment and Internal Entrapment.

**Table 4.13: Correlation Matrix of SPP, SC, Defeat, External Entrapment and Internal Entrapment**

	<b>SPP</b>	<b>SC</b>	<b>Defeat</b>	<b>External Entrapment</b>	<b>Internal Entrapment</b>
<b>SPP</b>	1	.591**	.135**	.115**	.251**
<b>SC</b>		1	.158**	.141**	.314**
<b>Defeat</b>			1	.833**	.777**
<b>External Entrapment</b>				1	.751**
<b>Internal Entrapment</b>					1

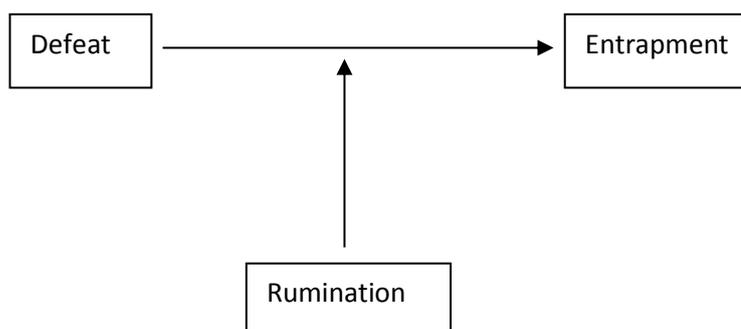
\*\* Correlation is significant at the 0.01 level (one-tailed)  
Key: SPP=socially prescribed perfectionism; SC=self-criticism

The data showed that SPP and SC were significantly positively associated with defeat, external and internal entrapment. Therefore, it can be seen that high levels of SPP and SC are associated with higher perceptions of defeat and entrapment, supporting H9. It can also be seen that the strongest associations are between SPP and SC and internal entrapment.

#### **4.3.0.7.2 RQ10: Does rumination act as threat-to-self moderator, moderating the defeat-entrapment relationship?**

The role of rumination within the IMV model was then investigated. The model suggests that rumination acts as a threat-to-self moderator, moderating the defeat-entrapment pathway (see Figure 4.3). Moderation analysis was therefore conducted to test this relationship.

##### **4.3.0.7.2.0 H10: Rumination will moderate the defeat-entrapment relationship.**



**Figure 4.4: Rumination as a moderator of the defeat-entrapment relationship**

To conduct the moderation analysis, firstly the IV (Defeat) and Moderator (Rumination) were mean centred. A new variable was also created to represent the interaction of Defeat X Rumination.

**Table 4.14: Hierarchical regression analysis of rumination as a moderator of the defeat-entrapment relationship**

Step/Predictors	$\beta$	R <sup>2</sup> change	Total R <sup>2</sup> change
1: Defeat	.85**		
Rumination	.09**	.75**	
2:Defeat	.79**		
Rumination	.09**		
Defeat X Rumination	.13**	.01**	.76

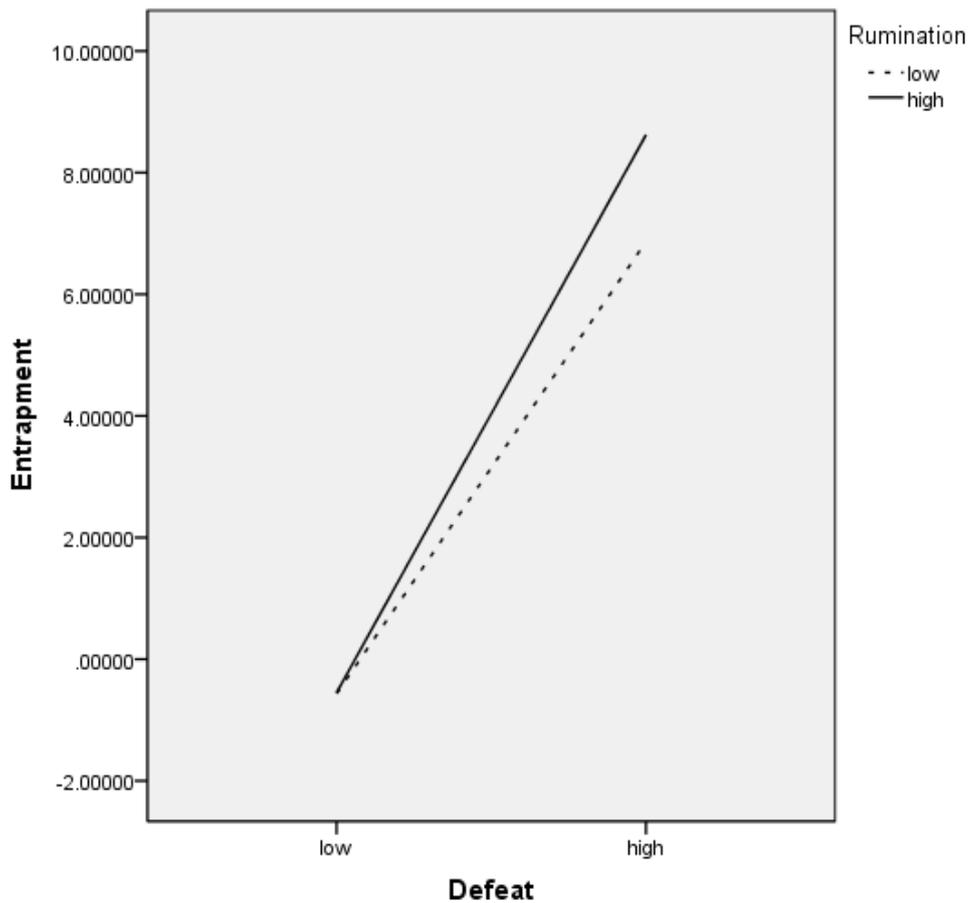
\*\*P<.001

Defeat and rumination were entered in step one, explaining 75% of the variance. After entry of the interaction in step two, the total variance explained by the model as a whole was 76%,  $F(3.696) = 739.86$ ,  $p < .001$ . R square change indicated that the interaction explained an additional 1% of the variance in entrapment when the effects of defeat were controlled for (see Table 4.14).

All of the variables made a significant unique contribution to explaining the variance in entrapment (defeat  $\beta = .79$ , rumination  $\beta = .09$ , interaction  $\beta = .13$ , all significant at  $p < .001$ ).

This analysis therefore suggests that rumination is a significant moderator of the defeat-entrapment pathway, acting as a threat-to-self moderator within the IMV Model, and supporting H10. The results indicate that higher perceptions of defeat and higher levels of rumination increase perceptions of defeat.

Post-hoc analyses were conducted. Figure 4.4 below shows the interaction between the variables.



**Figure 4.5: Rumination as a moderator of the defeat-entrapment relationship**

To investigate the interaction consistent with Aitken and West (1991), the regression lines were plotted at best fit at high (1 standard deviation above the mean) and low (1 standard deviation below the mean) levels of defeat and rumination (see Figure 4.4).

Further tests were conducted on the high and low rumination lines to determine if they differed significantly from zero. Application of the procedure outlined by Aitken and West (1991) revealed that the high rumination slope was significantly different from zero ( $\beta=.17, p<.001$ ) and that the low rumination slope was also significantly different from zero ( $\beta=.11, p<.001$ ). This indicates that those with high perceptions of defeat reported significantly higher perceptions of entrapment. As expected, the high rumination line

was associated with higher entrapment when defeat was high compared to the low rumination line.

Therefore, H10 was supported as rumination did act as a moderator of the relationship between defeat and entrapment.

#### **4.3.0.8 IMV Model – IPA experience and defeat & entrapment**

The final two variables that were investigated in relation to the IMV Model of Suicidal Behaviour were defeat and entrapment. Firstly, it was of interest to determine the relationship of defeat and entrapment to IPA.

##### **4.3.0.9.0 RQ11: What is the relationship between IPA experience and defeat, internal and external entrapment scores?**

This analysis looked at differences in defeat, internal and external entrapment between those with and without experience of IPA. Three hypotheses were used to address this research question, in order to explore the relationship between different aspects of IPA and defeat and entrapment. H11a investigates differences in defeat and entrapment between those with and without experience of IPA. H11b then explores whether there is any association between frequency of IPA and defeat and entrapment. H11c then investigates the association between IPA severity and defeat and entrapment.

**4.3.0.9.0.1 H11a: there will be a relationship between IPA experience and defeat and entrapment scores, with those having experienced IPA demonstrating higher defeat and entrapment scores.**

To test this hypothesis, a MANOVA was conducted to investigate the differences in defeat and entrapment scores across experience of IPA.

There was a significant difference across IPA experience on the combined dependent variables,  $F(3, 696) = 4.89, p = 0.002$ ; partial eta squared = 0.21. When the results for the dependent variables were considered separately, only internal entrapment scores were found to differ significantly across IPA experience:  $F(1) = 11.54, p = 0.001$ .

Table 4.15 below shows the means and standard deviations for defeat, external entrapment and internal entrapment across IPA experience.

**Table 4.15: Mean defeat, external entrapment and internal entrapment scores according to IPA experience**

	<b>No experience of IPA (N=481)</b>	<b>Experience of IPA (N=219)</b>	<b>F</b>	<b>p</b>
<b>Defeat</b>	0.47 (SD=1.39)	0.71 (SD =1.89)	3.42	.07
<b>External Entrapment</b>	0.43 (SD=1.48)	0.63 (SD=2.12)	1.94	.17
<b>Internal Entrapment</b>	0.50 (SD=1.58)	0.99 (SD=2.15)	11.54	.001*

\* $p = .001$

It can be seen from the means above that those with experience of IPA had higher scores on each of the measures than those with no experience of IPA. However, as noted above, only the mean scores for internal entrapment were significantly different across the two groups.

It can be concluded that internal entrapment scores do differ significantly according to whether the participant has experienced IPA or not. There are no significant differences in defeat or external entrapment scores across these two groups. Therefore H11a was partially supported.

**4.3.0.9.0.2 H11b: There will be an association between frequency of IPA and defeat and entrapment scores, with more frequent IPA being associated with higher defeat and entrapment scores.**

It was then investigated whether the frequency of IPA played a role in the defeat and entrapment scores of those who had experienced IPA. It was firstly investigated whether there was an association between IPA frequency and defeat and entrapment scores.

To test hypothesis 11b, that frequency of IPA will be associated with defeat and entrapment scores, a correlation analysis was carried out. The resulting correlation matrix can be seen in Table 4.16 below.

**Table 4.16: Correlation matrix of IPA frequency and defeat, external and internal entrapment**

	<b>IPA Frequency</b>	<b>Defeat</b>	<b>External Entrapment</b>	<b>Internal Entrapment</b>
<b>IPA Frequency</b>	1	0.07*	0.06	0.14**
<b>Defeat</b>		1	0.83**	0.78**
<b>External Entrapment</b>			1	0.75**
<b>Internal Entrapment</b>				1

\*\*correlation significant at the 0.01 level (one-tailed)

\*correlation significant at the 0.05 level (one tailed)

A small correlation was found between frequency of IPA and defeat and internal entrapment scores. There was no significant correlation between IPA frequency and external entrapment.

A standard regression analysis was conducted to investigate whether frequency of IPA was a predictor of defeat scores. This model was found to be non-significant ( $F(1) = 3.41, p=.07$ ). The frequency of IPA ( $\beta = 0.07, p=.07$ ) was therefore not a significant predictor of defeat scores.

A standard regression analysis was then conducted to investigate whether frequency of IPA was a predictor of internal entrapment scores. This model was found to be significant ( $F(1) = 14.52, p < 0.001$ ). The frequency of IPA ( $\beta = 0.14, p < 0.001$ ) was therefore a significant predictor of internal entrapment scores. However, the  $R^2$  for the model was 0.02, indicating that the model explained only 2% of the variance in internal entrapment scores.

Therefore, the analysis showed that frequency of IPA was a significant predictor of internal entrapment scores, but not of defeat or external entrapment, offering partial support for H11b.

**4.3.0.9.0.3 H11c: There will be an association between severity of IPA and defeat and entrapment scores.**

It was then investigated whether there was any association between the severity of IPA experienced and defeat and entrapment scores.

Hypothesis 11c states that defeat and entrapment scores will differ across the levels of IPA severity. To test this hypothesis, a MANOVA was conducted to investigate the differences in defeat and entrapment scores across IPA severity.

There was a significant difference across IPA severity on the combined dependent variables,  $F(6, 1392) = 3.27, p = 0.003$ ; partial eta squared = 0.14. When the results for the dependent variables were considered separately, only internal entrapment scores were found to differ significantly across IPA severity:  $F(2) = 6.64, p = 0.001$ .

Table 4.17 below shows the means and standard deviations for defeat, external entrapment and internal entrapment across IPA severity.

**Table 4.17: Mean defeat, external entrapment and internal entrapment scores according to IPA severity**

	<b>No IPA (N=484)</b>	<b>Minor IPA (N=58)</b>	<b>Severe IPA (N=159)</b>
<b>Defeat</b>	0.47 (SD 1.39)	0.74 (SD 1.90)	0.69 (SD 1.90)
<b>External Entrapment</b>	0.43 (SD 1.47)	0.66 (SD 1.83)	0.62 (SD 2.23)
<b>Internal Entrapment</b>	0.50 (SD 1.57)	0.78 (SD 1.72)	1.08 (SD 2.30)

It can be seen from the means above that those with experience of severe IPA had the highest scores on each of the measures, and the minor IPA group showed slightly higher scores than those with no experience of IPA. However, as noted above, only the mean scores for internal entrapment were significantly different across the levels of severity, and this was with a small effect size.

Post-hoc tests (bonferroni) indicated that the significant difference in internal entrapment scores was between the no IPA group and the severe IPA group (mean difference -0.58,  $p=0.001$ ).

Therefore, it can be concluded that internal entrapment scores do differ significantly between those with no experience of IPA and those with experience of severe IPA. There are no significant differences in internal entrapment scores between the minor and severe IPA groups.

H11c was partially supported as internal entrapment scores differ significantly between IPA severity levels, however there are no significant differences on defeat or external entrapment.

**4.3.0.9.1 RQ12: Does defeat mediate the relationship between IPA and suicidality?**

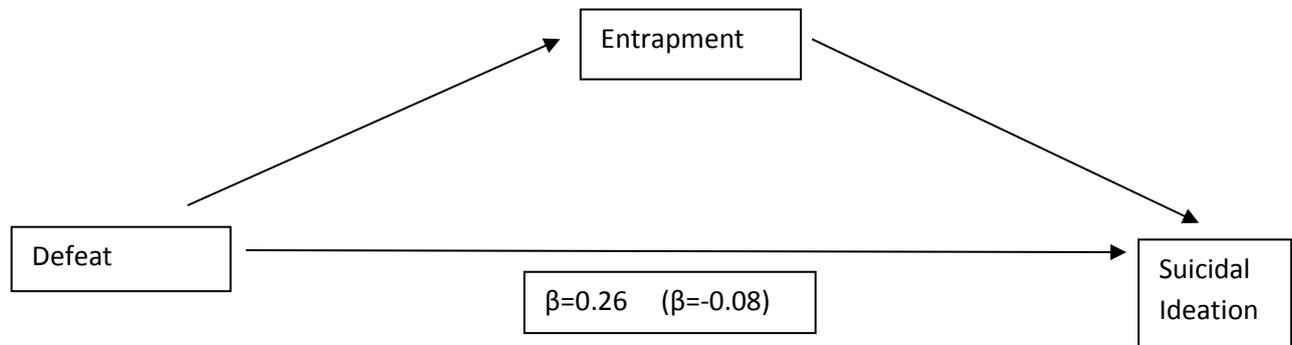
The IMV Model of Suicidal Behaviour suggests that defeat acts within the motivational phase to mediate the relationship between the stressor (IPA) and suicidality. This relationship was tested.

However, there was no significant relationship between IPA experience and defeat, so this view could not be tested further, and H12, that defeat would mediate the relationship between IPA and suicidal ideation, could be rejected.

**4.3.0.9.2 RQ13: Does entrapment mediate the defeat-suicidality relationship?**

The IMV Model suggests that entrapment would mediate the defeat-suicidality relationship. Mediation analysis was used to test this pathway.

#### 4.3.0.9.2.0 H13: Entrapment will mediate the defeat-suicidality relationship



**Figure 4.6: Entrapment as a mediator of the defeat-suicidal ideation relationship**

To test Hypothesis 13, that there will be a mediating effect of entrapment on the relationship between defeat and suicidal ideation (see Figure 4.5), a series of regressions were carried out. A standard regression was conducted with the IV (defeat) predicting the mediator (entrapment). A significant association between defeat and entrapment was found, with defeat explaining 74% of the variance in entrapment score:  $R^2 = 0.74$ ,  $\beta = 0.86$ ,  $p < 0.001$ .

A hierarchal regression was then conducted with the IV (defeat) and mediator (entrapment) predicting the DV (suicidal ideation). See Table 4.18.

**Table 4.18: Hierarchical Regression analysis of the defeat-suicidal ideation relationship with entrapment as a mediator**

Step/Predictors	$\beta$	p	R <sup>2</sup> change for step	Total R <sup>2</sup> change
1: Defeat	0.26	<.001*	0.07*	0.07*
2: Defeat	-0.08	.27	0.04*	0.11*
Entrapment	0.39	<.001*		

\*P<0.001

Defeat was entered at Step 1, explaining 6% of the variance in suicidal ideation. After entry of entrapment at Step 2 the total variance explained by the model as a whole was 10%,  $F(2, 697) = 40.91, p < .001$ . Entrapment explained an additional 4% of the variance in suicidal ideation after controlling for the effects of defeat, R squared change = 0.04,  $F \text{ change}(1, 697) = 30.74, p < .001$ . In the final model, entrapment was significant ( $\beta = 0.34, p < .001$ ), and the beta weight for defeat was reduced to non-significance ( $\beta = -0.08, p = 0.27$ ), suggesting that entrapment fully mediates the relationship between defeat and suicidal ideation.

A Sobel test was conducted to test whether there was a significant reduction in the beta weight of IPA experience. The reduction in beta weight (0.26 to -0.08) was not significant (Sobel value = 4.97,  $p = 6.77$ ) suggesting a partial mediating effect of entrapment score on the relationship between defeat and suicidal ideation.

Therefore, entrapment has a partial mediating effect on the relationship between defeat and suicidal ideation, supporting H13.

### **4.3.1. Summary**

With regards to social desirability bias, the results found that there were no significant differences in levels of socially desirable responses between those with and without experience of IPA. Indeed, the levels of socially desirable responses were low for the sample as a whole. As such, it can be concluded that social desirability bias was not a factor which influenced responses to the intimate partner abuse measure.

With regards to the core relationship between IPA and suicidality, the results found higher levels of suicidal ideation and higher rates of suicide attempts among those with experience of IPA, demonstrating a medium effect size, and finding that IPA experience is a significant predictor of suicidal ideation. All 4 aspects of IPA (psychological aggression, physical assault, injury and sexual coercion) correlated with suicidal ideation, however only the incidence of injury and of sexual coercion made a unique contribution to explaining suicidal ideation in this group. It was demonstrated that the frequency with which IPA occurred was a mediator of the relationship between IPA and suicidality. In addition, results showed that those currently experiencing IPA showed the highest levels of suicidal ideation, however those who had experienced IPA in the past also showed significantly higher levels of suicidal ideation than those with no experience of IPA.

In relation to IPA and stalking, the results found a significant association between the experience of IPA and the experience of stalking. The findings also showed that those who had experienced IPA had experienced more severe levels of stalking than those in the no IPA group, demonstrating a medium effect size. In looking at the relationship

between IPA, stalking and suicidality, the level of stalking experienced was found to mediate the IPA-suicidal ideation relationship.

In relation to symptoms of PTSD and depression, it was found that there were no significant differences on these variables between those with and without experience of IPA.

With regards to the IMV Model of suicidal behaviour, the relationships with socially prescribed perfectionism (SPP), self-criticism (SC) and rumination were investigated. Those who had experienced IPA showed higher levels of SPP, SC and rumination than those with no IPA experience, with a medium effect size. In addition, SPP, SC and rumination were correlated with suicidal ideation. SPP and SC were found to correlate with defeat and entrapment, offering support for their role as pre-motivational factors within the IMV Model. Rumination was found to moderate the defeat-entrapment pathway, offering support for its role as a threat-to-self moderator within the Model.

The relationships between IPA and defeat and entrapment were also investigated. No significant differences were found between those with experience of IPA and the no IPA group on levels of defeat or on external entrapment. However, there were significant differences between the two groups on internal entrapment, with the IPA group showing significantly greater levels of internal entrapment. Internal entrapment scores did not differ significantly between the minor and severe IPA groups. In addition, it was found that the frequency of IPA experienced predicted internal entrapment scores.

The final area of investigation concerned testing the defeat and entrapment pathways of the IMV Model. The results could not offer any support for a mediating role of defeat between the IPA experience and suicidal ideation. Perceptions of internal entrapment were found to differ significantly between those with and without experience of IPA, and also across levels of severity of IPA. Entrapment was found to partially mediate the defeat-suicidal ideation pathway as predicted.

## **4.4 Discussion**

### **4.4.0 Sample**

#### *Demographics*

There are a number of points it is worth discussing in relation to the demographics of the sample of the current study. First of all in relation to the composition of the sample. Whilst the majority of the sample were students (62%), it must be remembered that this was a group that was specifically targeted as they are identified as a high risk group for IPA. The study did in fact capture a wide range of occupations in the sample, but as these were so diverse, ranging from labourers to professionals, these other occupations each reflected only a small percentage of the overall sample. The sample reflected the studies aims to utilise a general population sample, gaining those with experience of IPA from outwith a purely student or refuge based sample.

In relation to IPA, it is of interest to note that the majority of those with experience of IPA were in full time employment at the time of the study. The majority of those with experience of IPA were educated to college level, with slightly more people with experience of IPA being educated to college, degree or post-graduate level than those with no IPA experience. This goes against the common mis-understanding that most IPA is confined to the unemployed section of society, demonstrating that IPA makes no such social distinction. It is also encouraging to note that there are no significant differences in educational level for those who have experienced IPA. However, it is worth noting that as the majority of those with IPA experience in the sample had experienced IPA in the past, rather than currently, it is possible that these educational attainments were achieved after the abuse had ended. It may be that the opportunities to

pursue education are more limited for those who are in abusive relationships and do not have the fortune to escape. Unfortunately we cannot understand any temporal relationships involved based on the current study.

Despite the researcher's attempts to gain male participants, and participants representing different sexual orientations, who had experience of IPA, the numbers obtained in the current sample were low. This demonstrates the difficulties of recruiting these groups, and perhaps illustrates that whilst IPA by men against women is becoming more widely understood and less stigmatised, for some it is still very much an issue that is hidden. This was a survey design, advertised to participants as investigating the impact of relationships. There is a sampling bias in that those who did not feel comfortable discussing such issues would have selected not to take part. Therefore many males or people experiencing same sex abuse may have self-excluded from this study.

This may also have been the case for many who were currently experiencing abuse. Those currently going through such difficulties may not have felt they wished to take part in a study about relationships, if it was currently something that was distressing or uncomfortable for them to discuss. Equally, for this group, it may be that they are often dealing with a large amount of stress and strain, and are therefore unlikely to be able to, or wish to, take part in any research. Indeed, many survivors often comment that at the time of the abuse, they were focused on just trying to get through each day, and found it difficult to think of anything else outside of that (e.g. Sev'er, 2002). There may also be other issues that would affect the likelihood of those currently experiencing IPA taking part, such as concerns around safety and security, and the confidentiality of taking part.

For many, the risk of a partner discovering them answering questions relating to the abuse would understandably be too big a risk to take. Again, the small number of those currently experiencing IPA in the sample, reflects the difficulties and issues around recruitment of this group.

### *Normative data*

There are also a number of points which are worth making in relation to the normative data for some of the main study variables. Firstly with regard to the CTS-2 measure of IPA. The prevalence of the different forms of IPA (psychological aggression, physical assault, injury, and sexual coercion) was very similar in the current sample to that reported in the normative data for the measure (Straus et al. 1996), except the prevalence of injury was higher in the current sample (20% compared to 9%). With regards to frequency of abuse in the current sample, psychological aggression was the most frequently occurring form of abuse, matching the normative data, followed by physical assault, and then injury and sexual coercion being the least frequent. In the current sample, injury and sexual coercion are equally frequent, whereas in the normative data, injury was less than half as frequent as sexual coercion. The key difference between the normative data and the current sample therefore appears to be that injury resulting from the abuse is more prevalent and more frequent in the current study. Straus et al. (1996) utilised a student sample. It may therefore be that the presence and frequency of injury is lower in that group than in the wider sample obtained in the current study. Indeed, Straus (2004) later discusses that he believes student samples often reflect a different form of IPA which is characterised as abuse aimed at controlling a situation, rather than a person, and that this form is less likely to involve more severe/advanced forms of abuse such as injury. Whilst this does not

appear to be the case in the current sample, it is thought to be illustrative of the normative sample used in Straus et al's (1996) research.

With regards to the measure of stalking and harassment behaviours (SHBS; Turmanis & Brown, 2006), the authors reported normative data showing that 78% of their sample had experienced stalking and/or harassment behaviours. In comparison, only 34% of the current sample reported such experiences. This may be a difference between a US and a primarily UK sample. It may also be the case that in the UK, stalking is not as well understood. The measure requires the participant to identify themselves as having experienced such behaviours before completing the rest of the items on the measure. It is possible therefore that this may lead to under-reporting as some people may not identify with the label of stalking, or may not perceive that their experiences constitute stalking. Perhaps there may be a reluctance to classify the experience as stalking if, for example, the police were not involved, or indeed if they felt responsible for ending the relationship, or upsetting the person who carried out the behaviours.

Turnamis and Brown (2006) reported that mild stalking and harassment behaviours were reported to have occurred more frequently, with more severe and disturbing behaviours recorded infrequently. In the current sample, this was not found to be the case, with a positive correlation between frequency and severity of stalking behaviours. Therefore, whilst stalking was not as prevalent in the current sample, more severe and disturbing behaviours were reported frequently. This may be an artefact of the IPA sample. Results of the current study showed that those with experience of IPA were most likely to report stalking and harassment and that they were more likely to experience more severe stalking than those without experience of IPA. The sample

used in the normative data was not related to IPA, but was a more general sample of students and office employees.

In relation to suicidality, Beck et al. (1988) reported normative data for suicidal ideation based on a sample of people seeking psychiatric treatment at a general hospital. This data was a good comparison as it was recorded for people completing the measure in a survey format. The mean score for suicidal ideation was found to be .62. Very similar levels were found in the current sample, with a mean score of .64. This is in a way surprising as one might expect those seeking psychiatric treatment to show higher suicidal ideation than a more general population sample. However, this highlights the increased risk posed by experiences of IPA, that it elevates levels of suicidal ideation comparable to those experienced by those with psychiatric and affective disorders.

With regards to perceptions of defeat and entrapment, the mean scores presented in the normative data cannot be compared to the current sample, as these means are based on completion of the full measures, rather than only the 3 items for each which were used in the current study. However, the pattern of the normative data suggests that defeat scores were highest, followed by external entrapment and then internal entrapment showing the lowest mean scores of the three. In the current study, perceptions of internal entrapment were highest, followed by defeat then external entrapment. This illustrates that the main difference between the normative data and the current sample is on perceptions of internal entrapment. This is not surprising as the current study demonstrates an important relationship between IPA and internal entrapment.

It can therefore be seen that there are some key differences between the normative data and the data obtained from the current sample on some of the key study variables. This helps to highlight relevant issues when working with an IPA sample.

#### **4.4.1 Social desirability bias**

Straus et al (2000) suggested that it is important to include a measure of social desirability bias when using the CTS-2 in a survey design. However in the current sample, no significant differences were found on levels of socially desirable responses, and the overall levels found were low throughout the sample. It may be that in UK samples, this is less applicable than in the US. It may also be the case that generalised short measures of social desirability are not a sensitive enough measure with this sample. Perhaps a measure which specifically assesses socially desirable responses around personal relationships would be more relevant when investigating issues such as IPA. However, at the time of this study, no such measure could be found.

#### **4.4.2 The relationship between IPA and Suicidality**

Hypothesis 2 addressed differences in suicidality between those with and without experience of IPA. The results found higher levels of suicidal ideation and higher rates of suicide attempts among those with experience of IPA, with a medium effect size, finding that IPA experience is a significant predictor of suicidal ideation. This supports previous research in this area which has consistently demonstrated a strong association between IPA and suicidality.

Hypothesis 3a investigated the impact of different aspects of IPA on suicidality. Specifically, this study demonstrated that different aspects of IPA do have differential impacts on suicidality, supporting previous research in this area (e.g. Blasco-Ros et al. 2010; Pico-Alfonso et al. 2006; Kaslow et al. 1998; Thompson et al. 1999). Whilst all four aspects of IPA (psychological aggression, physical assault, injury and sexual coercion) correlated with suicidal ideation, only the incidence of injury and of sexual coercion made a unique contribution to explaining suicidal ideation in those who had experienced IPA. This finding also offers support for research by Pico-Alfonso et al (2006) which suggests that sexual abuse plays an important role in increasing suicide risk. However, it is important to bear in mind that the regression model with these aspects of IPA only explained 2% of the variance in suicidal ideation, so the presence of different types of IPA did not play a big role in predicting suicidality.

The present study was not able to provide support for a key role of psychological abuse in suicidality. In this study, high rates of psychological abuse were recorded for all participants, regardless of IPA experience. It may therefore be that the items on psychological abuse in the Conflicts Tactics Scale Short Form used in this study are not sensitive enough to detect psychological abuse in a relationship. For example, one of the items asks participants to report whether their partner has 'shouted, yelled or swore'. This could clearly be something that many people would encounter and is not necessarily indicative of psychological abuse within a relationship. Also, whilst the incidence of injury and sexual coercion made a unique contribution to explaining suicidal ideation, the Cronbach's alphas for both these sub-scales of the CTS-2 was low, at around .5, indicating poor internal consistency. In addition, as noted above, the different types of IPA explained only a very small amount of the variance in suicidal

ideation. It may be that in addition to the measure not being sensitive enough to detect psychological abuse in this sample, it may also be biased towards physical forms of abuse with the other subscales centering around physical assault, injury, and sexual coercion. Increasingly there has been recognition that the psychological side of IPA is particularly important, and researchers have stressed the importance of considering the wider context of IPA including factors such as control within the relationship, and the impact that the abusive behaviours have on the individual (e.g. Johnson 2008; MCCarry, Hester & Donovan, 2008). However, as these measures were being developed and only published after the methods of the current study were in place, the CTS-2 was the best available measure of IPA at the time of the study.

H3b looked at IPA in greater detail, considering which aspects of IPA could mediate the relationship between IPA experience and suicidality. It was demonstrated that the frequency with which IPA occurred mediates this relationship. It is important to remember that frequency is not the same as severity. How often such behaviours occurred, rather than the specific type of abuse or the severity of that abuse, mediated the relationship, with more frequent abuse being related to higher levels of suicidal ideation. However this is unlikely to be a direct relationship with frequency of abuse alone increasing suicidal ideation. It is more likely that frequent abuse has a greater impact on the individual, perhaps, for example, having a greater likelihood of eroding factors such as self-esteem, or increasing feelings of hopelessness. It may be that it is the impact on the individual of this frequent abuse, rather than how often the abuse occurs per se that acts to increase suicide risk. However, these questions could not be answered within the scope of the present study, and the mechanisms involved in the

relationship between the frequency of IPA and suicidal ideation need further investigation.

H4 investigated suicidality in relation to when the individual had experienced IPA, comparing those with current IPA experience to those who had experienced IPA at some point in the past. Results showed that those currently experiencing IPA demonstrated the highest levels of suicidal ideation. However, those with past experience of IPA still showed significantly higher levels of suicidal ideation than those with no experience of IPA. These findings demonstrated a medium effect size. This is a particularly important finding, as the majority of resources are set up to address risk during and immediately after an abusive relationship. However, for the majority of those in the sample who had experienced IPA in the past, the abusive relationship had occurred a significant amount of time, often a number of years, before taking part in this study. The finding that this group continued to demonstrate significant levels of suicidal ideation highlights the importance of recognising risk within this group.

#### **4.4.3 The relationship between IPA, Stalking & Suicidality**

In relation to IPA and stalking, the results found a significant association between the experience of IPA and the experience of stalking, supporting previous research which has demonstrated a strong association between the two (e.g. Tjaden & Thoennes, 2000). It also supports the view that it is important to consider stalking as a form of IPA (e.g. Hall et al, 2012; Norris & Huss, 2011; Tjaden & Thoennes, 2000). The results of hypothesis 4 demonstrated that those with experience of IPA had experienced more severe levels of stalking than those with no experience of IPA. This is an important

finding as it is sometimes assumed that people being stalked by partners or ex-partners are not at great risk and services in the UK such as the police have been slow to change this assumption. This finding highlights the importance of recognising that those with experience of IPA are at increased risk of experiencing severe stalking behaviours. In looking at the relationship between IPA, stalking and suicidality, the level of stalking experienced was found to mediate the IPA-suicidal ideation relationship. Therefore, those with experience of IPA were more likely to experience more severe levels of stalking, and more severe levels of stalking in turn increased suicidal ideation. However, it is important to note that the level of stalking experienced only explained an additional 2% of the variance in suicidal ideation after controlling for IPA experience. Therefore, the severity of stalking experienced did not hugely increase risk of suicidal ideation in those with experience of IPA. It may be that whilst severity of stalking does play a mediating role, the actual relationship is in fact more complex. For example, severity of stalking could impact on perceptions of defeat and/or entrapment, as the individual struggles to fully escape from the abuse. It is also important to remember that stalking is most likely to occur at the end of the relationship, when the victim is attempting to escape the ex-partner and build a new life for themselves. This is therefore a time which is likely to be extremely difficult and impact on the individual in a wide variety of ways. Qualitative research (e.g. Sev'er 2002) suggests that this is a time when survivors struggle most and find it particularly difficult to cope, often fighting against factors such as low self-esteem whilst dealing with a wide range of practical difficulties including finances, housing, employment, and creating a safe environment for them and their family. It may therefore be that the severity of stalking experienced is only one factor amongst many which has a significant impact on the individual at this time.

However, overall, these findings highlight the importance of considering stalking whenever investigating the relationship between IPA and suicidality. It further stresses the impact that stalking and harassment can have on the individual, and the importance of recognising the increased risk experienced by those with a history of IPA.

#### **4.4.4 PTSD & Depression**

In the current study, no significant differences could be found between those with and without experience of IPA on measures of post-traumatic stress symptoms or depressive symptoms. This is surprising as one may expect such symptoms to be higher in those who have been through a potentially traumatic and challenging experience such as IPA. However, it may be that the measures of PTSD and depression employed are not relevant enough for this sample. For example, in recent years, it has been argued that experiences such as IPA which are not just a single traumatic event, but rather represent a repeated, ongoing exposure to a range of traumas, result in a specific sub-type of PTSD known as complex PTSD (e.g. Courtois 2004). Complex trauma generates complex reactions, in addition to those currently included in the DSM-IV (American Psychiatric Association, 1994) diagnosis of posttraumatic stress disorder (PTSD). Research (e.g. Herman 1992a; 1992b) showed that individuals exposed to such trauma suffered from a variety of psychological problems not included in the diagnosis of PTSD, including depression, anxiety, self-hatred, dissociation, substance abuse, self-destructive and risk taking behaviours, revictimization, problems with interpersonal and intimate relationships, medical and somatic concerns, and despair. Therefore, it may be that in the current sample, the measure of PTSD used was not able to pick up the

complexities involved in this type of trauma. Perhaps measures such as the Trauma Symptom Inventory (Briere, 1995; Briere, Elliot, Harris & Cotman, 1995) which was developed to assess general trauma symptoms as well as assessing the domains of the self and relations with others, or the Structured Interview for Disorders of Extreme Stress (SIDES; Pelcovitz et al, 1997; van der Kolk, 1999; Zlotnick & Pearlstein, 1997) may have been more sensitive to pick up levels of PTSD in those with experience of IPA. However, such measures may also have been too specific to pick up more general PTSD symptoms experienced by those in the non-IPA group. In addition, it is recommended that such measures are administered by a clinician, and therefore they are less suitable for a survey design such as the current study.

In relation to depression, the measure used assessed depressive symptoms experienced only over the previous two weeks. As the majority of those in the sample who had experienced IPA had experienced it at some point in the past, it may be that depressive symptoms are a more short term reaction, which therefore do not show up in high levels for those who experienced the abuse some time ago. It may also be that within the current sample there were higher levels of depression in the non-IPA group than may have been expected, eliminating group differences.

#### **4.4.5 IPA & Suicidality and the relationship with Socially Prescribed Perfectionism, Self-Criticism and Rumination**

Hypothesis 8a investigated the relationship between IPA and socially prescribed perfectionism (SPP), self-criticism (SC) and rumination. Those who had experienced IPA show higher levels of SPP, SC and rumination than those with no IPA

experience, with a medium effect size. This is an interesting point, as SPP and SC are generally considered to be stable personality traits. It therefore raises a question as to whether those with these personality traits are at greater risk of being involved in an abusive relationship, or whether these may be pre-existing vulnerabilities which the nature of an abusive relationship exacerbates. It may also be possible that these are traits which are not stable, and they can indeed change and be modified by our experiences. It may be that repeated and chronic exposure to factors such as abuse that may change or modify our cognitions and behaviours, may over time also be able to change personality traits. However, there is currently no research to support this view. More detailed research in this area is needed, and it may particularly benefit from longitudinal research to help investigate any changes in these areas during and after an abusive relationship. The finding that rumination, a cognitive response style, is found to a higher degree in those with experience of IPA is also an interesting finding. Again, longitudinal research would be of interest to determine the temporal relationship between IPA and rumination, and to better understand the causal relationship between the two.

Hypothesis 8b investigated the relationship between SPP, SC, rumination, and suicidal ideation, finding that they were all positively correlated with suicidal ideation. Therefore, they are associated with both IPA experience and suicidal ideation. This is an area where interventions could focus to help decrease suicide risk in those with experience of IPA.

Hypothesis 9 tested the role of SPP and SC within the IMV Model of Suicidal Behaviour (O'Connor, 2011). The Model proposes that SPP and SC act within the pre-

motivational phase. We would therefore expect to see an association between high levels of factors in the pre-motivational phase, and high levels of defeat and entrapment, the key variables within the motivational phase. Hypothesis 9 tested this relationship, finding that SPP and SC were positively correlated with perceptions of defeat and entrapment, supporting their role as pre-motivational factors within the model.

Hypothesis 10 tested the role of rumination within the IMV Model (O'Connor, 2011). The Model proposes that rumination acts as a threat-to-self moderator, moderating the pathway between defeat and entrapment. This was supported, showing that high levels of rumination and defeat are related to high perceptions of entrapment. Therefore, when those with a ruminative response style experience perceptions of defeat, they are more likely to perceive greater levels of entrapment than those who do not tend to ruminate. However, it must be noted that rumination as a moderator only explained an additional 1% of the variance in entrapment when perceptions of defeat were controlled for. Defeat was found to explain 74% of the variance in entrapment scores. As such, whilst rumination does act as a moderator between defeat and entrapment, its influence on this pathway was found to be weak in the current study. Perhaps for those with a ruminative response style i.e. those who tend to dwell on a situation or feeling, it is the impact of the content of this rumination rather than the tendency to ruminate itself which has a greater influence on perceptions of entrapment. For example, for those who have experienced IPA, if they tended to ruminate on their abusive experiences, their thoughts may be around their feelings that they had somehow been to blame for the incidents, or that they had in some way failed their partner or their family. These types of thoughts could lead to negative aspects such as low self-esteem, self-blame, or

feelings of worthlessness. If someone blames themselves and perceives that they are at fault, this could clearly lead to perceptions of internal entrapment as the individual feels the abuse is a result of internal factors, and not an external situation that they could escape or get away from. Therefore, it could be these factors which have a greater influence on perceptions of entrapment rather than the process of rumination itself.

#### **4.4.6 IMV Model: IPA experience and defeat and entrapment**

Research Question 11 investigated the relationship between IPA and defeat and entrapment, investigating the role of IPA experience itself, and frequency and severity of IPA in relation to perceptions of defeat and entrapment. H11a tested differences in defeat and entrapment between those with and without experience of IPA. No significant differences were found between the two groups on perceptions of defeat or external entrapment. This is an important finding as it indicates that those with experience of IPA do not perceive significantly higher feelings of defeat as a result of the abuse, and also are not more likely to feel externally trapped in a situation. However, there were significant differences between the two groups on internal entrapment, with the IPA group showing significantly greater perceptions of internal entrapment. Therefore, whilst those with experience of IPA are not more likely to feel trapped by external factors, they are more likely to feel trapped within themselves i.e. they will feel trapped by internal factors. However, it is important to note that this finding demonstrated only a small effect size. As discussed above, there may be a number of factors which result from the experience of IPA which could impact on perceptions of internal entrapment, such as low self-esteem and feelings of worthlessness. Indeed, it may be that the relationship is the other way round. Perhaps

perceptions of internal entrapment allow these negative feelings and cognitions to develop. Either way, it may be that it is these aspects themselves which have a bigger role in helping us to understand IPA than perceptions of internal entrapment alone.

H11b went on to investigate whether the frequency of IPA had any impact on perceptions of defeat or entrapment. A small association was found between IPA frequency and defeat and internal entrapment. Further analysis revealed that the frequency of IPA is predictive of perceptions of internal entrapment. H11c demonstrated that there were no significant differences in perceptions of defeat and entrapment between those experiencing minor and severe IPA. Therefore, research question 11 established that internal entrapment is a key variable related to IPA, and that perceptions of internal entrapment are associated with the frequency of IPA experienced, but have no relationship with the severity of the abuse experienced. These are important findings as, to our knowledge, this is the first study to investigate the relationship between IPA and internal entrapment and the results demonstrate a strong relationship between the two.

The finding that IPA experience is associated with internal entrapment supports qualitative research into the experience of IPA (e.g. Sev'er, 2002) , which highlights that victims of IPA often do not view the abuse as being caused by an aspect relating to the relationship, or to the partner, but perceive that they are in fact responsible. After the relationship has ended victims also highlight that it is their own perceived inability to rebuild their lives that they find particularly difficult (McLaughlin et al, submitted; Sev'er, 2002). Therefore, the finding that those with experience of IPA perceive greater levels of internal entrapment fits with existing research which demonstrates that victims

of IPA tend to associate the experience with internal factors. It may be that this finding in fact reflects an internal attribution style, where individuals have a tendency to attribute their experiences to aspects within themselves. However, this is the first study to investigate internal entrapment in relation to IPA, and there is currently no research exploring attribution styles in this group. Therefore, further research is needed in this area to better understand the factors involved.

Hypothesis 12 further investigated the pathways within the IMV Model of Suicidal Behaviour (O'Connor, 2011). The Model posits that defeat mediates the relationship between the stressor, in this case IPA, and suicidal ideation. Whilst the model does not specify this pathway, this hypothesis was proposed based on what can be inferred from the model, and from previous research. However in the current study, no relationship was found between IPA and perceptions of defeat. Therefore, the mediating role of defeat could not be supported. Hypothesis 13 then investigated whether entrapment mediated the relationship between defeat and suicidal ideation as the model suggests. Entrapment was found to be a partial mediator of this relationship.

#### **4.5 Implications for theory**

The findings have a number of implications for the IMV Model, and it's utility in helping us to understand the relationship between IPA and suicidality.

One of the first aspects to consider is that life events such as IPA may not be confined to the pre-motivational phase. The results show evidence of aspects of IPA such as frequency of abuse and severity of stalking behaviours mediating the relationship

between IPA (the life event in the pre-motivational phase) and suicidal ideation in the motivational phase, as well as predicting internal entrapment within the motivational phase. It may be therefore that aspects of IPA also act during the ideation formation phase, and are not merely background or triggering events.

The model suggests that perceptions of defeat are the first stage in the motivational phase. However the current study has demonstrated a role for entrapment in the relationship between IPA and suicidality, but not for defeat. High perceptions of internal entrapment were seen in those with experience of IPA, but their perceptions of defeat did not differ from those with no IPA experience. Frequency of IPA was found to predict internal entrapment, but was not predictive of defeat. Also, whilst entrapment was found to mediate the relationship between defeat and ideation as the model would predict, this was only a partial mediation effect, suggesting that another factor may be a more relevant mediator between defeat and ideation. These findings suggest that perhaps entrapment may be the first stage within the motivational phase, or at least that there may be a more direct pathway between the pre-motivational phase and entrapment which does not necessitate perceptions of defeat.

This study investigated the threat-to self-moderator of rumination. Whilst it was found to moderate the pathway between defeat and entrapment as proposed, this pathway was particularly weak in the current study. As discussed above, it may be that the content of the rumination has an important role to play, and that it is the psychological impact of this that is most relevant. There needs to be further exploration therefore as to the impact of the moderators on other variables currently outwith the model, and investigation into their role in the processes of the model.

As the model stands, the life events etc experienced in the pre-motivational phase are very separate from the moderators which act within the motivational phase. There is no pathway for life events to influence or interact with the moderators. However, it can clearly be seen that an experience such as IPA could potentially impact on factors such as coping, people's future thoughts, goals, social support etc, and potentially on the content and nature of moderators such as rumination and attitudes. This author would suggest therefore that the model needs to in some way take account of this complex interaction.

The findings of this study overall suggest that the IMV Model is a useful framework for understanding suicidality, but that it is perhaps missing some of the detail which would allow an in-depth understanding of the relationship between IPA specifically and suicidality. Findings indicate that perhaps defeat plays a less important role in the model than entrapment, with entrapment having a more direct relationship with the factors in the pre-motivational phase. They also suggest that there is a need for pathways to explain the interaction of such factors with the mediators and moderators within the motivational phase. Lastly, they suggest that there may be other variables which are currently not included in the structure of the model which are important in understanding the relationship between IPA and suicidality.

#### **4.6. Implications for practice**

This study has highlighted a number of important implications for practice. Firstly, in relation to IPA itself, the current study found a higher prevalence and frequency of injury than observed in the normative data. This suggests that it may be relevant to conduct IPA screening when individuals seek medical attention for injuries which could have been a result of IPA. However, this may potentially be of limited value as many people experiencing IPA may either not be allowed by the partner to seek medical help, or else would be accompanied by the partner. Another concern with screening in this way is how useful it could be in terms of outcomes. Medical services are unlikely to be able to offer or provide any protection or direct help. Providing people with information on IPA and/or potential sources of help should they wish it could not be done with written materials, as the partner may find this and it could potentially endanger the victim further. However, perhaps just the opportunity to discuss the situation with the medical professional, and a verbal indication of potential sources of help and support that the victim could access if wanted, would provide at least some benefit to victims.

This research also identified that frequency of IPA is a more relevant measure than severity. This is a particularly important aspect for practice as services to help those experiencing IPA often look at severity as a means to assess what help should be given. For example, housing services base decisions on whether or not to provide someone with a new home, giving them the means to leave the abusive relationship, on whether or not the police have been called to an IPA incident. This is not only an attempt to measure severity, but is also biased to respond to physical abuse, as victims are more

likely to need the police to respond to this type of abuse. Currently, many are in a position where if they approach housing services to escape the abuse, they will be told that they cannot have access to emergency housing unless they have a police report documenting an incident of the abuse. People are therefore forced to stay in the abusive relationship until an incident occurs which is severe enough for the police to be called, putting themselves, and often their children, at risk, to gain the evidence needed to access emergency housing services. Such services currently do not consider different types of abuse, or the frequency with which the individual is exposed to abuse. Consideration of such factors would result in far more individuals being able to access the support and resources they need. It is worth noting, that even if these aspects were taken into account, for those who need to rely on local councils or housing associations to provide this kind of emergency accommodation, the benefits of this are limited. The housing provided to people in these situations is generally of low quality and in the worst area of the district – representing the housing that those in less desperate need refuse. It will also be in the same general area as where they lived with the abusive partner, meaning they are still in the same local area, making it extremely easy for the partner to track them down. Qualitative research highlighted that in these circumstances, many feel that it would be easier to return to the partner, than struggle on their own in an unpleasant and often unsafe environment, with often escalated abuse from the ex-partner (e.g. Sev'er 2002; McLaughlin et al, submitted).

With regards to experiences of stalking, the results of the current study demonstrate that those with experience of IPA are more likely to experience stalking, and also experience more severe levels of stalking than those with no IPA experience. Whilst this study is not able to comment categorically on the temporal relationship between the

two, the high prevalence of stalking experiences amongst those who have experienced IPA in the past, suggests that the majority of stalking occurs after the relationship has ended. This raises a few areas for concern for practice. Firstly, a greater awareness of the association between IPA and stalking is needed. Often, victims do not anticipate these behaviours from their ex-partner, or at least do not anticipate the severity and extent of such behaviours. This aspect could be part of IPA awareness campaigns, increasing knowledge and understanding that this can occur when leaving an abusive relationship, and suggesting strategies for safety and security in the weeks, months, and years after the end of the relationship.

The other aspect to awareness is awareness on behalf of the police, social services etc. Often, stalking by an ex-partner is viewed by such services as a nuisance factor, rather than presenting real threat and danger to the victim. Ending the relationship can often cause the abuse to escalate, and stalking and harassment are one of the forms that this escalation can take, whilst the ex-partner attempts to find a way to physically get to the victim and/or to regain control over the victim. At the moment, the police and legal system can do very little practically to help or protect victims. It is important that when victims report any stalking or harassment behaviours from an ex-partner, that these are taken seriously by the services involved, and appropriate advice and support is given to victims at this time. At the moment, victims generally experience a complete lack of support and protection at this time, which could potentially lead to perceptions of defeat and entrapment, and feelings of depression and hopelessness. It is therefore no surprise that severe levels of stalking were found to be predictive of suicidal ideation. Better help and support from a variety of sources may help reduce this increased risk of suicidality in this group.

In relation to suicidality, this study demonstrated higher levels of suicidal ideation and of suicide attempts amongst those with experience of IPA. Comparison to the available normative data further illustrated that suicidal ideation in this group is similar to levels found in those with psychiatric and affective disorders. This highlights the importance of recognising the increased risk presented by this group. Whenever an individual discloses experiences of IPA to a professional, it would therefore be worthwhile to screen for suicidal ideation. The results also demonstrate that those who have experienced IPA in the past continue to report high levels of suicidal ideation, illustrating that risk persists for some time after the end of the relationship. It is therefore important for services set up to help victims and survivors of IPA to be aware of this increased risk of suicidality and to aim to address the issue of suicidal thoughts and risk in the information and support that they provide. It also highlights the need for continued support and resources to be available to survivors in the years after the abusive relationship, and this is an area which is currently very lacking in practice.

The current research highlights the need for interventions focusing on three main areas; personality and cognitive factors, perceptions of internal entrapment, and on survivors of IPA in the years after the abusive relationship. Interventions which could target the psychological impact of the abuse, at the time of the abuse, immediately afterwards, and in the years to follow, could be of considerable benefit to victims and survivors. A multicomponent intervention may be the most effective, involving elements such as psychoeducation, psychotherapy, training and education, and support, to help people to better address negative thought processes, to gain coping skills, and to rebuild their

lives after abuse. At the moment there are no such interventions available for those with experience of IPA.

#### **4.7 Limitations**

There were some limitations of this study. As mentioned previously, it is possible that the measure of psychological abuse used was not sensitive enough to detect such abuse within this sample. Another criticism of the Conflicts Tactics Scale Short Form could be that the other three forms of abuse it investigates (physical assault, injury and sexual coercion) are all physical aspects. The addition of measures to more directly assess psychological aspects of IPA, such as Johnson's (2008) measure of control within intimate relationships, may have revealed more about the relationship between psychological abuse and suicidality. It has also been highlighted that the sexual coercion and injury subscales demonstrated poor internal consistency in the current study. As such, the CTS-2 showed significant limitations within the current study.

In relation to measures outside of IPA, it was hypothesised that those with experience of IPA would demonstrate greater perceptions of defeat, however this was not supported. It must be noted that this study only used the three top loading items to assess perceptions of defeat, and it may be that this was simply not a sensitive enough measure with this sample. Future research in this area may benefit from using the full defeat scale.

Also in relation to the measures used, in keeping the questionnaire manageable for participants, it was not possible to include all variables of interest. For example, it

would have been desirable to include measures of self-esteem and to also assess protective factors such as resilience. In addition, this questionnaire was designed to be completed online in order to facilitate ease of completion for participants and maximise the number of participants in the study. In this format it was not possible to include a qualitative aspect to the study which could have provided a more in-depth understanding of the quantitative data. Lastly in relation to the measures, as the questionnaire was presented online in the format, all participants received the measures in the same order, and therefore order effects could be a consideration in this study. It is also important to note that the cronbach's alphas for the social desirability measure were low in this study. Whilst no significant differences were found in social desirability scores between the groups, future research should consider a more suitable measure.

Another limitation of this study involved the sample composition. The study aimed to include both males and females, not restricting its definition of IPA by focusing on females only. Although the sample consisted of both males and females, there were not enough males who had experienced IPA within the sample to conduct any meaningful analysis regarding any potential gender differences in IPA experiences or outcomes.

A key limitation of this study is that it cannot establish the temporal relationship between the variables. This would be of particular interest in relation to the personality (SPP and SC) and cognitive variables (rumination) in the study. If we assume that the personality factors are acting as pre-existing vulnerabilities that are in some way exacerbated by the experience of IPA, then it is important to investigate the mechanisms involved in this process. Perhaps some of these mechanisms may be

aspects that interventions could target. This is particularly relevant as this study shows that those with previous experience of IPA continue to demonstrate high levels of suicidal ideation. It may be that these personality and cognitive factors, once affected by IPA, are extremely difficult to change. Identifying these mechanisms involved in their relationship with IPA may reveal a way to target these areas and lower suicide risk in this group.

#### **4.8 Directions for future research**

This study has demonstrated the importance of considering a number of different aspects of IPA when investigating suicide risk, particularly highlighting that the presence of injury and of sexual coercion are key risk factors that predict suicidality. It also demonstrated that the frequency of IPA, severity of stalking, and perceptions of internal entrapment mediate this relationship. Future research could usefully establish the mechanisms which are involved in these processes.

It has been discussed previously in this section that this study found significant limitations with the CTS-2 measure of IPA. Whilst it has been suggested that future research should use a more suitable measure, it must be noted that at the moment there are no other measures available which assess a range of abusive behaviours and also are not gender specific. Therefore there is a strong need for the development of a comprehensive and current measure of IPA. Until such a measure is available, it may be a useful strategy to make use of a number of IPA measures which can assess different aspects, in order to give a more detailed view. Increasingly the context that the IPA occurs in is becoming recognised as an important factor to consider. Aspects

such as the level of control within the relationship (e.g. Johnson 2008) and the impact that the abuse has on the individual (e.g. McCarry et al. 2008) could be measured alongside the CTS-2 to help address the areas it does not cover, and better understand the psychological impact of IPA.

The study has further demonstrated that the concept of IPA severity is not a particularly useful one when investigating suicidality, as no significant differences were found between those experiencing minor and severe IPA. It may be that the addition of measures of IPA which can go beyond this minor/severe dichotomy could reveal more about the relationship between IPA and suicidality. The measure of frequency of IPA, how often abusive behaviours occurred, was found to be a more relevant measure. This is an important finding, as severity is an aspect of IPA which is commonly assessed in the literature, however, frequency is rarely measured.

This research has demonstrated that some aspects of IPA such as frequency of abuse, and the severity of stalking experienced, act to increase suicide risk. However, the small amount of variance in suicidal ideation which is explained by these variables suggests that there may be other important factors at work. As discussed previously, it is unlikely that these factors have a direct influence on suicidal ideation. It is more likely that such factors impact on a psychological factor which plays a bigger role in influencing suicide risk. It is important therefore that aspects such as frequency of abuse and severity of stalking are studied in more depth to help understand the impact of these on the individual, and identify mechanisms which are involved in suicidality. For example, frequent abuse could impact on self-esteem and self-worth, and it may be these factors which have a greater influence on suicidal ideation than the frequency of

abuse itself. Also, given that, as discussed previously, at the time when an individual is experiencing stalking, there may be many more issues and stresses involved than simply the stalking behaviour itself. Understanding the psychological impact of abuse on the individual is therefore a key area on which future research needs to focus.

This also follows on to the need for interventions to be developed for people with IPA experience, as discussed above. At the moment, it would be difficult to develop such an intervention due to a lack of knowledge and understanding about the impact of IPA and the needs of victims and survivors. Although this research would suggest that psychological aspects such as negative cognitions and perceptions of entrapment are important targets, as are the needs of those with previous IPA experience, there are still many gaps in our understanding. For example, what is the role of internal entrapment? Is it related to attributional processes, or factors such as self-blame? Is internal entrapment itself the important factor, or is it the impact of internal entrapment on other psychological aspects which is important? Therefore, future research needs to investigate the impact of IPA further, investigating the key mechanisms involved, and identify possible areas for intervention. This will enable the development and trial of appropriate multicomponent interventions which can help reduce the impact of IPA on the individual and also lower risk of suicidality in this group.

With regard to the IMV Model of Suicidal Behaviour, the results suggest areas for future research, specifically in relation to IPA. There firstly needs to be some investigation into the impact of life events such as IPA throughout the different phases of the model, and how it interacts with/influences the various moderators. For example, there may be places for IPA to act between the defeat-entrapment-ideation pathways,

and there may also be complex interactions with moderators such as coping, rumination, goals, future thoughts, social support and attitudes which need to be understood in order to gain an in-depth knowledge of the relationship between IPA and suicidality. In relation to this, it would also be useful if research could suggest and test the potential temporal relationships of the variables within the model, as this is presently unclear.

In addition, it is important to investigate whether there is in fact a more direct pathway between factors in the pre-motivational phase and perceptions of entrapment, which do not necessitate perceptions of defeat. Research needs to be conducted to understand whether this finding of high perceptions of entrapment without high perceptions of defeat is unique to an IPA sample, and if so, what are the mechanisms involved, and how can the model be revised to take account of this.

#### **4.9 Conclusions**

This study was one of the few empirical studies to take a comprehensive view of IPA in investigating its relationship with suicidality, and the first to investigate potential mediators of this relationship. It adds to the literature regarding the differential impact of different aspects of IPA on suicidality, and highlights the importance of considering stalking as a part of IPA. This is the first study to demonstrate the mediating role of the frequency of IPA and the severity of stalking in the relationship between IPA and suicidality.

This study has been able to provide partial support for the IMV Model of Suicidal Behaviour (O'Connor, 2011), demonstrating that it is a useful framework for understanding the relationship between IPA and suicidality. The findings regarding the differential impacts of different aspects of IPA, such as frequency and severity, and the role of various key variables within the model, support the model's view that the process from the stressor to suicide risk is a complex interaction of a variety of factors. Utilising this model within the study has identified important relationships between IPA and key variables, such as internal entrapment, for the first time.

This study has revealed a key role for internal entrapment in the relationship between IPA and suicidality. It has also established that the frequency of the IPA experienced is a more relevant measure than severity when investigating suicidality in this group. The IMV Model of Suicidal Behaviour (O'Connor, 2011) was found to be a useful framework for understanding the relationship between IPA and suicidality. Future research should address the limitations with regards to the measure of defeat, in order to better investigate the role of this factor within the model, and to better test its relationship with IPA.

Further research is needed to explore these relationships in greater depth, but this study has revealed key areas of focus for attempting to better understand the relationship between IPA and suicidality.

## **Chapter 5: IPA & Suicidality: an in-depth investigation**

### **5.0. Structured Abstract**

**5.0.1 Background:** This study aimed to conduct an in-depth investigation of the relationship between intimate partner abuse (IPA) and suicidality, and test the IMV Model of Suicidal Behaviour within this context. This study was based on the knowledge gained from the previous study reported in Chapter 4, and aimed to expand on this. This research also addressed limitations identified in the previous study, introduced more detailed measures of IPA to increase our understanding of the relationship between IPA and suicidality, and further tested the pathways and processes involved in the IMV Model.

**5.0.2 Method:** A prospective survey design was implemented to measure lifetime experience of IPA, experience of stalking and harassment behaviours, suicidal thoughts and behaviours, and other key factors at two time periods, 6 months apart. Multiple recruitment techniques were employed. Male and female participants with and without experience of IPA were recruited using a mix of opportunistic and targeted sampling, as well as snowballing techniques. Participants with (n=58) and without (n=67) experience of IPA were compared.

**5.0.3 Results:** Participants with experience of IPA showed significantly higher levels of suicidality. Those with current and past experience showed similar levels of suicidal ideation, and those with past experience showed the highest levels of suicide attempts. The impact of IPA, stalking, internal entrapment, low positive future thinking and low social support emerged as significant predictors of suicidal ideation. Predictors of suicide attempts were stalking and internal entrapment. Those who experienced high levels of being controlled within IPA reported higher suicidal ideation, greater impact

of IPA, more severe stalking, higher levels of internal and external entrapment, defeat, and lower self-esteem. Predictors of the impact of IPA were also investigated, and these were identified as high levels of control, stalking, planning, internal entrapment, and lower positive future thinking. Those with experience of IPA reported higher perceptions of defeat and entrapment than those with no IPA experience. The model was partially supported in that defeat was found to mediate the relationship between IPA and entrapment. Personality factors (socially prescribed perfectionism, self-criticism, and self-esteem) were found to act within the pre-motivational phase of the model, being associated with higher perceptions of defeat and entrapment. Social support and positive future thinking were found to act as motivational moderators, moderating the relationship between entrapment and suicidal ideation. However, only internal entrapment mediated the relationship between IPA and suicidal ideation. Neither defeat nor entrapment acted as mediators of suicide attempts. Support was not found for the role of threat-to-self moderators within the model.

**5.0.4 Conclusion:** This study found a strong association between IPA and suicidality, and expands on previous research in this area by investigating the mechanisms by which suicide risk is increased in this group. This study highlights the continuing risk for those with past experience of IPA, and also the key role of stalking and internal entrapment in the relationship between IPA and suicidality. The study also suggests that different levels of control within an abusive relationship are associated with different levels of risk and outcomes. The study found partial support for the IMV Model of Suicidal Behaviour, suggesting it is a useful framework for understanding the relationship between IPA and suicidality, but that future research is needed to test this further. This study was not able to adequately investigate the process between suicidal ideation and suicide attempts, and this is identified as an area for future research.

## **5.1 Introduction**

This chapter presents the second empirical study to be conducted within this PhD. This research expands on the study reported in Chapter 4, by investigating the relationship between IPA and suicidality in greater depth, enhancing our understanding of IPA, and also testing the IMV Model of Suicidal Behaviour (O'Connor, 2011) in greater detail. In order to do this, this study not only addressed many of the limitations identified in the study reported in Chapter 4, but included a number of additional variables to allow a more in-depth investigation of the relationship between IPA and suicidality and to help determine the utility of the IMV Model as a framework for advancing our understanding of the relationship between IPA and suicidality.

The chapter will introduce the additional variables involved, covering factors particularly related to suicidality, and variables chosen to increase our understanding of IPA, and test the various pathways within the IMV Model. The introduction concludes by presenting the aims of this study, and the research questions and hypotheses tested. The method section then outlines the sample used in this study. Each of the measures employed and the study procedure are then detailed. The method section concludes with an overview of the analytic strategy used in the data analysis. The results of this study will then be presented and discussed. The chapter concludes with consideration of the limitations of the study, along with its implications, and directions for future research.

### **5.1.0 IPA & Suicidality**

This study included a number of additional variables to those described in Chapter 4 in order to explore the relationship between IPA and suicidality in greater depth. This section will outline the additional measures utilised in this study. The selection of these variables was informed by the IMV Model of Suicidal Behaviour (O'Connor, 2011; see Chapter 3 for a detailed description). The current study investigates the relationship of these factors to IPA and suicidality, and their role within the IMV Model. Each of these variables are discussed below.

#### **5.1.1 The IMV Model**

##### **5.1.1.0 Key Elements within the IMV Model of Suicidal Behaviour**

###### **5.1.1.0.1 Defeat**

One of the key elements within the IMV model is defeat. Williams and Pollock (2001) suggest that defeat can increase suicide risk, and previous research has demonstrated that defeat is positively correlated with suicidal ideation (e.g. Rasmussen et al. 2010). The IMV model suggests that defeat may be a mechanism which increases suicide risk.

Whilst the role of defeat was investigated in the previous study, and was not found to be a significant factor, it has been included in the current study as it is a key feature of the IMV Model. In addition, it had been noted in the previous study that a considerable

limitation was the use of the short version of this measure. Therefore, the variable is included in the current study, and assessed using the full defeat measure.

#### **5.1.1.0.2 Entrapment**

Another key element within the IMV model involves the individual making appraisals regarding the extent to which they feel trapped. Williams and Pollock (2001) suggest that entrapment can increase suicide risk, and previous research has demonstrated that perceptions of entrapment mediate the relationship between defeat and suicidal ideation (e.g. Rasmussen et al. 2010). The IMV model posits that entrapment acts as a mediating variable between defeat and suicidal ideation, meaning that entrapment is the mechanism by which defeat increases suicide risk. If full mediation occurs, this suggests that defeat does not have a direct effect on suicidal ideation, but ideation is increased through perceptions of entrapment.

Whilst the role of entrapment was investigated in the previous study, and internal entrapment was found to be a significant factor, it has been included again in the current study as it is a key feature of the IMV Model. In addition, it had been noted in the previous study that a considerable limitation was the use of the short version of this measure. Therefore, the variable is included in the current study, and assessed using the full entrapment measure.

### **5.1.1.1 Pre-Motivational Factors**

The key variables within the pre-motivational phase that are investigated here are the experience of IPA, being a life event. In addition, two personality factors are investigated (socially prescribed perfectionism and self-criticism) which are thought to increase one's sensitivity to signals of defeat and entrapment (O'Connor, 2011). One final factor which is considered within the pre-motivational phase is that of self-esteem.

### **Understanding IPA**

In previous chapters one of the main areas of concern within IPA research which was discussed is how IPA is conceptualised and measured. Consequently, this is a key issue that this thesis aims to address. In particular, the importance of taking a comprehensive measure of IPA has been discussed and, in addition, Chapter 4 highlighted that our understanding of IPA would benefit from the inclusion of measures to specifically address psychological aspects of the abuse, and to take account of the impact of IPA on the individual. In order to address these concerns, two additional measures relating to IPA were included in the current study, and these are discussed below.

#### **5.1.1.1.0 Impact of IPA**

The majority of studies investigating IPA tend to measure specific abusive behaviours that have occurred within the relationship, but very few studies have taken into account the impact of the abuse on the individual (McCarry, Hester & Donovan, 2008). This is

an important point, as looking only at behaviours does not give us any understanding of the context of the abuse or the effect of a particular act (Straus, 1999; Greenwood et al. 2002) e.g. a measure may allow a behaviour to be categorised as severe, but it may not be an aspect of the abuse that has a great impact on the individual.

Despite this growing awareness of the importance of considering the impact of IPA on the individual, very few studies have measured this aspect of the abuse. Where it has been measured, this has been limited to research on IPA between same sex partners (e.g. McCarry et al. 2008; Hester, Donovan & Fahmy, 2010) and has not been investigated within the context of IPA and suicidality. Impact may be a key factor within this relationship as it could help explain differences in suicide risk among those with experience of IPA.

#### **5.1.1.1.1 Control within relationships**

Johnson (2008) argues that there are two main, and very different, forms of IPA: intimate terrorism (IT) and situational couple violence (SCV). He distinguishes between these two types based on levels of control within the relationship. IT is representative of couples for whom there is a general ongoing pattern of power and control within the relationship, whereas SCV is a response to conflict in relation to a specific situation (Johnson, 1995; 2001; 2005; Johnson & Ferraro, 2000).

In IT, the abuse associated with this pattern of control effectively entraps the individual in the relationship by creating fear, diminishing personal resources (e.g. self-esteem), financial resources, and contact with support networks (social support) (Johnson &

Ferraro, 2000). SCV does not exist within a context of control, rather it is a means to controlling a specific situation, and often involves a disagreement that escalates into violence (Johnson, 1995). These two types of IPA are not defined in terms of severity of abuse or frequency. Therefore, IT is not a more severe form of SCV, but is a different phenomenon (Johnson, 1995).

Studies which have investigated these two forms of IPA have found that they have different outcomes. For example, victims of IT report higher symptoms of depression and PTSD, and more injuries (Johnson & Leone, 2005; Leone, Johnson, & Cohan, 2004). Research has also demonstrated that victims of IT report lower self-esteem (Piispa, 2002) and social support (Leone et al. 2004) than victims of SCV. An important implication of these findings is that those experiencing IT may therefore be at greater risk for suicidality than those experiencing SCV.

Johnson (2008) argued that all research into IPA should explicitly distinguish between these two types of IPA to bring greater clarity to research in this area, and reduce overgeneralisations in this area. There is a lack of research utilising this typology in the UK, with the majority of such research being conducted in the USA. Therefore, distinguishing between these types of IPA in the present study will give greater consistency with current International research, as well as providing more information about the utility of such typologies in increasing understanding of the relationship between IPA and suicidality. The current study is one of the first pieces of prospective research to include these types of IPA, and the first to investigate these within the context of IPA and suicidality.

#### **5.1.1.1.2 Socially Prescribed Perfectionism (SPP)**

Perfectionism is a personality factor which acts within the pre-motivational phase. The IMV model posits that predisposing personality vulnerabilities, such as perfectionism, can predict suicidality when activated by a stressor. Perfectionism is an important factor to consider as it is particularly concerned with sensitivity to signals of defeat (O'Connor, 2007). Perfectionism is viewed as a multi-dimensional construct, and certain dimensions of perfectionism have been consistently implicated in increased hopelessness, depression and suicidal behaviour (Rasmussen et al, 2008). Socially prescribed perfectionism is associated with suicidality (e.g. O'Connor, 2007). Socially prescribed perfectionism can be described as a belief that others hold unrealistic and exaggerated expectations of us that must be met in order to gain acceptance and approval. The IMV model posits that perfectionism acts as a predisposing factor for perceiving defeat and entrapment, meaning that those who are perfectionistic, particularly those high on socially prescribed perfectionism, would experience greater perceptions of defeat and entrapment when exposed to a stressor.

#### **5.1.1.1.3 Self-Criticism (SC)**

Self-criticism is viewed as a stable personality factor, and therefore also acts as a pre-dispositional factor within the pre-motivational phase. The IMV model posits that predisposing personality vulnerabilities, such as self-criticism, can predict suicidality when activated by a stressor. Self-criticism can be described as overly critical self-evaluation. Research has demonstrated that self-criticism is correlated with suicidality (e.g. O'Connor, 2007; O'Connor & Noyce, 2008). The IMV model posits that self-

criticism would act as a predisposing factor for perceiving defeat and entrapment, meaning that those who are overly self-critical are more likely to experience greater perceptions of defeat and entrapment when exposed to a stressor.

#### **5.1.1.1.4 Self-esteem**

Self-esteem is viewed as a stable personality characteristic that reflects a sense of personal worth (Rosenberg, 1965). Many studies have demonstrated strong connections between self-esteem and both suicidal ideation and suicide attempts (e.g. Bhar, Ghahramanlou-Holloway, Brown, & Beck 2008; Marciano & Kazdin, 1994; Overholser, Adams, Lehnert & Brinkman, 1995; Roberts, Roberts & Chen, 1998; Wild, Flisher & Lombard, 2004). Studies have also demonstrated that self-esteem acts as a protective factor against suicidal behaviours (e.g. Grohold, Ekeberg, Wichstrom & Haldorsen, 2005).

Although self-esteem is not explicitly mentioned within the IMV Model, as a personality characteristic, it would be considered to fit within the pre-motivational phase, acting as a possible diathesis, whereby low self-esteem may act to predispose the individual to perceptions of defeat and entrapment in times of stress, increasing risk of suicidal ideation.

Very little research has focused on self-esteem in relation to IPA, although lower levels of self-esteem have been found in those with experience of IPA (e.g. Sahin et al, 2010). Research has also demonstrated that self-esteem can act as a mediator of the relationship between IPA experience and PTSD symptoms (Bradley, Schwartz &

Kaslow, 2005). However, to our knowledge, the role of self-esteem in the relationship between IPA and suicidality has not been investigated, and research is needed to explore this area.

#### **5.1.1.2 Threat-to-self Moderators**

Threat-to-self moderators influence the pathway between perceptions of defeat and entrapment. The specific moderators which are investigated in the current study are coping, social problem solving, and rumination.

##### **5.1.1.2.0 Coping**

Coping has been defined by Lazarus (1993) as a process where an individual makes cognitive or behavioural efforts to manage psychological stress. The style of coping that is used may be a protective factor against stress and suicidality, in that coping could serve to counteract the effects of perceived stress (Calvete, Corral & Estevez, 2008). Indeed, most researchers suggest that the use of more efficacious coping strategies results in lower risk of psychological distress when dealing with stressful events or situations (e.g. Troop, Holbrey, Trowder & Treasure, 1994).

In the wider literature, there has been a lot of research on specific coping behaviours, for example, problem solving, cognitive restructuring, physical activities, self-criticism, humour, social withdrawal, acceptance, alcohol or drug use, seeking social support, and use of religion. (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001). It has been suggested that these types of specific coping behaviours

may be the most pertinent to healthy functioning (Horwitz, Hill & King, 2011). Indeed, the relationship between several coping behaviours and suicidal ideation has been investigated. Specific coping behaviours, such as planning (Aldridge & Roesch, 2008), have been associated with positive outcomes. Previous research has also demonstrated hopelessness, theoretically related to behavioural disengagement, as a predictor of suicide attempts (Huth-Bocks, Kerr, Ivey, Kramer, & King, 2007; Terzi-Unsal & Kapci, 2005), whilst self-blame has been associated with suicidal ideation (Ullman & Najdowski, 2009).

The IMV model suggests that coping acts a threat-to-self moderator, meaning that it moderates the relationship between defeat and entrapment. Therefore the use of different types of coping behaviours could increase or decrease perceptions of entrapment when an individual feels defeated.

Whilst there has been a large amount of research into the relationship between coping and psychological distress, only a few studies have investigated this in the context of IPA. However, the existing research has demonstrated that coping strategies differentiate levels of adverse psychological outcomes following IPA (Coker et al. 2002; Kemp, Rawlings & Green, 1991; Mitchell & Hodson 1983; Tan, Basta, Sullivan & Davidson, 1995).

Although there are a wide variety of specific coping behaviours, as discussed above, researchers tend to categorise these coping strategies as active vs. passive, or emotion focused vs. problem-focused, especially when investigating the impact of coping strategies on psychological health (Lee, Pomeroy & Bohman, 2007). Mitchell and

Hodson (1983) found that those with experience of IPA who used more active coping strategies and fewer avoidant strategies reported less depression and higher levels of self-esteem. Arias and Pape (1999) reported a similar result, finding that greater use of emotion-focused rather than problem-focused coping was related to more PTSD symptoms, and Kemp, Green, Hovanitz, and Rawlings (1995) found that disengagement coping strategies were associated with an increased level of psychological distress in this group.

Whilst this evidence tells us something about *general* coping styles in relation to IPA and outcomes, there has been very little research into *specific* coping behaviours in this context. To our knowledge, the current research is the first study to investigate specific coping behaviours and their relationship with IPA and suicidality.

#### **5.1.1.2.1 Social Problem Solving**

Social problem solving is the process by which individuals attempt to find solutions to problems in their daily lives (D’Zurilla & Nezu, 2007). Those with more effective problem solving skills demonstrate lower levels of distress in relation to their problems (Nezu et al. 1986; D’Zurilla & Nezu, 2007). Researchers suggest that when individuals find it difficult to generate effective and flexible alternative solutions to challenges that they face, this can lead to suicidality (Schotte & Clum, 1987; Weishaar & Beck, 1990). Indeed, research has demonstrated a strong association between social problem solving and suicidality (e.g. Pollock & Williams, 2001; Speckens & Hawton, 2005). The IMV model suggests that social problem solving acts a threat-to-self moderator, meaning that it moderates the relationship between defeat and entrapment. Therefore those who

demonstrate poor social problem solving may have higher perceptions of entrapment when they feel defeated than someone with good social problem solving abilities.

Social problem solving is also a variable which has not been investigated in the context of IPA, or the relationship between IPA and suicidality, and consideration of this factor will help to strengthen our understanding of the mechanisms involved in the relationship between IPA and suicide risk.

#### **5.1.1.2.2 Rumination**

Rumination can be described as enduring, repetitive and self-focused thinking which is a frequent reaction to depressed mood (Rippere, 1977). Rumination has been associated with proximal predictors of suicidality such as depression (e.g. Robinson & Alloy, 2003; Nolen-Hoeksema et al. 1997), with a systematic review establishing a clear association between rumination and suicidality (Morrison & O'Connor, 2008). The IMV model suggests that rumination acts as a moderating variable between defeat and entrapment, meaning that those who are predisposed to ruminate when their mood is low would experience higher perceptions of entrapment, i.e. they may be more likely to view the situation as inescapable. However, lower levels of rumination could reduce perceptions of being trapped.

#### **5.1.1.3 Motivational Moderators**

Motivational moderators moderate the pathway between entrapment and suicidal ideation i.e. when one feels trapped, such moderators can reduce or increase the

likelihood that suicidal ideation will be experienced. The motivational moderators under investigation in the current study are social support, future thinking and self-regulation of unattainable goals.

#### **5.1.1.3.0 Social Support**

A large body of research has demonstrated that low social support acts as a risk factor for suicidality (Kleiman et al. 2012). Many researchers suggest that social support can act as a buffer, moderating the effect of other risk factors on suicidality (e.g. Clum & Febraro, 1994; Harrison et al. 2010; Yang & Clum, 1994). For example, social support has been found to moderate the relationship between depression and depression and suicide risk (Chioqueta & Styles, 2007) and between PTSD and suicidality (Kotler et al. 2001). The IMV model suggests that social support acts to moderate the relationship between entrapment and suicidal ideation. Therefore those with low social support may experience higher levels of suicidal ideation when they feel entrapped, whilst high levels of social support can act to decrease suicidal ideation.

Research has demonstrated that social support plays a key role in reducing adverse psychological outcomes in those with experience of IPA. (Mitchell & Hodson, 1983; Kaslow et al. 1998; Thompson et al. 2000). Kaslow et al (1998) reported that higher levels of perceived social support were associated with lower suicidal behaviours in those with experience of IPA. Thompson et al (2000) suggested that social support acts a mediator between IPA and distress. Social support was therefore considered an important variable to include within the current study.

#### **5.1.1.3.1 Future Thinking**

Future thinking relates to one's expectations for the future. Researchers have demonstrated that the lack of positive future thinking is particularly associated with suicide risk (MacLeod et al. 1998; MacLeod et al. 1997; MacLeod et al. 1993; Hunter and O'Connor, 2003; O'Connor et al. 2007; O'Connor et al. 2004; O'Connor et al. 2000), and they have found positive future thinking to be a predictor of suicidal ideation (O'Connor et al. 2008). The IMV model suggests that future thinking moderates the relationship between entrapment and suicidal ideation. Therefore, those who find it difficult to generate positive future thoughts may experience higher suicidal ideation when they feel entrapped, whilst high positive future thinking can act to decrease levels of suicidal ideation.

To our knowledge, no research has been conducted to investigate future thinking in those with IPA experience, or its role in the relationship between IPA and suicidality. Therefore, investigating future expectancies in this context may provide a more in-depth understanding of the mechanisms which link IPA and suicide risk.

#### **5.1.1.3.2 Self-Regulation of Unattainable Goals**

Self-regulation of unattainable goals refers to the processes that take place when a goal cannot be accomplished. When a goal cannot be reached, to conserve resources it may be adaptive to disengage from that specific goal, i.e. relinquish efforts to attain that goal, as further pursuit of the goal would represent a waste of such efforts (Wrosch & Scheier, 2003). Goal disengagement allows us, therefore, to avoid feelings of failure

(Nesse, 2000), which are associated with suicide risk. It is also seen as particularly beneficial as it frees up resources which we can then direct towards new goals (Carver & Scheier, 1998; Wrosch & Scheier 2003), a process known as goal reengagement (Heckhausen, Wrosch & Schulz, 2010).

With regard to suicidality, O'Connor, Fraser, Whyte, MacHale and Masterton (2009) found significantly higher levels of suicidal ideation in those who demonstrated high levels of disengagement and low levels of reengagement. In addition, difficulties reengaging in new goals independently predicted levels of suicidal ideation. In the field of IPA research, self-regulation of unattainable goals has not been investigated. This may be an important area to consider as it is a factor which could act to maintain abusive relationships, if for example there were difficulties in disengaging from the goal of a good relationship, or it could make adjustment particularly difficult after the ending of an abusive relationship, if for example there were difficulties in reengaging with new goals. Therefore, the potential of this variable to be particularly associated with IPA, and the existence of previous research indicating that it can impact on suicidality, suggests that self-regulation of unattainable goals is an important variable to include within the present study.

This Introduction will now outline the aims of the current study, before concluding with a presentation of the research questions and hypotheses under investigation.

### **5.1.2 Aims**

The present study investigates the relationship between IPA and suicidality, and addresses many of the limitations which have been discussed previously and those identified in Chapter 4, such as issues with sample composition, conceptualisation and measurement. It also aimed to test the IMV Model of Suicidal Behaviour (O'Connor, 2011) in greater detail than was possible in the study reported in Chapter 4, exploring the roles of defeat and entrapment, and testing the main pathways of the IMV Model. This study aimed to investigate IPA in some depth, exploring the factors and mechanisms involved in the relationship between IPA and suicidality, and expanding on the study reported in Chapter 4 to help strengthen our understanding of this relationship, and better understand the utility of the IMV Model in this context.

### **5.1.3 Research Questions & Hypotheses**

This study addressed a number of research questions and hypotheses derived from previous research in order to explore the relationship between IPA and suicidality in more depth. Whilst research question 1 covers the same area as addressed in the previous study i.e. whether or not suicidality will be higher amongst those with IPA experience, it was important to re-test this with this new sample, to establish whether this basic relationship continues in the current study, as this relationship is core to the analysis that follows.

Table 5.1 shows the research questions under investigation and the related hypotheses.

**Table 5.1: Research questions and related hypotheses**

<b>Research Area</b>	<b>Research Question</b>	<b>Hypotheses</b>
<b>Suicidality</b>	RQ1: What is the relationship between IPA and suicidality?	H1a: Those with experience of IPA will demonstrate higher suicidality than those with no experience of IPA.  H1b: Those experiencing IPA currently will show higher levels of suicidal ideation than those who experienced IPA previously or not at all. Those with previous IPA experience will show higher levels of suicide attempts than those with current or no IPA experience.
	RQ2: Which factors predict suicidal ideation at T2?	
	RQ3: Which factors predict suicidal attempts at T2?	
<b>Understanding IPA</b>	RQ4: Do those experiencing Situational Couple Violence (SCV) and those experiencing Intimate Terrorism (IT) differ significantly on any key variables?	H4: There will be significant differences between the SCV and IT groups on suicidality, IPA variables (impact, level of stalking), social support, self-esteem, depression and PTSD. The IT group will have higher levels of suicidality, greater impact of IPA, level of stalking, self-blame, defeat, entrapment, depression and PTSD than the SCV group. The IT group will also demonstrate lower self-esteem and social support than the SCV group.
	RQ5: Which factors predict the impact of IPA?	
<b>IPA &amp; Suicidality – Relationships with defeat &amp; entrapment</b>	RQ6: Do defeat and entrapment differ between those with and without IPA experience?	H6: Those with experience of IPA will demonstrate higher perceptions of defeat and entrapment than those with no experience of IPA.
	RQ7: Does defeat mediate the relationship between IPA & entrapment?	H7: Defeat will mediate the relationship between IPA & entrapment.
	RQ8: Do defeat and entrapment mediate the relationship between IPA and suicidality?	H8a: Defeat and entrapment will mediate the relationship between IPA and suicidal ideation.  H8b: Defeat and entrapment will mediate the relationship between IPA and suicide attempts.
	RQ9: Does defeat mediate the relationship between entrapment and suicidal ideation?	H9: Defeat will mediate the relationship between entrapment and suicidal ideation.

<b>Pre-motivational factors</b>	RQ10: Do personality factors such as SPP, SC, or self-esteem increase perceptions of defeat and entrapment?	H10: SPP, SC, or self-esteem will be associated with higher perceptions of defeat and entrapment
<b>Threat-to-self moderators</b>	RQ11: Do coping, social problem solving or rumination moderate the defeat-entrapment pathway?	H11: Coping, social problem solving, or rumination will moderate the defeat-entrapment pathway.
<b>Motivational moderators</b>	RQ12: Do social support or positive future thinking moderate the entrapment-suicidality pathway?	<p>H12a: Social support will moderate the entrapment-suicidal ideation pathway.</p> <p>H12b: Social support will moderate the relationship between entrapment and suicide attempts</p> <p>H12c: Positive future thinking will moderate the entrapment-suicidal ideation pathway.</p> <p>H12d: Positive future thinking will moderate the relationship between entrapment and suicide attempts.</p>

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Key: IPA=intimate partner abuse; PTSD=post-traumatic stress disorder, SCV=situational couple violence; IT=intimate terrorism; SPP=socially prescribed perfectionism; SC=self-criticism

## **5.2 Methods**

This section describes the participants, measures and procedure used within this study, and concludes with an overview of the analytic strategy used in the data analysis.

### **5.2.0 Participants**

Participants were recruited from a wide variety of sources using a range of techniques. As it is estimated that around 1 in 4 women in the general population will experience IPA at some point in their lives (Council of Europe, 2002), and the prevalence amongst men in the general population is not known. Male and female participants with and without experience of IPA were recruited using a mix of opportunistic and targeted sampling, as well as snowballing techniques. Participants were recruited through placing flyers advertising the project in a range of public places such as libraries, leisure centres, health centres, and family planning clinics in Stirlingshire and Lanarkshire in order to reach a wide sample of the general population. Adverts were also placed in local newspapers. Flyers and adverts asked for volunteers to take part in a research project investigating relationships, stress and psychological distress, to help increase our understanding of the impact relationships can have on our well-being. It was also highlighted that it was not necessary to currently be in a relationship in order to take part. Recruitment materials did not mention IPA, as it was aimed to recruit people with and without experience of IPA. A range of more targeted recruitment strategies were also used, and are described below.

Students have been identified as a high risk group for IPA. As such, participants were recruited from outside of university campuses throughout Lanarkshire by the researcher. Within the University of Stirling, participants were also recruited by placing an advert for the project on the students' web portal home page, and also by running the project on the Psychweb system. This is an online experiment management system which allows first and second year undergraduates to take part in research projects for course credit.

In order to specifically target those with experience of IPA, participants were recruited through Women's Aid branches throughout Stirlingshire and Lanarkshire. The researcher liaised with Women's Aid workers who identified women interested in taking part through their community outreach work, and put them in touch with the researcher. The researcher also worked with Men's Aid in Scotland specifically to recruit male victims of IPA.

To target a wider range of people with experience of IPA, a number of online sources were used such as Facebook groups (e.g. Women and Men Against Domestic Partner Abuse, Domestic Abuse group) and chat forums concerning IPA. The researcher advertised the project on group notice boards and in forum threads.

Due to the limited number of male victims of IPA that were obtained in the previous study, the researcher targeted a wider range of sources specifically aimed at male victims, and liaised closely with relevant organisations such as Men's Aid, in an effort to increase their representation in the current study.

In order to reach a range of individuals, snowballing techniques were also used, with participants encouraged to pass on the researcher's details to anyone they knew who they felt may be interested in taking part.

There were 125 participants (98F, 27M) retained in the study at Time 2. Only 3 individuals dropped out between Time 1 and Time 2. As with the previous study, it is estimated that this good retention rate was largely a result of the researcher playing an active role to keep the project in the minds of the participants and to keep up good contacts and relationships with organisations which had helped with recruitment, to maintain their interest at follow up. For example, emails were sent to participants (with their permission) each month, thanking them for taking part and for their interest in the project, and reminding them when the researcher would be in touch again for the second phase of the project. The researcher also regularly visited the various organisations and sites where recruitment had taken place, to thank them and keep them up to date. In addition, in the current study, as it involved the participants taking the time to meet with the researcher, this seemed to give participants a greater sense of investment in the project, as well as covering a research area which participants seemed to view as an important one. These factors together helped lead to a strong retention rate in the study.

The 125 participants were made up of 134 nationalities, the majority of which were British (n=108 (84%)). A number of other nationalities made up around 2% each of the total sample (Finnish, Polish, Dutch, Irish, and German). All other nationalities represented less than 1% each of the total sample. All participants were residing in the

UK at the time of the study. The age range was 17-61 years, with the mean age being 25 years old (SD=9).

In respect of sexual orientation, the majority were heterosexual (n=107, (85%)), with 9% (n=11) being bisexual, and 5% (n=7) homosexual.

With regard to the current of most recent occupations of the participants, these covered a wide range of occupations. The majority were students (n=38 (30%)). 14% (n=18) worked in sales/retail, and 10% (n=13) worked in management. Of the remaining occupations, 9% were academics, 7% were technical occupations (e.g. engineer, electrician), 6% administrative, 5% medical, and 3% education sector. Four occupations represented between 1%-2% each of the total sample; social care, leisure industry, catering, manual labourer. 5% of the sample were unemployed.

With regard to the highest level of education they had obtained, the majority were educated to degree level (n=72 (55%)). 22% (n=28) were educated to high school level, 12% (n=16) to college/vocational level, and 7% (n=9) to post graduate level.

The majority of the sample were currently employed at the time of the study (65%), with the second highest employment status being those in full time education (30%). 5% were unemployed.

With regard to experiences of intimate partner abuse (IPA), the majority of participants had no experience of IPA (n=67). Participants with experience of IPA could be divided into two groups; those with experience of IPA in the past (but not currently) (n=39);

and participants currently experiencing IPA (n=19). Of those with experience of IPA, 48 experienced intimate terrorism (IT) and 9 experienced situational couple violence (SCV).

The majority of those with experience of IPA were female (83%), with only 17% being male. Of those with experience of IPA, 83% were heterosexual, 16% were bisexual and 2% were homosexual. Due to the small number of male participants with experience of IPA, and the small numbers of those with a sexual orientation other than heterosexual who had experienced IPA, the data was not analysed to look at differences across gender or sexual orientation.

### **5.2.1. Measures**

This section outlines the measures employed in this study. Only outcome measures were recorded at Time 2.

This section provides an overview of the measures in this study. For clarity, the measures are split into which section of the IMV Model they apply to. This covers factors within the pre-motivational phase such as life events i.e. variables relating to IPA, and factors which would present a diathesis such as personality variables. Measures relevant to the motivational phase, including threat to self moderators and motivational moderators are presented. This section concludes with an overview of the outcome measures.

All measures utilised in the previous study were also included in the current study (with the exception of the social desirability measure as this was not relevant to a non-survey design). As such, those measures previously outlined are only detailed in this section if they have been modified in any way in the current study. Otherwise, only the Cronbach's alphas are given in relation the current study, and the reader is referred to the Method section of Chapter 4 for full details of the measure.

### **5.2.1.0 IMV Model – Pre-Motivational Phase**

#### **Life Events**

##### **5.2.1.0.0 Intimate Partner Abuse**

Intimate partner abuse was measured using a modified version of the Conflicts Tactics Scale 2 Short Form (Straus & Douglas, 2004). This is a 16 item measure covering the tactics of psychological aggression (e.g. my partner insulted or swore or shouted or yelled at me), physical assault (e.g. my partner pushed, shoved or slapped me), injury from assault (e.g. I had a sprain, bruise, cut or felt pain the next day because of a fight with my partner), and sexual coercion (e.g. my partner insisted on sex when I did not want to, or insisted on unsafe sex). In addition, the measure allows classification of the behaviours according to level of severity. For example, under the psychological aggression category, 'my partner insulted or swore or shouted or yelled at me' is classed as a minor level of severity, whilst "my partner destroyed something belonging to me or threatened me' is classed as severe. The frequency of abusive behaviours is also measured. Items were also rated on a 5-point Likert type scale, ranging from 'never happened' to 'more than 5 times in the past year'. Participants selected a point on this scale for the partner's behaviour towards them. This was completed for the

relationship the participant defined as abusive; either a current or previous relationship, or for both a current and previous relationship if applicable. To reduce load on participants in the current study, participants with no experience of IPA did not complete this measure, and for those who did complete it, they reported only their partners behavior towards them, and not their own behavior towards the partner.

This measure therefore provides information on the types of abusive behaviours experienced across the lifetime, along with the frequency and severity of those behaviours.

Normative data for this measure is presented in the method section of Chapter 4.

According to Straus, Hamby, Boney-McCoy, and Sugarman (1996) the CTS2 has good internal consistency. The Cronbach's  $\alpha$  reported for each of the four sub-scales was as follows; psychological aggression = .79; physical assault = .86; injury = .95; sexual coercion = .87. In the current study, the details for each subscale were as follows; psychological aggression  $\alpha$  = .43; physical assault  $\alpha$  = .76; injury  $\alpha$  = .52; sexual coercion  $\alpha$  = .50.

#### **5.2.1.0.1. Impact of IPA**

The impact of IPA scale (McCarry et al, 2008) measured the impact that abusive behaviours may have had on the participant. The measure consists of 26 potential impacts. Items cover a wide range of impacts, for example, stopped trusting others, felt worthless, worried partner might leave, fear, worked harder to stop making mistakes,

and negatively affected your children. Participants were asked to select all the items that they had experienced. The number of items selected were summed to give an impact score. This measure was completed in relation to the participants' abusive relationship. Participants with no experience of IPA did not complete this measure. See Appendix 15 for the measure.

There is currently no normative data available with regards to expected impact levels within a sample.

Cronbach's alphas have not previously been reported for this scale. In the current study, the Cronbach's  $\alpha$  was .97 for the impact scale.

#### **5.2.1.0.2 Control**

Johnson (2008) uses seven items deemed to assess control tactics used by a partner, combined into a control scale. The measure consists of seven control tactics, such as 'he or she tries to limit your contact with family or friends', 'he or she puts you down or calls you names to make you feel bad', and 'he or she prevents you from knowing about or having access to income, or controls spending'. For each item participants were asked to indicate whether or not each statement described the partner. The number of 'yes' responses can then be summed to give a total control score. This total can also be used to categorise the participant into the situational couple violence (SCV) or intimate terrorism (IT) group. Johnson (2008) chose a cutting point of three or more controlling tactics to represent high control (IT) and two or less to represent low control (SCV). This measure was completed in relation to the participants' abusive relationship.

Participants with no experience of IPA did not complete this measure. See Appendix 16 for the measure.

There is currently no normative data available with regards to expected prevalence of IT and SCV within a UK sample.

A Cronbach's alpha has not previously been reported for this scale. In the current study, the Cronbach's  $\alpha$  was .93 for the control scale.

### **5.2.1.0.3 Stalking and Harassment**

The Stalking and Harassment Behaviour Scale (SHBS; Turmanis & Brown, 2006) and its reported normative data is detailed in the Method section of Chapter 4.

According to Turmanis and Brown (2006) the SHBS has good internal consistency, reporting a Cronbach's  $\alpha$  averaging above .90 for both the TBH and SDS items. In the current study, the Cronbach's  $\alpha$  was .87 for both the THB scale and the SDS scale.

### **5.2.1.1 Personality factors/potential diathesis**

#### **5.2.1.1.0 Self-criticism**

Self-criticism was measured using the 18 self-criticism items from the McGill Revised Depressive Experiences Questionnaire (Santor, Zuroff & Fielding, 1997), and this measure is detailed in the Method section of Chapter 4.

Previous research (e.g. O'Connor & Noyce, 2008) has demonstrated that the self-criticism items from the McGill Revised Depressive Experiences Questionnaire have good internal consistency ( $\alpha = .82$ ). In the current study, the Cronbach's  $\alpha$  was .89, demonstrating very good internal consistency.

#### **5.2.1.1.1 Socially Prescribed Perfectionism**

The 15 socially prescribed perfectionism items from the Multidimensional Perfectionism Scale (MPS-H; Hewitt & Flett, 1991) were used, and this measure is detailed in the Method section of Chapter 4.

Previous research (e.g. Rasmussen, O'Connor & Brodie, 2008) has demonstrated that the socially prescribed perfectionism items from the Multidimensional Perfectionism Scale have very good internal consistency ( $\alpha = .88$ ). In the current study, the Cronbach's  $\alpha$  was .87, demonstrating very good internal consistency.

#### **5.2.1.1.2 Self-Esteem**

Self-esteem was measured using the Rosenberg's Self-Esteem Scale (1965). This is a ten item measure. Items consist of statements such as "I feel that I am a person of worth, at least on an equal plane with others" and "At times I feel no good at all". Participants were asked to read each statement and indicate on a 4-point scale the extent to which they agree or disagree with each item. The scale ranges from strongly agree (3) to strongly disagree (0). Items 3, 5, 8, 9, and 10 are reverse scored. Scores for each item are summed, giving a total self-esteem score between 0-30. Scores between 15-25

are within normal range and scores below 15 suggest low self-esteem. (See Appendix 17 for the measure).

Previous research (Whiteside-Mansell & Corwyn, 2003) has demonstrated that the Rosenberg Self-Esteem scale has good internal consistency ( $\alpha = .83$ ). In the current study, the Cronbach's  $\alpha$  was .90.

### **5.2.1.2 IMV Model Motivational Phase**

#### **5.2.1.2.0 Threat to Self Moderators**

##### **5.2.1.2.0.0 Coping**

Coping was measured using the Brief COPE (Carver, 1997). This is an abbreviated version of the COPE Inventory. The Brief COPE measures 14 coping behaviours or strategies such as substance use, positive reframing, planning, and self-blame. There are 28 items presented, with 2 items for each coping behavior. For example, the items relating to self-blame are 'I've been criticising myself' and 'I've been blaming myself for things that happened'. Participants are asked to select from a 4-point scale ranging from 'I haven't done this at all' (scored as 0) to 'I've done this a lot' (scored as 3). The two items from each sub-scale are summed to give a score for that coping behavior. See Appendix 18 for the measure.

According to Carver (1997) the Cronbach's  $\alpha$  for the subscales ranged from .50 (venting) to .90 substance use. In the current study, the Cronbach's  $\alpha$  for the subscales ranged from .41 (self-distraction) to .87 (substance use).

#### **5.2.1.2.0.1 Social Problem Solving**

Social problem solving was measured using the Means-End Problem Solving test (MEPS, Platt, Spivack, & Bloom, 1975). As the focus of this study is on social problem solving, only the four interpersonal problems from this measure were used. Participants were given four different interpersonal problems. For each scenario they were given an initial problem to be solved (e.g. a persons' friends are avoiding them) and a desired end (e.g. the persons' friends like him/her again). The gender of the person in the scenario is changed to match the participants' gender. This measure is administered verbally by the researcher. The participant is asked to complete the middle of the story, giving ways by which the initial problem will reach the desired end. The MEPS is scored for the number of relevant means (problem solving steps). See Appendix 19 for the measure.

#### **5.2.1.2.0.2 Rumination**

To measure rumination, the 10-item Response Styles Summary was used (Treyner, Gonzales & Nolen-Hoeksema, 2003). This measure is detailed in the Method section of Chapter 4.

According to Treyner, Gonzalez and Nolen-Hoeksema (2003) the rumination scale has good internal consistency, showing a Cronbach's  $\alpha$  of .72 for the reflective scale, and .77 for the brooding scale. In the current study, the Cronbach's  $\alpha$  for the reflective scale was .82 and .81 for the brooding scale. The Cronbach's  $\alpha$  for the total rumination score was .86, demonstrating very good internal consistency.

### **5.2.1.3 IMV Model Motivational Phase**

#### **5.2.1.3.0 Motivational Moderators**

##### **5.2.1.3.0.0 Perceived Social Support**

Perceived social support was measured using the ENRICHD Social Support Instrument (ESSI; Freedland, 2000). This is a six-item measure which assesses the four defining attributes of social support: emotional, instrumental, informational, and appraisal (Freedland 2000). Participants are asked to indicate how often someone is available for each of the items, for example ‘is there someone available to you to give you good advice about a problem?’ Participants select a response from a 5-point scale, ranging from ‘none of the time’ (scored as 0) to ‘all of the time’ (scored as 4). Responses are summed to give a total score for perceived social support. See Appendix 20 for the measure.

Vaglio et al (2004) demonstrated a Cronbach’s  $\alpha$  of .88 for the ESSI. In the current study, the Cronbach’s  $\alpha$  for the ESSI was .92.

##### **5.2.1.3.0.1 Self-Regulation of Unattainable Goals**

Goal adjustment was measured using the Goal Adjustment Scale (Wrosch, Scheier, Miller, Schulz, & Carver, 2003). This is a ten item measure which assesses goal disengagement and goal reengagement. Participants are asked to think about how they usually react when they cannot attain what they want and are forced to stop pursuing a goal they want to achieve. Participants indicate the extent to which they agree or

disagree with each of the ten statements on a 5-point scale ranging from strongly disagree to strongly agree. For example, an item relating to goal disengagement is 'it's easy for me to reduce my effort towards the goal', and an item relating to goal reengagement is 'I convince myself that I have other meaningful goals to pursue'. In order to calculate the goal disengagement scale, items 1, 3, 6 and 8 are summed (3 and 6 are reverse coded), and to calculate the goal reengagement scale, items 2, 4, 5, 7, 9, and 10 are summed. Therefore, a total score for goal disengagement and for goal reengagement is obtained. See Appendix 21 for the measure.

Wrosch et al (2003) reported a Cronbach's  $\alpha$  of .84 for the goal disengagement scale, and .86 for the goal reengagement scale. In the current study, the Cronbach's  $\alpha$  was .85 for the goal disengagement scale, and .87 for the goal reengagement scale.

#### **5.2.1.3.0.2 Future Thinking**

The future thinking task (FTT; MacLeod, Pankhania & Mitchell (1997) was used to assess prospective thinking. This measure is administered verbally by the researcher. Participants were asked to think about potential future experiences, both positive and negative, that could occur across three time periods in the future; the next week, the next year, and the next five to ten years. For positive future thoughts, participants were asked to think of things that they were looking forward to, that they enjoy. For negative future thoughts, participants were asked to think of things that they were worried about or not looking forward to. For each of the time periods, participants were given one minute to generate as many thoughts as possible. The number of positive and negative

future thoughts are then summed to give a total for positive future thinking, and one for negative future thinking (see Appendix 22 for the measure).

The order of completion of the positive and negative conditions was counterbalanced across participants. Before administration of the FTT, participants are asked to complete a standard verbal fluency task (Lezak, 1976) as a control task (MacLeod et al, 1997). Participants are asked to generate as many words as possible beginning with F, A, and S, with one minute given for each letter.

#### **5.2.1.4 Outcome Measures**

##### **5.2.1.4.0 Defeat**

The defeat scale (Gilbert & Allan, 1998) was used. This is a 16 item measure consisting of statements such as ‘I feel that I have sunk to the bottom of the ladder’ and ‘I feel completely knocked out of action’ and the full scale was used in the current study. Participants were asked to select the option which best described how often they had felt like each statement in the past 7 days from a 5-point scale., ranging from never (scored as 0) to always (scored as 4). Items 2, 4 and 9 were reverse coded. A defeat score is obtained by summing the item scores, with a higher score indicating greater perceptions of defeat. See Appendix 23 for the measure.

Gilbert and Allan (1998) reported normative data for this measure based on a sample of students and patients with depression. The mean score for defeat for the student group was 17, with a mean of 47 in the depressed group.

According to Gilbert and Allan (1998) the defeat scale has good internal consistency in relation to non-clinical samples ( $\alpha = .94$ ). In the current study, the Cronbach's  $\alpha$  was .94.

#### **5.2.1.4.1 Entrapment**

Gilbert and Allan's (1998) full Internal and External Entrapment scales were used. Participants were given statements and asked to indicate the extent to which they thought it represented their own view of themselves. Items related to either external entrapment e.g. 'I am in a situation I feel trapped in' or internal entrapment e.g. 'I want to get away from myself'. Participants were asked to select the option that best described the degree to which each statement was like them on a 5-point scale ranging from 'not at all like me' (scored as 0) to 'extremely like me' (scored as 4).

Items 1-10 are summed to give an external entrapment score, and items 11-16 are summed to give an internal entrapment score. The two totals can also be summed to give an overall entrapment score. Higher scores represent greater perceptions of entrapment. See Appendix 24 for the measure.

Gilbert and Allan (1998) reported normative data for this measure based on a sample of students and patients with depression. The mean score for internal entrapment for the student group was 5, with a mean of 19 in the depressed group. The mean score for external entrapment for the student group was 10, with a mean of 25 in the depressed group.

According to Gilbert and Allan (1998) the entrapment scale has good internal consistency in relation to non-clinical samples, showing a Cronbach's  $\alpha$  of .93 for the Internal Entrapment scale, and .88 for the External Entrapment scale. In the current study, the Cronbach's  $\alpha$  for the Internal and External Entrapment scales was .96 and .92 respectively.

#### **5.2.1.4.2 Suicidality**

Suicidality was measured using the Beck Scale for Suicidal Ideation (SSI; Beck, Kovacs & Weissman, 1979). This scale has 5 items which relate to suicidal ideation. Participants are given 3 statements for each item, and asked to select the statement in each group that best describes how they have been feeling for the past week. For example, item number one asks the participant to select from either 'I have a moderate to strong wish to live', 'I have a weak wish to live' or 'I have no wish to live'. Items are scored between 0 and 2. Scores can then be totalled to give a suicidal ideation score, with higher scores representing higher suicidal ideation.

The scale for capability was not utilised within the current study, due to low number of suicide attempts found in the previous sample, and anticipated in the current sample. Removing these items also helped to reduce load on participants in this study.

An additional 2 items are then used to measure suicide attempts. All participants complete the first of these, relating to the amount of times the participant has attempted suicide (never, once, or more than once) which is again scored between 0 and 3.

Throughout these analyses, this suicide attempt measure is treated as a scale variable. If they have attempted suicide before, they are asked to complete the final item relating to the strength of their wish to die during the suicide attempt.

Normative data for this measure is reported in the Method section of Chapter 4.

According to Beck et al (1979) the BSI has good internal consistency, showing a Cronbach's  $\alpha$  of .89. In the current study, the Cronbach's  $\alpha$  was .91.

#### **5.2.1.4.3 Depression**

The Patient Health Questionnaire (PHQ-9; Kroenke, Spitzer & Williams, 2001) is designed as a screening measure for depression. This measure is detailed in the Method section of Chapter 4.

According to Kroenke, Spitzer & Williams (2001) the PHQ-9 has very good internal consistency, showing a Cronbach's  $\alpha$  of .88. In the current study, the Cronbach's  $\alpha$  was .89.

#### **5.2.1.4.4 Post Traumatic Stress**

Post-traumatic stress symptoms were assessed using The Posttraumatic Diagnostic Scale (Foa, Cashman, Jaycox, & Perry, 1997). This measure is detailed in the Method section of Chapter 4.

According to Foa, Cashman, Jaycox and Perry (1997) the PTSD scale has good internal consistency. Foa et al (1997) demonstrated good internal consistency for the PTSD total score and for each of the scores of the three symptom clusters; total symptom severity  $\alpha = .92$ ; re-experiencing  $\alpha = .78$ ; avoidance  $\alpha = .84$ ; and arousal  $\alpha = .84$ . In the current study, the Cronbach's  $\alpha$  were as follows; total symptom severity  $\alpha = .93$ ; re-experiencing  $\alpha = .86$ ; avoidance  $\alpha = .86$ ; and arousal  $\alpha = .84$ , demonstrating very good internal consistency.

### **5.2.2 Procedure**

Prior to the collection of any data, ethical approval was obtained from the University Psychology Department's ethics committee. Participants were given information on the study. Participants were advised that the study would be completed over two time points, 6 months apart, and if they wished to take part in the second phase of the study, they should provide the researcher with contact details. Participants then completed a consent form (Appendix 25).

At the beginning of the study, participants were given the opportunity to review the study information again, and they were given the researcher's contact details. Participants were invited to contact the researcher at any time if they had any questions or required any further information. The participants demographic information was then recorded.

Participants were asked to complete the following measures online or in hard copy before attending the session with the researcher:

- Conflicts Tactics Scale 2 Short Form (where IPA was present for current and/or previous partner as applicable)
- Control (only completed by those with experience of IPA)
- Impact (only completed by those with experience of IPA)
- Stalking & Harassment Behaviour Scale (SHBS) (Only completed by those with experience of stalking behaviours).
- Brief Cope
- Perceived Social Support
- Goal Adjustment

These measures took around 10-20 minutes to complete. Participants also created a personal identifier at this stage to allow all their data throughout the study to be collated. After completion of these measures, participants attended a session with the researcher. The session began with the researcher verbally administering the verbal fluency task. Participants were given one minute to say aloud as many words as they could think of that began with the letter F. This was repeated for the letters A and S. The researcher recorded the number of words provided by the participant. The future thinking task was then also administered by the researcher for both positive and negative future thinking over the three time periods (next week, next year, and next 5-10 years). Participants were given one minute to say aloud the thoughts they had, and these were noted by the researcher. This was done for both positive and negative thoughts for each of the three time periods. Participants then completed the following self-report measures:

- Socially Prescribed Perfectionism
- Self-Criticism
- Rumination
- Suicidal Ideation and suicide attempt items
- Entrapment
- Defeat
- Self-esteem
- Depression
- PTSD

The researcher then verbally administered the social problem solving measure. The session took approximately 30 minutes to complete. On completion, participants were thanked for taking part, debriefed and given contact details for a variety of organisations that could offer help and support with any issues that may be raised by the study.

Participants were then sent reminders by email, post or phone, after 6 months to complete the second phase of the study. A 6 month time gap between Time 1 and Time 2 was desired. As there were no significant differences in any of the variables between Time 1 and Time 2 in the previous study, this time period was increased to the maximum which could be utilised in this study given the timescales of the PhD project, which allowed a 6 month time-gap. This would allow us to investigate which Time 1 factors predicted suicidality at Time 2, and would also act as a control for each participant.

At Time 2, only the outcome measures were completed either online or in hard copy:

- Depression
- PTSD
- Suicidal Ideation and attempts
- Defeat
- Entrapment

On completion, participants were again thanked for taking part, debriefed and given contact details for a variety of organisations that could offer help and support with any issues that may be raised by the study.

### **5.2.3 Power Calculation**

The study based the power calculation on the largest analysis, which was a multiple regression with 7 predictors. The study aimed to detect a small effect size, based on the effect sizes typically found in this area of research (see Systematic Review in Chapter 2), and to reach a power of .8. A G Power calculation based on these criteria established that to achieve this, the study would require a sample of  $n=80$ .

## **5.2.4 Analytic Strategy**

A variety of statistical methods and techniques was employed in order to analyse the data in this study. This section will outline the strategies used to address the research questions and hypotheses. These research questions and hypotheses are detailed in full earlier in this chapter, in section 5.1.3.

Throughout these analyses, Time 1 variables are used in order to determine their relationship with suicidality at Time 2.

### **5.2.4.0 Demographics**

In these analyses, one way ANOVAs were used to test whether there were any significant differences in suicidal ideation across the demographic variables (employment status, level of education, and sexual orientation). The IV is the demographic variable, and the DV is the suicidal ideation score. Tukey post-hoc tests were utilised. Cross-tabs were used to determine if there were any differences between those with and without IPA experience on the demographic variables, using Cramer's V as a measure of effect size as each of the demographic variables had more than two groups.

### **5.2.4.1 Suicidality at Time 1 and Time 2**

Paired samples t-tests were conducted to test whether there were any differences in suicidality between Time 1 and Time 2. This was of interest in order to direct the

following analyses with regard to whether there was any relevance to conducting each analysis on suicidality for both time points.

#### **5.2.4.2 Analysis relating to investigating the relationship between IPA & Suicidality**

##### **5.2.4.2.0 Suicidality**

In these analyses, IPA experience was operationalised as a categorical variable, defined as ‘yes’ or ‘no’ IPA experience over the lifetime. The different forms of IPA are operationalised as categorical variables (0=no incidences, 1=1 or more incidences). There are 4 such categorical variables: psychological aggression, injury, physical assault and sexual coercion. The severity of IPA is also a categorical variable, representing ‘no IPA’ ‘minor IPA’ and ‘severe IPA’.

Suicidality at Time 2 was operationalised in two ways, as a continuous variable for suicide attempts over the lifetime, and as a continuous variable for suicidal ideation. Throughout these analysis, this study aimed to investigate differences in, and predictors of, suicide attempts as well as suicidal ideation, and this is reflected in the research questions and hypotheses formed.

To address H1a, testing differences between those with and without IPA experience on two dependent variables (DVs): suicidal ideation and suicide attempts, a MANOVA was used. A MANOVA was selected in order to control for the increased risk of a Type 1 error due to testing multiple DVs. The results for the combined DVs were

examined. The results for each of the dependent variables were considered separately to identify which specific variables differed significantly across the two groups. Means and standard deviations for the measures were also presented.

To address H1b, testing differences in suicidality between those with current experience of IPA and previous IPA experience, A MANOVA was used. This was selected in order to control for the increased risk of a Type 1 error due to testing multiple DVs. The results for the combined DVs were examined. The results for each of the dependent variables were considered separately to identify which specific variables differed significantly across the two groups. Means and standard deviations for the measures were also presented. Post hoc analysis (Bonferroni) was conducted to determine which of the groups differed significantly from each other.

RQ2 aimed to investigate predictors of suicidal ideation at T2. A specific hypothesis could not be formulated due to the large number of potential predictors, and the lack of previous research in relation to many of the variables. As there were such a large amount of potential predictors, the analysis employed methods of variable reduction. Firstly, zero order correlations were carried out to identify variables which were significantly correlated with suicidal ideation at T2. In the next step of the variable reduction, individual linear regressions were carried out with each of the variables which had significantly correlated with suicidal ideation. Those variables which were not found to be significant predictors of suicidal ideation through these regressions were eliminated from further analysis. In the next step of variable regression, the remaining significant predictors were grouped together into three areas; variables relating specifically to IPA, one relating to how people deal with stress, and one with variables

considered to be personality and cognitive processes. A multiple regression was then conducted for each of these three variable groupings, and correlations for the included variables were presented. This process allowed further variables to be eliminated as they did not emerge as significant predictors of suicidal ideation at T2.

Following this process of variable reduction, a final regression was then carried out with the variables that had emerged from the previous analysis as significant predictors of suicidal ideation. Correlations for the included variables were presented. The final beta values were inspected to determine which variables made a significant unique contribution to explaining the variance in suicidal ideation at T2.

RQ3 aimed to investigate predictors of suicide attempts at T2, and followed the same procedure as RQ2 above. A specific hypothesis could not be formulated due to the large number of potential predictors, and the lack of previous research in relation to many of the variables. As there were such a large amount of potential predictors, the analysis employed methods of variable reduction. Firstly, zero order correlations were carried out to identify variables which were significantly correlated with suicide attempts at T2. In the next step of the variable reduction, individual linear regressions were carried out with each of the variables which had significantly correlated with suicide attempts. Those variables which were not found to be significant predictors of suicide attempts through these regressions were eliminated from further analysis. In the next step of variable regression, the remaining significant predictors were grouped together into three areas; variables relating specifically to IPA, one relating to how people deal with stress, and one with variables considered to be personality and cognitive processes. A multiple regression was then conducted for each of these three

variable groupings, and correlations for the included variables were presented. This process allowed further variables to be eliminated as they did not emerge as significant predictors of suicide attempts at T2.

Following this process of variable reduction, a final regression was then carried out with the variables that had emerged from the previous analysis as significant predictors of suicide attempts. Correlations for the included variables were presented. The final beta values were inspected to determine which variables made a significant unique contribution to explaining the variance in suicide attempts at T2.

#### **5.2.4.2.1 Understanding IPA**

In this analysis, IPA experience is operationalised as a categorical variable, defined as ‘yes’ or ‘no’ IPA experience over the lifetime. Severity of IPA is also a categorical variable, representing ‘no IPA’, ‘minor IPA’ and ‘severe IPA’. The IPA control variable is operationalised in two ways, as a continuous variable for a total control score, and also as a categorical variable representing high control (intimate terrorism (IT)) and low control (situational couple violence (SCV)). Stalking is operationalised as a categorical variable for stalking experience: ‘yes’ or ‘no’ over the lifetime. Stalking is also operationalized as a continuous variable as a level of stalking (LOS) score. The LOS score was derived from participant responses to the Stalking and Harassment Behaviour Scale (SHBS) and represents the severity of stalking or harassment they had experienced. Specifically, participants’ LOS scores were calculated by multiplying the frequency of each of the reported harassing behaviours by the level of subjective distress that each of these behaviours caused them, and then

summing these scores, from the formula: LOS score = sum of (the frequency of behaviour x the level of distress). All other variables are continuous.

To address H4, investigating differences in variables between the IT and SCV groups, a MANOVA was used. This was selected in order to control for the increased risk of a Type 1 error due to testing multiple DVs. The results for the combined DVs were examined. The results for each of the dependent variables were considered separately to identify which specific variables differed significantly across the two groups. Means and standard deviations for the measures were also presented.

To address H5, investigating which factors were predictive of the impact of IPA, the analysis followed the procedure outlined for RQ2 and RQ3 above. A specific hypothesis could not be formulated due to the large number of potential predictors, and the lack of previous research in relation to many of the variables. As there were such a large amount of potential predictors, the analysis employed methods of variable reduction. Firstly, zero order correlations were carried out to identify variables which were significantly correlated with impact. In the next step of the variable reduction, individual linear regressions were carried out with each of the variables which had significantly correlated with impact. Those variables which were not found to be significant predictors of impact through these regressions were eliminated from further analysis. In the next step of variable regression, the remaining significant predictors were grouped together into three areas; variables relating specifically to IPA, one relating to how people deal with stress, and one with variables considered to be personality and cognitive processes. A multiple regression was then conducted for each of these three variable groupings, and correlations for the included variables were

presented. This process allowed further variables to be eliminated as they did not emerge as significant predictors of impact.

Following this process of variable reduction, a final regression was then carried out with the variables that had emerged from the previous analysis as significant predictors of impact. Correlations for the included variables were presented. The final beta values were inspected to determine which variables made a significant unique contribution to explaining the variance in impact.

### **5.2.4.3 Analysis relating to testing the IMV Model of Suicidal Behaviour**

#### **5.2.4.3.0 IPA & Suicidality – Relationships with defeat and entrapment**

In these analyses, IPA experience was operationalised as a categorical variable, defined as ‘yes’ or ‘no’ IPA experience over the lifetime. Suicidality was operationalised in two ways, as a continuous variable for suicide attempts over the lifetime, and as a continuous variable for suicidal ideation. Throughout these analysis, this study aimed to investigate mediators and moderators of suicide attempts as well as of suicidal ideation, and this is reflected in the research questions and hypotheses formed.

To address H6, testing differences between those with and without IPA experience on two dependent variables (DVs): defeat and entrapment, a MANOVA was used. A MANOVA was selected in order to control for the increased risk of a Type 1 error due to testing multiple DVs. The results for the combined DVs were examined. The results for each of the dependent variables were considered separately to identify which

specific variables differed significantly across the two groups. Means and standard deviations for the measures were also presented.

To address H7, testing defeat as a mediator of IPA-entrapment, a series of regressions were carried out. In mediation analysis, it is important first of all to determine that there are significant relationships between each of the variables involved. First, a standard regression was conducted to determine whether the IV predicted the mediator. A hierarchal regression was then carried out with the IV and the mediator predicted the DV.

Within the hierarchal regression, the IV was entered at step 1, and the mediator at step 2. The total variance explained by the model as a whole was examined. The R squared change was considered to determine how much of the variance in the DV was explained by the mediator, after controlling for the effects of the IV. The final regression model was examined along with the betas, to determine whether the beta weight of the IV was reduced, indicating mediation. A Sobel test was then conducted to test whether any reduction in the beta weight of the IV was significant, which would indicate whether there was a significant mediating effect.

This approach was used for all mediation analysis, covering H7 through to H9.

#### **5.2.4.3.1 Pre-Motivational Factors**

To address H10, testing whether SPP, SC, or self-esteem were associated with higher perceptions of defeat and entrapment, a correlational analysis was conducted, and the significance and strengths of any associations discussed.

#### **5.2.4.3.2 Threat to self moderators & motivational moderators**

In H11 it was tested testing whether social problem solving or rumination acted as moderators of the defeat-entrapment pathway. Firstly, the data was checked for skewness and transformed if necessary. The IV and the Moderator were then mean centred, and the mean centred variables used for this analysis. A new variable was also calculated, multiplying the IV and the moderator to create an interaction variable.

A hierarchal regression was then carried out. The IV and moderator were entered in step 1, and the interaction at step 2. R squared change was selected under the statistics option. The coefficients for the individual variables were examined to determine which ones made a significant unique contribution to explaining the variance in DV scores.

In order to present the moderation in a graph format, four dummy participants were formed to represent 1SD above and below the mean for the IV and the moderator. Therefore, the four participants showed the following score patterns; high moderator – high IV; high moderator – low IV; low moderator – high IV; low moderator – low IV. The interaction variable was then re-calculated, and unstandardized predictor variables were created, giving predicted scores for the 4 dummy participants. The 4 dummy

participants were then selected and a multiple line graph constructed to present the moderation.

Post-hoc analyses were then conducted on the high and low moderator lines of the graph to determine if they differed significantly from zero. The procedure outlined by Aitken and West (1991) was followed. This involved computing 4 variables, *zabove*, *zbelow*, *xzabove* and *xzbelow*, to represent the high and low IV and interaction. Two regressions were then carried out. The first regression examined the high line, entering the IV and *zabove* in step 1, and *xzabove* in step 2. The second regression examined the low line, entering the IV and *zbelow* in step 1, and *xzbelow* in step 2. The results revealed whether the high and low lines on the graph were significantly different from zero.

This procedure was followed for all moderation analysis, covering H11 through to H12d.

### 5.3. Results

This chapter investigates the relationship between IPA and suicidality. This analysis focuses on what this study has been able to contribute to our understanding of IPA and its relationship with suicidality. The data analysis conducted will now be presented, following the analytic strategy outlined in section 5.2.4.

#### 5.3.0 Analysis

##### 5.3.0.0 Demographics

A one-way ANOVA was carried out to determine whether suicidal ideation varied across the employment status variable (unemployed, employed, in full time education). There was a significant difference in suicidal ideation scores for the three employment status groups:  $F(2, 122) = 9.04, p < .001$ . Table 5.2 below shows the mean suicidal ideation scores for each of the 3 employment status groups

**Table 5.2 Mean suicidal ideation scores according to employment status**

<b>Employment Status</b>	<b>N</b>	<b>Mean Suicidal Ideation</b>	<b>SD</b>
Employed	80	1.63	2.43
Unemployed	7	5.00	2.65
Full Time Education	38	1.03	1.82

Bonferroni post hoc tests were conducted to establish which groups varied significantly from each other on suicidal ideation. Significant differences were found between those unemployed and employed (mean difference -3.38,  $p = .001$ ) and between those unemployed and in full time education (mean difference 3.97,  $p < .001$ ). There were no

significant differences between those employed and in full time education. Therefore, those who were unemployed demonstrated significantly higher suicidal ideation scores than those in employment or in full time education. However, this finding must be treated with caution, as there were only a small number of participants in the unemployed category.

A one-way ANOVA was also carried out to determine whether suicide attempts varied across employment status. There was no significant difference in suicide attempts between the three employment status groups:  $F(2, 122) = .05, p=.95$ .

A one-way ANOVA was then carried out to determine whether suicidal ideation varied across the highest qualification variable (high school, college/vocational, degree, post-graduate). There was a significant difference in suicidal ideation scores for the four level of education groups:  $F(3, 120) = 9.20, p<.001$ . Table 5.3 below shows the mean suicidal ideation scores for each of the 4 level of education groups.

**Table 5.3 Mean suicidal ideation scores according to level of education**

<b>Level of Education</b>	<b>N</b>	<b>Mean Suicidal Ideation</b>	<b>SD</b>
High School	28	2.86	3.26
College/vocational	16	3.13	2.68
Degree	71	0.76	1.43
Post-graduate	9	2.22	2.44

Bonferroni post hoc tests were conducted to establish which groups varied significantly from each other on suicidal ideation. Significant differences were found between those educated to degree level and those educated to high school level (mean difference 2.10,  $p<.001$ ) and between those educated to degree level and those educated to

college/vocational level (mean difference 2.36,  $p=.001$ ). There were no significant differences between any other groups. Therefore, those who were educated to degree level demonstrated significantly lower suicidal ideation scores than those educated to high school and college/vocational level, with those educated to college level showing the highest rates of suicidal ideation.

A one-way ANOVA was also carried out to determine whether suicide attempts varied across education level. There was no significant difference in suicide attempts between the four level of education groups:  $F(3, 120) = .48, p=.70$ .

It was then of interest whether IPA experience varied across any of the demographic variables. Cross-tabs were conducted on the demographic variables.

Cross-tabs were carried out to look at any differences in IPA experience (yes,no) across employment status (employed, unemployed, in full time education). There was a significant association between whether people had experienced IPA or not and employment status,  $\chi^2(2, n=125) = 13.16, p=.001, \text{Cramers } V = .32$ . This shows that there is a medium effect size between IPA experience and employment status. Table 5.4 below shows the percentages of each employment status category according to IPA experience.

**Table 5.4 Percentages of employment status categories according to IPA experience**

<b>Employment status</b>	<b>Experience of IPA (n=58)</b>	<b>No Experience of IPA (n=67)</b>
Employed	69%	60%
Unemployed	12%	0%
Full Time Education	19%	40%

The table above shows that the majority of those with experience of IPA were in employment. It can also be seen from the table above that all of those in sample who were unemployed were those with experience of IPA. Those with no experience of IPA were more likely to be in full time education.

Cross-tabs were then carried out to look at any differences in IPA experience (yes, no) across level of education (high school, college, degree, postgraduate). There was a significant association between whether people had experienced IPA or not and level of education,  $\chi^2 (3, n=125) = 24.63, p < .001, \text{Cramers } V = .45$ . This shows that there is a medium effect size between IPA experience and level of education. Table 5.5 below shows the percentages of each level of education category according to IPA experience.

**Table 5.5 Percentages of level of education categories according to IPA experience**

<b>Level of Education</b>	<b>Experience of IPA (n=58)</b>	<b>No Experience of IPA (n=67)</b>
High School	34%	12%
College/vocational	22%	4%
Degree	34%	76%
Post-graduate	9%	6%

It can be seen from the table above that the majority of those with experience of IPA were educated to either high school or degree level. Those with no experience of IPA were more likely to be educated to degree level.

### **5.3.0.1 Suicidality at Time 1 and Time 2**

To test whether there were any differences in suicidality between Time 1 and Time 2, a paired samples t-test was conducted. There was no significant difference in suicidal ideation from Time 1 (mean = 1.61) to Time 2 (mean = 1.63),  $t(124) = 1.42, p = .16$ . A paired-samples t-test was also conducted to test whether there were any significant differences in suicide attempts between Time 1 and Time 2. The test could not be computed as there were no differences at all in whether people had attempted suicide or not between Time 1 and Time 2.

### **5.3.0.2 Analysis relating to understanding the relationship between IPA and suicidality**

#### **5.3.0.2.0 Suicidality**

##### **5.3.0.2.0.0 RQ1: What is the relationship between IPA and suicidality?**

RQ1 addresses the relationship between IPA and suicidality, firstly comparing those with and without IPA experience on measures of suicidal ideation and suicide attempts (H1a), before investigating this in more detail by examining differences in suicidality between current and past IPA experience (H1b). Whilst these areas were investigated in the previous study, it is important to test this again with the current sample, as a

relationship with suicidality cannot be assumed, and is central to the analysis that follows.

**5.3.0.2.0.0.0 H1a: Those with experience of IPA will demonstrate higher suicidality than those with no experience of IPA.**

H1a compares those with and without experience of IPA on measures of suicidal ideation and suicide attempts. To test H1a, a MANOVA was conducted to investigate differences in suicide attempts and suicidal ideation between those with and without IPA experience.

There was a significant difference between those who had and had not experienced IPA on the combined dependent variables,  $F(2,122) = 29.25, p < .001$ . When the results for the dependent variables were considered separately, both variables were found to differ significantly across IPA experience (suicide attempts,  $F(1) = 5.43, p = .02$ , partial eta squared .04, suicidal ideation,  $F(1) = 58.96, p < .001$ , partial eta squared .32).

Therefore those with and without experience of IPA differed significantly on suicidal ideation and suicide attempts. Table 5.6 below shows the related means and standard deviations.

**Table 5.6: Mean suicide attempts and suicidal ideation in relation to IPA experience**

	<b>Experience of IPA (N=58)</b>	<b>No Experience of IPA (N=67)</b>	<b>F</b>	<b>p</b>	<b>Partial Eta Squared</b>
<b>Suicide Attempts</b>	.36 (SD=.58)	.15 (SD=.44)	5.43	.02	.04
<b>Suicidal Ideation</b>	3.10 (SD=2.74)	.36 (SD=.96)	58.96	<.001	.32

Key: IPA= Intimate Partner Abuse; SD=standard deviation

Those with experience of IPA demonstrated significantly higher mean scores on the measures of suicidal ideation and suicide attempts than those with no experience of IPA, supporting H1a.

**5.3.0.2.0.0.1. H1b: Those experiencing IPA currently will show higher levels of suicidal ideation than those who experienced IPA previously or not at all. Those with previous IPA experience will show higher levels of suicide attempts than those with current or no IPA experience.**

H1b examines the relationship between IPA and suicidality in greater depth, by investigating differences in suicidality in relation to whether the IPA is current or in the past. This is an important area of investigation, as the majority of research in this area focuses on those currently experiencing IPA. Therefore, little is known about the longer term relationship between IPA and suicidality.

We tested whether levels of suicidality differed according to whether IPA was being experienced currently, or had been experienced in the past. To test H1b, a MANOVA was conducted to investigate differences in suicide attempts and suicidal ideation

between those with no experience of IPA, current experience of IPA, and previous IPA experience.

There was a significant difference between those with no experience of IPA, current, and previous IPA experience on the combined dependent variables,  $F(4,242) = 16.84$ ,  $p < .001$ . When the results for the dependent variables were considered separately, both variables were found to differ significantly across IPA experience (suicide attempts,  $F(2) = 8.59$ ,  $p < .001$ , partial eta squared .12, suicidal ideation,  $F(2) = 29.24$ ,  $p < .001$ , partial eta squared .32).

Therefore those with no experience of IPA, current, and previous IPA experience differed significantly on suicidal ideation and suicide attempts. Table 5.7 below shows the means and standard deviations for suicide attempts and suicidal ideation across these levels of IPA experience.

**Table 5.7: Mean suicide attempts and suicidal ideation across IPA experience**

	No Experience of IPA (N=67)	Previous IPA Experience (N=39)	Current IPA Experience (N=19)	F	p	Partial Eta Squared
<b>Suicide Attempts</b>	.15 (SD=.44)	.51 (SD=.64)	.05 (SD=.23)	8.59	<.001	.12
<b>Suicidal Ideation</b>	.36 (SD=.96)	3.10 (SD=2.76)	3.11 (SD=2.77)	29.24	<.001	.32

Key: IPA = intimate partner abuse

Post-hoc tests were conducted (Bonferroni) to determine which of the groups differed significantly from each other. For suicide attempts, there was a significant difference between the previous and current IPA groups ( $p = .001$ ) and between those with no

experience of IPA and the previous IPA group ( $p < .001$ ). There was no significant difference between those with no experience of IPA, and those currently experiencing IPA ( $p = 1.00$ ). Therefore, those with previous experience of IPA showed significantly higher suicide attempts than those currently experiencing IPA, and those with no IPA experience.

In relation to suicidal ideation, there was a significant difference between those with no IPA experience and those with previous ( $p < .001$ ) and current ( $p < .001$ ) IPA experience. There was no significant difference between those with current and previous IPA experience ( $p = 1.00$ ). Therefore, those with no IPA experience showed significantly lower suicidal ideation than those with current and previous IPA experience. Those with current and previous IPA experience did not differ significantly on levels of suicidal ideation.

Therefore H1b was partially supported, as those with current IPA experience did show higher levels of suicidal ideation than those with no IPA experience, and the previous IPA group did show significantly higher levels of suicide attempts than the current or no IPA group. However the current IPA group did not have significantly higher levels of suicidal ideation than those who had previously experienced IPA.

#### **5.3.0.2.0.1 RQ2: Which factors predict suicidal ideation at T2?**

In the following analysis, IPA experience, the prevalence of different forms of IPA (psychological aggression, physical assault, injury and sexual coercion), and the severity of IPA, are categorical variables. All other variables are continuous.

RQ2 aimed to establish which Time 1 variables were predictive of suicidal ideation at Time 2. Due to the large amount of potential predictors in the study, a specific hypothesis could not be formulated.

To determine which factors predict suicidal ideation, firstly zero order correlations were conducted. Potential predictors were entered into the correlation analysis, and the following variables were significantly correlated with suicidal ideation: IPA experience; IPA level of control; impact of IPA; prevalence of psychological aggression; prevalence of physical assault; prevalence of injury; prevalence of sexual coercion; severity of IPA; frequency of IPA; level of stalking score; forms of coping (behavioural disengagement, positive reframing, humour and self-blame); social support; goal disengagement; goal reengagement; positive future thinking; self-esteem; social problem solving; depression; PTSD; SPP; SC; brooding rumination; total rumination score; entrapment (total, internal and external); and defeat.

Variable reduction techniques were used to determine which factors would be entered into a final regression to establish which variables were significant predictors of suicidal ideation. In the first step of this variable reduction, individual regression analyses were carried out with each of these variables, and those which were not significant predictors of suicidal ideation were not included in further analysis. This process allowed the following variables to be removed as they did not predict suicidal ideation: IPA severity, prevalence of all types of IPA (psychological aggression, physical assault, injury and sexual coercion), behavioural disengagement, goal disengagement, negative future thinking, self-criticism, external entrapment, total entrapment score, and defeat.

In the second step of variable reduction the variables were split into groups and a regression was conducted with each group. One group contained all the variables specifically relating to IPA, one contained variables relating to how people cope with a stressor, and the third group contained variables that were considered to be personality factors and cognitive processes. Three regressions were then carried out with these groups of variables predicting suicidal ideation. The variables included in each group for each of the three regressions are listed below:

Regression 1: IPA variables – IPA experience, frequency of IPA, control, impact, level of stalking (see Table 5.8 for correlation matrix)

**Table 5.8: Correlation Matrix of IPA Variables and Suicidal Ideation at T2**

	Suicidal Id	IPA Exp	Freq of IPA	Control	Impact	LOS
Suicidal Id	1	.56**	.74**	.76**	.81**	.60**
IPA Exp		1	.79**	.82**	.80**	.34**
Freq of IPA			1	.88**	.85**	.55**
Control				1	.92**	.52**
Impact					1	.57**
LOS						1

\*\* significant at 0.01 level.

Key: Suicidal Id=suicidal ideation; IPA Exp=IPA experience; Freq of IPA=frequency of IPA; LOS=level of stalking

The model with these variables predicting suicidal ideation was found to be significant ( $F(5) = 56.79, p < .001$ ). The  $R^2$  for the model was .71 ( $p < .001$ ), indicating that the final model explained 71% of the variance in suicidal ideation. Inspection of the final beta values found that IPA experience ( $\beta = .26, p = .008$ ), frequency of IPA ( $\beta = .22, p = .05$ ), impact ( $\beta = .68, p < .001$ ), and level of stalking ( $\beta = .15, p = .03$ ) made a significant unique

contribution to explaining suicidal ideation. Control ( $\beta=.07$ ,  $p=.62$ ) did not make a unique contribution to explaining suicidal ideation at T2.

Regression 2: Coping variables – positive reframing, humour, self-blame, goal reengagement, social support, positive future thinking, social problem solving (see Table 5.9 for correlation matrix).

**Table 5.9: Correlation Matrix of Coping Variables and Suicidal Ideation at T2**

	Suicidal Id	Positive re	Humour	Self blame	Goal reeng	Social supp	Positive ft	SPS
Suicidal Id	1	-.32**	-.39**	.44**	-.25**	-.55**	-.41**	.19*
Positive re		1	.39**	-.21*	.27**	.27**	.12	-.17
Humour			1	-.19*	.12	.29**	.21*	-.05
Self-blame				1	-.20*	-.32**	-.06	.20*
Goal reeng					1	.31**	.25**	.05
Social Supp						1	.38**	-.16
Positive ft							1	-.06
SPS								1

\*\* significant at 0.01 level. \*significant at 0.05 level.

Key: Suicidal Id=suicidal ideation; Positive re=positive reframing; Goal reeng=goal reengagement; social sup=social support; positive ft=positive future thinking; SPS=social problem solving.

The model with these variables predicting suicidal ideation was found to be significant ( $F(7) = 15.64$ ,  $p<.001$ ). The  $R^2$  for the model was .49 ( $p<.001$ ), indicating that the final model explained 49% of the variance in suicidal ideation. Inspection of the final beta values found that humour ( $\beta= -.18$ ,  $p=.02$ ), self-blame ( $\beta=.25$ ,  $p=.001$ ), social support ( $\beta= -.27$ ,  $p=.001$ ), and positive future thinking ( $\beta= -.21$ ,  $p=.001$ ) made a significant unique contribution to explaining suicidal ideation. Positive reframing ( $\beta= -.06$ ,  $p=.46$ ),

goal reengagement ( $\beta = -.12, p = .10$ ), and social problem solving ( $\beta = .08, p = .26$ ) did not make a unique contribution to explaining suicidal ideation at T2.

Regression 3: Personality & Cognitive variables – self-esteem, socially prescribed perfectionism, brooding rumination, total rumination score, and internal entrapment (see Table 5.10 for correlation matrix)

**Table 5.10: Correlation Matrix of Personality & Cognitive Variables and Suicidal Ideation at T2**

	Suicidal Id	Self est	SPP	Brood R	Rum	Int Entrp
Suicidal Id	1	-.55**	.43**	.44**	.21*	.75**
Self est		1	-.35**	-.40**	-.21*	-.66**
SPP			1	.44**	.44**	.57**
Brood R				1	.76**	.58**
Rum					1	.36**
Int Entrp						1

\*\* significant at 0.01 level. \*significant at 0.05 level.

Key: Suicidal Id=suicidal ideation; self est=self esteem; SPP=socially prescribed perfectionism; brood R=brooding rumination; Rum=rumination; Int Entrp=internal entrapment

The model with these variables predicting suicidal ideation was found to be significant ( $F(5) = 33.65, p < .001$ ). The  $R^2$  for the model was .59 ( $p < .001$ ), indicating that the final model explained 59% of the variance in suicidal ideation. Inspection of the final beta values found that internal entrapment ( $\beta = -.18, p = .02$ ) made a significant unique contribution to explaining suicidal ideation. Self-esteem ( $\beta = -.08, p = .32$ ), SPP ( $\beta = .04, p = .61$ ), brooding rumination ( $\beta = .15, p = .15$ ), and rumination ( $\beta = -.18, p = .07$ ) did not make a unique contribution to explaining suicidal ideation at T2.

To summarise, these analyses found that within Regression 1 containing the IPA variables, IPA experience, more frequent IPA, greater impact and higher level of stalking score predicted suicidal ideation. Within Regression 2 containing the coping variables, lower humour, higher self-blame, lower social support and lower positive future thinking predicted suicidal ideation. Within Regression 3 containing the personality and cognitive variables, only high internal entrapment predicted suicidal ideation. Regression 1 containing the IPA variables explained the largest amount of the variance in suicidal ideation (71%). The following variables were removed through this process as they were not significant predictors of suicidal ideation: control, positive reframing, goal reengagement, social problem solving, self-esteem, socially prescribed perfectionism, brooding rumination, and total rumination score.

Following this process of variable reduction, a final regression was then carried out including the variables that had emerged in the previous regression analysis as significant predictors (IPA experience, frequency of IPA, impact, level of stalking, humour, self-blame, social support, positive future thinking and internal entrapment). Table 5.11 below shows the correlation matrix for the variables entered into the final analysis.

**Table 5.11: Correlation Matrix of predictors entered into final regression analysis and Suicidal Ideation at T2**

	Suicid Id	IPA exp	Freq IPA	Impact	LOS	Humou r	Self blm	Soc supp	Postv ft	Int entrp
Suicid Id	1	.56**	.74**	.81**	.60**	-.39**	.44**	-	-.41**	.75**
IPA exp		1	.79**	.80**	.34**	-.30**	.28**	.55**	-.35**	.54**
Freq IPA			1	.85**	.55**	-.40*	.35**	.23**	-.35**	.65**
Impact				1	.57**	-.36**	.44**	.38**	-.39**	.78**
LOS					1	-.27**	.28**	.46**	-.19*	.47**
Humour						1	-.19*	.29**	.21*	-.38**
Self blm							1	-.06	-.06	.54**
soc supp								1	.32**	-.53**
Postv ft									1	-.27**
Int entrp										1

\*\* significant at 0.01 level. \*significant at 0.05 level.

Key: Suicidal Id=suicidal ideation; IPA exp=IPA experience; Freq IPA=frequency of IPA; LOS=level of stalking; Self blm=self-blame; soc sup=social support; postv ft=positive future thinking; int entrp=internal entrapment.

The model with these variables predicting suicidal ideation was found to be significant ( $F(7) = 51.27, p < .001$ ). The  $R^2$  for the model was .74 ( $p < .001$ ) indicating that the final model explained 74% of the variance in suicidal ideation. Inspection of the final beta values found that impact ( $\beta = .36, p < .001$ ), level of stalking ( $\beta = .23, p < .001$ ), social support ( $\beta = -.16, p = .006$ ), positive future thinking ( $\beta = -.12, p = .029$ ), and internal entrapment ( $\beta = .22, p = .011$ ) made a significant unique contribution to explaining suicidal ideation (see Table 8.8 below). IPA experience ( $\beta = .12, p = .21$ ), frequency of IPA ( $\beta = .18, p = .06$ ), humour ( $\beta = -.02, p = .69$ ) and self-blame ( $\beta = .03, p = .54$ ) did not make a unique contribution to explaining suicidal ideation at T2.

**Table 5.12: Final regression of variables predicting suicidal ideation**

<b>Predictors</b>	<b><math>\beta</math></b>	<b>p</b>	<b>R<sup>2</sup> change for model</b>
IPA experience	.12	.21	.76*
Frequency of IPA	.18	.06	
Impact	.34	.009*	
LOS	.20	.002*	
Humour	-.02	.69	
Self-Blame	.03	.54	
Social Support	-.14	.02*	
Positive ft	-.12	.03*	
Internal entrap	.21	.01*	

\*P<0.05

Therefore, experiencing a higher level of impact of IPA, experiencing more severe stalking and harassment behaviours, and perceiving higher levels of internal entrapment predicts higher levels of suicidal ideation. Having lower perceived social support and less positive future thoughts also predicted higher suicidal ideation.

#### **5.3.0.2.0.2 RQ3: Which factors predict suicidal attempts at T2?**

In the following analysis, IPA experience, the prevalence of different forms of IPA (psychological aggression, physical assault, injury and sexual coercion), and the severity of IPA, are categorical variables. Suicide attempts is a dichotomous variable with three levels representing no suicide attempts, one suicide attempt or more than one suicide attempt over the lifetime. All other variables are continuous.

RQ3 aimed to establish which Time 1 variables were predictive of suicide attempts measured at Time 2. Due to the large amount of potential predictors in the study, a specific hypothesis could not be formulated.

To determine which factors predict suicide attempts at T2, firstly zero order correlations were conducted. Potential predictors were entered into the correlation analysis, and the following variables were significantly correlated with suicide attempts: IPA experience; IPA level of control; impact of IPA; prevalence of psychological aggression; prevalence of physical assault; prevalence of injury; prevalence of sexual coercion; severity of IPA; frequency of IPA; level of stalking score; forms of coping (behavioural disengagement, planning, humour and self-blame); social support; goal disengagement; self-esteem; depression; PTSD; SPP; SC; entrapment (total, internal and external); and defeat.

Variable reduction techniques were used to determine which factors would be entered into a final regression to establish which variables are significant predictors of suicide attempts. In the first step of this variable reduction, individual regression analyses were carried out with each of these variables, and those which were not significant predictors of suicide attempts were not included in further analysis. This process allowed the following variables to be removed as they did not predict suicide attempts: IPA experience ( $\beta = .21$ ,  $p = .07$ ), severity of IPA ( $\beta = -.15$ ,  $p = .68$ ), frequency of IPA ( $\beta = -.09$ ,  $p = .76$ ), prevalence of psychological aggression ( $\beta = -.10$ ,  $p = .74$ ), prevalence of physical assault ( $\beta = .17$ ,  $p = .45$ ), prevalence of injury ( $\beta = -.38$ ,  $p = .09$ ), prevalence of sexual coercion ( $\beta = -.06$ ,  $p = .71$ ), behavioural disengagement ( $\beta = -.09$ ,  $p = .32$ ), planning ( $\beta = .10$ ,  $p = .26$ ), goal disengagement ( $\beta = -.13$ ,  $p = .13$ ), self-criticism ( $\beta = .01$ ,  $p = .97$ ), external entrapment ( $\beta = -.35$ ,  $p = .30$ ), total entrapment score ( $\beta = .57$ ,  $p = .17$ ), and defeat ( $\beta = .02$ ,  $p = .91$ ).

In the second step of variable reduction the variables were split into groups and a regression was conducted with each group. One group contained variables specifically

relating to IPA, one contained variables relating to how people cope with a stressor, and the third group contained variables that were considered to be personality factors and cognitive processes. Three regressions were then carried out with these groups of variables predicting suicide attempts. The variables included in each group for each of the three regressions are listed below:

Regression 1: IPA variables – control, impact, level of stalking (see Table 5.13 for correlation matrix)

**Table 5.13: Correlation Matrix of IPA Variables and Suicide Attempts at T2**

	Suicide Att	Control	Impact	LOS
Suicide Att	1	.30**	..33**	.38**
Control		1	.92**	.52**
Impact			1	.57**
LOS				1

\*\* significant at 0.01 level.

Key: Suicide Att=suicide attempts; LOS=level of stalking

The model with these variables predicting suicide attempts was found to be significant ( $F(3) = 8.00, p < .001$ ). The  $R^2$  for the model was .17 ( $p < .001$ ), indicating that the final model explained 17% of the variance in suicide attempts. Inspection of the final beta values found that level of stalking ( $\beta = .28, p = .006$ ) made a significant unique contribution to explaining suicide attempts. Control ( $\beta = -.03, p = .87$ ) and impact ( $\beta = .21, p = .36$ ) did not make a unique contribution to explaining suicide attempts at T2.

Regression 2: Coping variables – humour, self-blame, social support (see Table 5.14 for correlation matrix)

**Table 5.14: Correlation Matrix of Coping Variables and Suicide Attempts at T2**

	Suicide Att	Humr	Self blam	Social supp
Suicide Att	1	-.29**	.24**	-.18*
Humour		1	-.19*	.29**
Self blame			1	-.32**
Social supp				1

\*\* significant at 0.01 level. \*significant at 0.05 level.

Key: Suicide Att=suicide attempts; social supp=social support; humr=humour; self blam=self-blame

The model with these variables predicting suicide attempts was found to be significant ( $F(3) = 5.66, p=.001$ ). The  $R^2$  for the model was .10 ( $p<.001$ ), indicating that the final model explained 10% of the variance in suicide attempts. Inspection of the final beta values found that humour ( $\beta = -.24, p=.008$ ) made a significant unique contribution to explaining suicide attempts. Self-blame ( $\beta = .19, p=.06$ ) and social support ( $\beta = -.05, p=.61$ ) did not make a unique contribution to explaining suicide attempts at T2.

Regression 3: Personality & Cognitive variables – self-esteem, socially prescribed perfectionism, and internal entrapment (see Table 5.15 for correlation matrix).

**Table 5.15: Correlation Matrix of Personality & Cognitive Variables and Suicide Attempts at T2**

	Suicide Att	Self est	SPP	Int Entrp
Suicidal Att	1	-.28**	.20*	.39**
Self est		1	-.35**	-.66**
SPP			1	.57**
Int Entrp				1

\*\* significant at 0.01 level. \*significant at 0.05 level. Key: Suicidal Att=suicide attempts; self est=self esteem; SPP=socially prescribed perfectionism; Int Entrp=internal entrapment

The model with these variables predicting suicide attempts was found to be significant ( $F(3) = 7.23, p < .001$ ). The  $R^2$  for the model was .13 ( $p < .001$ ), indicating that the final model explained 13% of the variance in suicide attempts. Inspection of the final beta values found that internal entrapment ( $\beta = .38, p = .004$ ) made a significant unique contribution to explaining suicide attempts. Self-esteem ( $\beta = -.04, p = .74$ ) and SPP ( $\beta = -.03, p = .80$ ) did not make a unique contribution to explaining suicide attempts.

To summarise, these analyses found that within Regression 1 containing the IPA variables, only higher level of stalking score predicted suicide attempts. Within Regression 2 containing the coping variables, only lower humour predicted suicide attempts. Within regression 3 containing the personality and cognitive variables, only high internal entrapment predicted suicide attempts. Regression 1 containing the IPA variables explained the largest amount of the variance in suicide attempts (17%). The following variables were removed through this process as they were not significant predictors of suicidal ideation: control, impact, self-blame, social support, self-esteem, and socially prescribed perfectionism.

A final regression was then carried out including the variables that had emerged in the previous analysis as significant predictors (level of stalking, humour, and internal entrapment). Table 5.16 below shows the correlation matrix for these variables.

**Table 5.16: Correlation Matrix of predictors entered into final regression analysis and Suicide Attempts at T2**

	Suicide Att	LOS	Humou r	Int entrp
Suicide Att	1	.38**	-.29**	.39**
LOS		1	-.27**	.47**
Humour			1	-.38**
Int entrp				1

\*\* significant at 0.01 level. \*significant at 0.05 level. Key: Suicidal Att=suicide attempts; LOS=level of stalking; Int entrp=internal entrapment

The model with these variables predicting suicide attempts was found to be significant ( $F(3) = 11.25, p < .001$ ). The  $R^2$  for the model was .20 ( $p < .001$ ) indicating that the final model explained 20% of the variance in suicide attempts. Inspection of the final beta values found that level of stalking ( $\beta = .24, p = .011$ ), and internal entrapment ( $\beta = .22, p = .021$ ) made a significant unique contribution to explaining suicide attempts at T2 (see Table 5.17). Humour ( $\beta = -.14, p = .11$ ) did not make a unique contribution to explaining suicide attempts at T2.

**Table 5.17: Final regression of variables predicting suicide attempts**

Predictors	$\beta$	p	$R^2$ change for model
LOS	.24	.01*	.22**
Humour	-.14	.11	
Internal entrap	.22	.01*	

\* $p = 0.01$  \*\* $p < .001$

Therefore, experiencing more severe stalking and harassment behaviours, and perceiving higher levels of internal entrapment predicted a higher number of suicide attempts at T2.

### **5.3.0.3 Understanding IPA**

#### **5.3.0.3.0 RQ4: Do those experiencing Situational Couple Violence (SCV) and those experiencing Intimate Terrorism (IT) differ significantly on any key variables?**

The IPA control variable allows distinction between SCV and IT, with those experiencing low levels of control in the relationship falling into the SCV category, and the IT category representing those experiencing high levels of control. Previous research suggests that the IT group will have higher levels of depression and PTSD, and lower levels of self-esteem and social support. It was therefore important to determine whether there were significant differences between these two groups on the key factors and outcomes in the current study.

H4 tested the differences in these key factors and outcomes between the SCV and IT groups.

**5.3.0.3.0.0 H4: There will be significant differences between the SCV and IT groups on suicidality, IPA variables (impact, level of stalking) self-blame, key variables in the IMV Model (defeat, internal and external entrapment), social support, self-esteem, depression and PTSD. The IT group will have higher levels of suicidality, greater impact of IPA, severity of stalking, self-blame, defeat and entrapment, along with higher levels of depression and PTSD than the SCV group. The IT group will also demonstrate lower self-esteem and social support than the SCV group.**

To test H4, a MANOVA was conducted to investigate any differences in the variables listed above between the SCV and IT groups.

There was a significant difference between those in the SCV and IT groups on the combined dependent variables,  $F(24,222) = 14.35, p < .001$ . When the results for the dependent variables were considered separately, all variables were found to differ significantly across between the no control, SCV and IT groups. F values, significance and effect size for each variable are reported in Table 5.18 below.

Therefore those experiencing different levels of control within their relationships differed significantly on suicidality, impact, level of stalking, self-blame, defeat, internal and external entrapment, self-esteem, depression and PTSD. Table 8.14 below shows the related means and standard deviations.

**Table 5.18: Means as a function of no control, SCV and IT groups**

	<b>No Control (N=68)</b>	<b>SCV (N=9)</b>	<b>IT (N=48)</b>	<b>F</b>	<b>p</b>	<b>partial eta squared</b>
<b>Suicidal Ideation</b>	.26 (SD=.82)	.89 (SD=1.27)	3.71 (SD=2.63)	53.85	<.001	.47
<b>Suicide Attempts</b>	.13 (SD=.42)	.11 (SD=.33)	.44 (SD=.62)	5.60	.005	.08
<b>Impact of IPA</b>	.19 (SD=.98)	7.56 (SD=6.91)	16.63 (SD=5.80)	228.6 6	<.001	.79
<b>LOS</b>	209.66 (SD=667.90)	571.11 (SD=1347.78)	6228.29 (SD=9544.72)	14.91	<.001	.20
<b>Self-blame</b>	3.13 (SD=1.88)	3.22 (SD=1.86)	5.00 (SD=1.25)	18.34	<.001	.23
<b>Social Support</b>	17.22 (SD=5.31)	15.56 (SD=6.77)	11.83 (SD=6.39)	11.98	<.001	.16
<b>Self-Esteem</b>	19.49 (SD=5.34)	20.89 (SD=5.75)	13.5 (SD=4.20)	23.01	<.001	.27
<b>PHQ9</b>	5.29 (SD=3.87)	4.44 (SD=3.00)	7.63 (SD=6.15)	3.86	.024	.06
<b>PTSD</b>	4.03 (SD=7.20)	.78 (SD=2.33)	7.58 (SD=9.06)	4.48	.013	.07
<b>Defeat</b>	35.18 (SD=10.11)	34.22 (SD=13.78)	51.65 (SD=10.59)	36.41	<.001	.37
<b>Internal Entrapment</b>	9.16 (SD=4.41)	8.22 (SD=5.70)	20.65 (SD=4.96)	89.37	<.001	.59
<b>External Entrapment</b>	17.57 (SD=7.74)	16.89 (SD=9.09)	28.71 (SD=10.25)	23.63	<.001	.28

Key: SD=standard deviation

Therefore, there were significant differences in the mean scores between those with no control, the SCV and the IT groups. The IT group demonstrated the highest mean scores of impact, LOS, self-blame, depression, PTSD, defeat, internal and external entrapment. The IT group also showed the lowest mean scores of self-esteem and social support.

Post-hoc tests were conducted (Bonferroni) to determine which of the groups differed significantly from each other.

For suicidal ideation, there was a significant difference between the SCV and IT group ( $p < .001$ ), with the IT group having significantly higher levels of suicidal ideation. The IT group also showed significantly higher scores than the SCV group on impact ( $p < .001$ ), level of stalking ( $p = .030$ ), self-blame ( $p = .012$ ), PTSD ( $p = .05$ ), internal entrapment ( $p < .001$ ), external entrapment ( $p = .001$ ), and defeat ( $p < .001$ ). The IT and SCV groups also differed significantly on self-esteem ( $p < .001$ ), with the IT group showing significantly lower levels of self-esteem than the SCV group.

The IT and SCV groups did not differ significantly on levels of social support ( $p = .247$ ), depression ( $p = .218$ ) or suicide attempts ( $p = .225$ ).

In addition, the IT group differed significantly from the no control group on all variables; suicidal ideation, level of stalking, self-blame, internal entrapment, external entrapment, impact of IPA, defeat, social support, self-esteem ( $p < .001$ ); suicide attempts ( $p = .002$ ); depression and PTSD ( $p = .012$ ).

The only difference between the SCV group and the no control group was found on impact of IPA ( $p < .001$ )

Therefore, H4 was partially supported. However, the IT group did not show higher levels of suicide attempts or depression, or lower levels of social support than the SCV group.

#### **5.3.0.3.1 RQ5: Which factors predict impact of IPA?**

In the following analysis, the severity of IPA and the prevalence of different forms of IPA (psychological aggression, physical assault, injury and sexual coercion) are categorical variables. All other variables are continuous.

Those experiencing IPA differ in the degree of impact they perceive resulting from this experience. RQ5 aimed to establish which variables were predictive of the impact the experience of IPA has on the individual. Due to the large amount of potential predictors in the study, a specific hypothesis could not be formulated.

To determine which factors predict the impact of IPA, firstly zero order correlations were conducted. Potential predictors were entered into the correlation analysis, and the following variables were significantly correlated with impact: IPA level of control; frequency of IPA; IPA severity; prevalence of psychological aggression; prevalence of physical assault; prevalence of injury; prevalence of sexual coercion; level of stalking score; forms of coping (positive reframing, planning, humour and self-blame); social support; goal disengagement; goal reengagement; positive future thinking; self-esteem; SPP; SC; brooding rumination; entrapment (total, internal and external); and defeat.

Variable reduction techniques were used to determine which factors would be entered into a final regression to establish which variables were significant predictors of the impact of IPA. In the first step of this variable reduction, individual regression analyses were carried out with each of these variables, and those which were not significant predictors of IPA impact were not included in further analysis. This process allowed the following variables to be removed as they did not predict impact: severity of IPA ( $\beta = .21$ ,  $p = .47$ ), prevalence of psychological aggression ( $\beta = -.14$ ,  $p = .56$ ), prevalence of physical assault ( $\beta = .05$ ,  $p = .80$ ), prevalence of injury ( $\beta = -.22$ ,  $p = .19$ ), prevalence of sexual coercion ( $\beta = -.02$ ,  $p = .84$ ), goal disengagement ( $\beta = -.003$ ,  $p = .97$ ), self-criticism ( $\beta = -.11$ ,  $p = .33$ ), external entrapment ( $\beta = -.18$ ,  $p = .49$ ), total entrapment score ( $\beta = .37$ ,  $p = .26$ ) and defeat ( $\beta = .13$ ,  $p = .41$ ).

In the second step of variable reduction the variables were split into groups and a regression was conducted with each group. One group contained all the variables specifically relating to IPA, one contained variables relating to how people cope with a stressor, and the third group contained variables that were considered to be personality factors and cognitive processes. Three regressions were then carried out with these groups of variables predicting the impact of IPA. The variables included in each group for each of the three regressions are listed below.

Regression 1: IPA variables – control, frequency of IPA, and level of stalking (see Table 5.19 for correlation matrix).

**Table 5.19: Correlation Matrix of IPA Variables and Impact of IPA**

	Impact	Control	IPA Freq	LOS
Impact	1	.92**	.85**	.57**
Control		1	.88**	.52**
IPA Freq			1	.55**
LOS				1

\*\* significant at 0.01 level. Key: IPA Freq= frequency of IPA; LOS=level of stalking

The model with these variables predicting impact was found to be significant ( $F(3) = 258.58, p < .001$ ). The  $R^2$  for the model was .86 ( $p < .001$ ), indicating that the final model explained 86% of the variance in impact of IPA. Inspection of the final beta values found that control ( $\beta = .75, p < .001$ ) and level of stalking ( $\beta = .11, p = .01$ ) made a significant unique contribution to explaining impact of IPA. Frequency of IPA ( $\beta = .05, p = .71$ ) did not make a unique contribution to explaining impact.

Regression 2: Coping variables – positive reframing, planning, humour, self-blame, goal reengagement, social support, and positive future thinking (see Table 8.16 for correlation matrix).

**Table 5.20: Correlation Matrix of Coping Variables and Impact of IPA**

	Impact	Postv re	Planning	Humour	Self blame	Goal reeng	Social supp	Positive ft
Impact	1	-.29**	.28**	-.36**	.44**	-.33**	-.46**	-.39**
Postv re		1	.17	.39**	-.21*	.27**	.27**	.12
Planning			1	.01	.26**	.01	-.02	.05
Humour				1	-.19*	.12	.29**	.21*
Self-blame					1	-.20*	-.32**	-.06
Goal reeng						1	.31**	.25**
Social Supp							1	.38**
Positive ft								1

\*\* significant at 0.01 level. \*significant at 0.05 level. Key: Postv re=positive reframing; Goal reeng=goal reengagement; social supp=social support; positive ft=positive future thinking.

The model with these variables predicting impact was found to be significant ( $F(7) = 14.94, p < .001$ ). The  $R^2$  for the model was .44 ( $p < .001$ ), indicating that the final model explained 44% of the variance in impact of IPA. Inspection of the final beta values found that planning ( $\beta = .26, p = .001$ ), humour ( $\beta = -.17, p = .03$ ), self-blame ( $\beta = .22, p = .005$ ), social support ( $\beta = -.17, p = .04$ ), and positive future thinking ( $\beta = -.24, p = .002$ ) made a significant unique contribution to explaining impact of IPA. Positive reframing ( $\beta = -.04, p = .72$ ) and goal reengagement ( $\beta = -.04, p = .70$ ) did not make a unique contribution to explaining impact.

Regression 3: Personality & Cognitive variables – self-esteem, socially prescribed perfectionism, brooding rumination, and internal entrapment (see Table 5.21 for correlation matrix).

**Table 5.21: Correlation Matrix of Personality & Cognitive Variables and Impact of IPA**

	Impact	Self est	SPP	Brood R	Int Entrp
Impact	1	-.48**	.40**	.43**	.78**
Self est		1	-.35**	-.40**	-.66**
SPP			1	.44**	.57**
Brood R				1	.58**
Int Entrp					1

\*\* significant at 0.01 level. \*significant at 0.05 level. Key: self est=self esteem; SPP=socially prescribed perfectionism; brood R=brooding rumination; Int Entrp=internal entrapment.

The model with these variables predicting impact was found to be significant ( $F(4) = 48.83, p < .001$ ). The  $R^2$  for the model was .61 ( $p < .001$ ), indicating that the final model explained 61% of the variance in impact of IPA. Inspection of the final beta values found that internal entrapment ( $\beta = .89, p < .001$ ) made a significant unique contribution to explaining impact of IPA. Self-esteem ( $\beta = .16, p = .11$ ), SPP ( $\beta = -.08, p = .38$ ) and brooding rumination ( $\beta = -.08, p = .39$ ) did not make a unique contribution to explaining impact.

To summarise, these analyses found that within Regression 1 containing the IPA variables, control and level of stalking predicted impact. Within Regression 2 containing the coping variables, planning, humour, self-blame, social support and positive future thinking predicted impact. And within Regression 3 containing the personality and cognitive variables, only internal entrapment predicted impact. Regression 1 containing the IPA variables explained the largest amount of the variance in impact of IPA (86%). The following variables were removed through this process as they were not significant predictors of impact: frequency of IPA, positive reframing,

goal reengagement, self-esteem, socially prescribed perfectionism, and brooding rumination.

A final regression was then carried out including the variables that had emerged in the previous analysis as significant predictors (control, level of stalking, planning, humour, self-blame, social support, positive future thinking and internal entrapment). Table 5.22 below shows the correlation matrix for these variables.

**Table 5.22: Correlation Matrix of predictors entered into final regression analysis and Impact**

	Impact	Cntrl	LOS	Plan	Humr	Self b	Soc S	Postv ft	Int entrp
Impact	1	.92**	.57**	.28**	-.36**	.44**	-	-.39**	.78**
Cntrl		1	.52**	.22*	-.35**	.47**	.46**	-.29**	.76**
LOS			1	.27**	-.27**	.28**	-.19*	.10	.47**
Planning				1	.01	.26**	-.02	-.05	.15
Humour					1	-.19*	.29**	.21*	-.38**
Self blm						1	-	-.06	.54**
soc supp							1	.32**	-.53**
Postv ft								1	-.27**
Int entrp									1

\*\* significant at 0.01 level. \*significant at 0.05 level. Key: Cntrl=control; LOS=level of stalking; Plan=planning, Humr=humour, Self b=self-blame; soc s=social support; postv ft=positive future thinking; int entrp=internal entrapment.

The model with these variables predicting impact was found to be significant ( $F(8,115)=124.49, p<.001$ ). The  $R^2$  for the model was .89 ( $p<.001$ ) indicating that the final model explained 89% of the variance in impact. Inspection of the final beta values found that control ( $\beta=.70, p<.001$ ), level of stalking ( $\beta=.09, p<.001$ ), planning ( $\beta=.10, p=.003$ ), positive future thinking ( $\beta=-.13, p<.001$ ), and internal entrapment ( $\beta=.18, p=.001$ ) made a significant unique contribution to explaining impact (see Table 8.19).

Humour ( $\beta = .09$ ,  $p = .16$ ), self-blame ( $\beta = -.06$ ,  $p = .36$ ) and social support ( $\beta = .14$ ,  $p = .06$ ) did not make a unique contribution to explaining impact.

**Table 5.23: Final regression of variables predicting impact of IPA**

Predictors	$\beta$	p	R <sup>2</sup> change for model
Control	.70	<.001**	.90**
LOS	.09	.01*	
Planning	.10	.003*	
Humour	-.01	.87	
Self-Blame	-.05	.17	
Social Support	-.001	.97	
Positive ft	-.13	<.001**	
Internal entrap	.18	.001**	

\* $p < 0.05$  \*\* $p < .001$

Therefore, experiencing a higher level of control, experiencing more severe stalking and harassment behaviours, using planning as a coping style, and perceiving higher levels of internal entrapment predicted higher levels of impact. Having less positive future thoughts also predicted higher impact

#### **5.3.0.4 Analysis relating to testing the IMV Model of suicidal behaviour**

##### **5.3.0.4.0 IPA & Suicidality – Relationships with defeat and entrapment**

###### **5.3.0.4.0.0 RQ6: Do defeat and entrapment differ between those with and without IPA experience?**

As defeat and entrapment are proximal predictors of suicidality within the IMV Model of Suicidal Behaviour, it was of interest to determine whether levels of defeat and entrapment differed depending on whether IPA had been experienced. H6 investigates whether higher levels of defeat and entrapment will be shown by those with experience of IPA compared to those who have not experienced IPA.

###### **5.3.0.4.0.0.0 H6: Those with IPA experience will demonstrate higher perceptions of defeat and entrapment than those with no experience of IPA.**

To test this, a MANOVA was conducted to investigate differences in defeat and entrapment between those with and without IPA experience.

There was a significant difference between those who had and had not experienced IPA on the combined dependent variables,  $F(3,121) = 20.00, p < .001$ . When the results for the dependent variables were considered separately, all variables were found to differ significantly across IPA experience (internal entrapment,  $F(1) = 50.82, p < .001$ , external entrapment,  $F(1) = 10.13, p = .002$ , entrapment total score,  $F(1) = 25.10, p < .001$ , defeat,  $F(1) = 24.97, p < .001$ ).

Therefore those with and without experience of IPA differed significantly on defeat and entrapment scores. Table 5.24 below shows the related means and standard deviations.

**Table 5.24: Mean defeat and entrapment at depending on IPA experience**

	<b>Experience of IPA (N=58)</b>	<b>No Experience of IPA (N=67)</b>	<b>F</b>	<b>p</b>	<b>Partial Eta Squared</b>
<b>Internal Entrapment</b>	17.76 (SD=7.33)	9.82 (SD=5.04)	50.82	<.001	.29
<b>External Entrapment</b>	24.86 (SD=10.16)	19.15 (SD=9.88)	10.13	.002	.08
<b>Total Entrapment</b>	42.62 (SD=16.37)	28.97 (SD=14.09)	25.10	<.001	.17
<b>Defeat</b>	47.26 (SD=12.58)	36.39 (SD=11.72)	24.97	<.001	.17

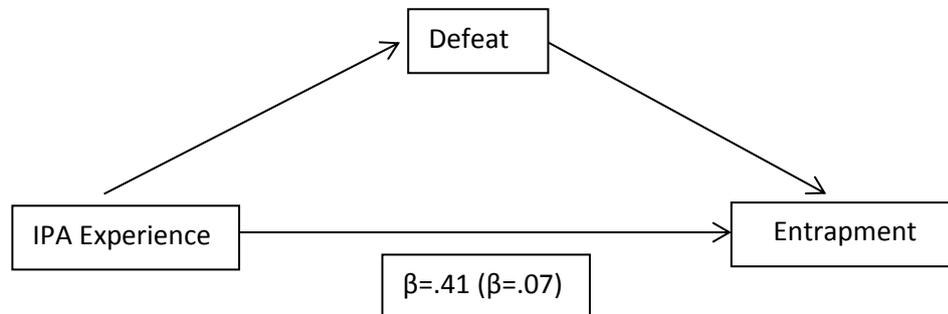
Key: IPA= Intimate Partner Abuse; SD=standard deviation

Therefore, those with experience of IPA demonstrated significantly higher mean scores on the measures of defeat and entrapment than those with no experience of IPA, supporting H6.

#### **5.3.0.4.0.1 RQ7: Does defeat mediate the relationship between IPA & Entrapment?**

The IMV Model suggests that defeat would mediate the relationship between the stressor (IPA) and feelings of entrapment. H7 investigates this relationship.

**5.3.0.4.0.1.0 H7: Defeat will mediate the relationship between IPA & entrapment**



**Figure 5.1: Defeat as a mediator of the IPA experience-entrapment pathway**

To test whether there will be a mediating effect of defeat on the relationship between IPA experience and entrapment, a series of regressions were carried out. A standard regression was conducted with the IV (IPA experience) predicting the mediator (defeat). A significant association between IPA experience and defeat was found, with IPA experience explaining 16% of the variance in defeat score:  $R^2 = 0.16$ ,  $\beta = .41$ ,  $p < .001$ .

A hierarchal regression was then conducted with the IV (IPA Experience) and mediator (defeat) predicting the DV (entrapment). See Table 5.25

**Table 5.25: Hierarchical Regression analysis of the IPA experience-entrapment relationship with defeat as a mediator**

Step/Predictors	$\beta$ (Step 1)	p	$R^2$ change for step	Total $R^2$ change
1: IPA Experience	0.41	<.001*	0.17*	0.17*
2: IPA Experience	0.07	.17	0.58*	0.75*
Defeat	0.83	<.001*		

\* $P < 0.001$

IPA Experience was entered at Step 1, explaining 16% of the variance in entrapment. After entry of defeat score at Step 2 the total variance explained by the model as a whole was 74%,  $F(2, 122) = 181.11, p < .001$ . Defeat score explained an additional 58% of the variance in entrapment after controlling for the effects of IPA experience,  $R^2 \text{ change} = 0.58, F \text{ change}(1, 122) = 280.13, p < .001$ . In the final model, defeat score was significant ( $\beta = 0.83, p < .001$ ), and the beta weight for IPA experience was reduced to non-significance ( $\beta = -0.07, p = 0.17$ ), suggesting that defeat fully mediates the relationship between IPA experience and entrapment.

A Sobel test was conducted to test whether there was a significant reduction in the beta weight of IPA experience. The reduction in beta weight (36.39 to 1.05) was significant (Sobel value = 13.90,  $p < .001$ ) suggesting a full mediating effect of defeat on the relationship between IPA experience and entrapment.

Therefore, H7 was supported, defeat does have a significant mediating effect on the relationship between IPA experience and entrapment.

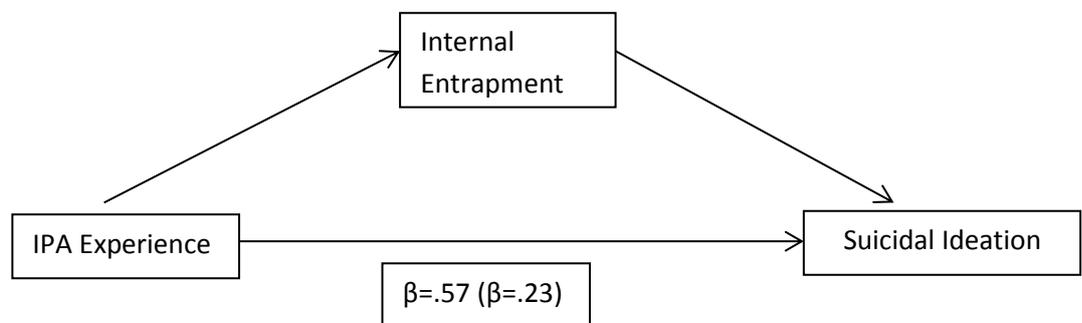
#### **5.3.0.4.0.2 RQ8: Do defeat and entrapment mediate the relationship between IPA and suicidality?**

RQ8 investigates whether defeat and entrapment do in fact mediate the relationship between the stressor (IPA) and suicidality. As this question is concerned with suicidality, rather than only thoughts or behaviours, H8a investigates whether these

factors mediate between IPA and suicidal ideation, whilst H8b investigates whether they mediate between IPA and suicide attempts.

#### **5.3.0.4.0.2.0 H8a: Defeat & entrapment will mediate the relationship between IPA and suicidal ideation**

It was tested whether defeat and entrapment mediated the relationship between IPA experience and suicidal ideation. A multiple regression was carried out in order to include only those variables which were significant predictors to help improve the power of the analysis. Internal entrapment was the only significant predictor of suicidal ideation. The focus of this analysis was therefore whether internal entrapment was a mediator of the relationship between IPA experience and suicidal ideation.



**Figure 5.2: Internal Entrapment as a mediator of the IPA experience-suicidal ideation relationship**

To test whether there will be a mediating effect of entrapment on the relationship between IPA experience and suicidal ideation, a series of regressions were carried out. A standard regression was conducted with the IV (IPA experience) predicting

the mediator (internal entrapment). A significant association between IPA experience and internal entrapment was found, with IPA experience explaining 29% of the variance in internal entrapment:  $R^2=0.29$ ,  $\beta=.54$ ,  $p<.001$ .

A hierarchal regression was then conducted with the IV (IPA Experience) and mediator (internal entrapment) predicting the DV (suicidal ideation). See Table 5.26.

**Table 5.26: Hierarchical Regression analysis of the IPA experience-suicidal ideation relationship with internal entrapment as a mediator**

Step/Predictors	$\beta$	p	$R^2$ change for step	Total $R^2$ change
1: IPA Experience	0.57	<.001**	0.32**	0.32**
2: IPA Experience	0.23	.001*	0.28*	0.60*
Internal Entrapment	0.63	<.001**		

\*\*P<0.001

\*p=.001

IPA Experience was entered at Step 1, explaining 32% of the variance in suicidal ideation. After entry of internal entrapment at Step 2 the total variance explained by the model as a whole was 60%,  $F(2, 122) = 93.74$ ,  $p<.001$ . Internal entrapment explained an additional 28% of the variance in suicidal ideation after controlling for the effects of IPA experience,  $R^2$  change = 0.28,  $F$  change (1,122) = 87.20,  $p<.001$ . In the final model, internal entrapment was significant ( $\beta=0.63$ ,  $p<.001$ ), and the beta weight for IPA experience was reduced but remained significant ( $\beta=.23$ ,  $p=.001$ ), suggesting that internal entrapment partially mediates the relationship between IPA experience and suicidal ideation.

A Sobel test was conducted to test whether there was a significant reduction in the beta weight of IPA experience. The reduction in beta weight (7.938 to 1.110) was significant (Sobel value = 3.07,  $p=.002$ ) suggesting a significant partial mediating effect of internal entrapment on the relationship between IPA experience and suicidality.

Therefore, H8a was partially supported, with internal entrapment having a significant mediating effect on the relationship between IPA experience and suicidal ideation. However there was no mediating effect of defeat on the IPA experience-suicidal ideation pathway.

#### **5.3.0.4.0.2.1 H8b: Defeat & entrapment will mediate the relationship between IPA and suicide attempts.**

It was tested whether defeat and entrapment mediated the relationship between IPA experience and suicide attempts. A multiple regression was carried out on defeat, internal, external and total entrapment scores in order to include only those variables which were significant predictors to help improve the power of the analysis. Neither defeat nor entrapment were predictive of suicide attempts, and therefore no further analysis were conducted.

H8b was therefore not supported as defeat and entrapment do not act as mediators of the relationship between IPA and suicide attempts.

**5.3.0.4.0.3 RQ9: Does defeat mediate the relationship between entrapment and suicidal ideation?**

It was tested whether defeat acted as a mediator between entrapment and suicidal ideation.

**5.3.0.4.0.3.0 H9: Defeat will mediate the relationship between entrapment and suicidal ideation.**

H9 addressed whether defeat mediated the relationship between entrapment and suicidal ideation. However, there was no significant relationship between defeat and suicidal ideation, and therefore no further analyses were conducted.

H9 was therefore not supported as defeat does not act as a mediator between entrapment and suicidal ideation.

**5.3.0.4.1 Pre-motivational factors**

**5.3.0.4.1.0 RQ10: Do personality factors such as socially prescribed perfectionism (SPP) self-criticism (SC) and self esteem increase perceptions of defeat and entrapment, acting as pre-motivational factors within the IMV model?**

The IMV Model suggests that personality factors can act within the pre-motivational phase to increase perceptions of defeat and entrapment. H5 investigates these relationships.

**5.3.0.4.1.0.0 H10: SPP, SC, and self esteem will be associated with higher perceptions of defeat and entrapment**

A correlational analysis was conducted to establish whether socially prescribed perfectionism, self-criticism and self-esteem were associated with perceptions of defeat and entrapment. The resulting correlation matrix is shown below.

**Table 5.27 Correlation matrix of SPP, SC and self-esteem with perceptions of defeat and entrapment**

	<b>Defeat</b>	<b>Entrapment</b>	<b>SPP</b>	<b>SC</b>	<b>Self-esteem</b>
<b>Defeat</b>	1	.86**	.61**	.76**	-.62**
<b>Entrapment</b>		1	.62**	.72**	-.63**
<b>SPP</b>			1	.75**	-.35**
<b>SC</b>				1	-.45**
<b>Self-esteem</b>					1

\*\* correlation significant at 0.01 level

It can be seen that SPP, SC and self-esteem are significantly associated with perceptions of defeat and entrapment, with high levels of SPP and SC and low

levels of self-esteem being associated with higher perceptions of defeat and entrapment. Hypotheses 10 is therefore supported.

#### **5.3.0.4.2 Threat to self moderators**

##### **5.3.0.4.2.0 RQ11: Do coping, social problem solving or rumination moderate the defeat-entrapment pathway, acting as threat-to-self moderators?**

The IMV Model suggests that these variables will act as moderators between defeat and entrapment. H11 investigates these relationships.

##### **5.3.0.4.2.0.0 H11: Coping, social problem solving or rumination will moderate the defeat-entrapment pathway**

There were no significant associations between the potential moderators and defeat and entrapment, indicating that these variables do not moderate this pathway. (rumination (defeat  $r=.11$ , entrapment  $r=.12$ ,  $p>.05$ ) social problem solving (defeat  $r=.13$ , entrapment  $r=.15$ ,  $p>.05$ ) coping defeat  $r=.01$ , entrapment  $r=.03$ ,  $p>.05$ ). H11 is therefore not supported.

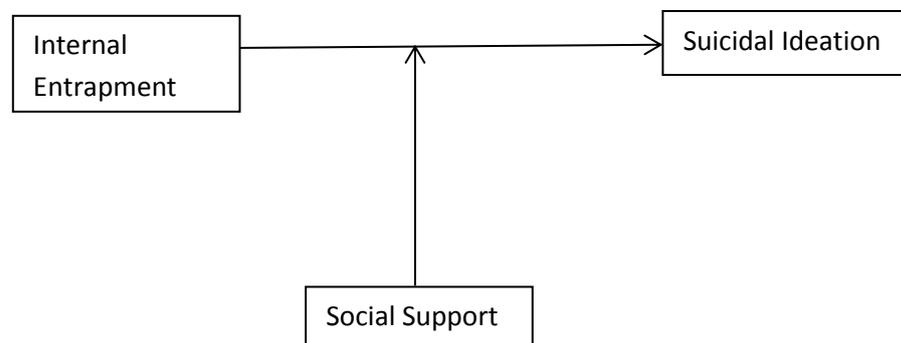
#### **5.3.0.4.3 Motivational moderators**

##### **5.3.0.4.3.0 RQ12: Do social support and positive future thinking moderate the entrapment-suicidality pathway, acting as motivational moderators within the IMV Model?**

The IMV Model suggests that these variables will act as moderators between entrapment and suicidality. H12a investigates whether social support moderates the pathway between entrapment and suicidal ideation, which H12b investigates whether it moderates between entrapment and suicide attempts. H12c investigates whether positive future thinking moderates between entrapment and suicidal ideation, and H12d addresses whether positive future thinking moderates between entrapment and suicide attempts.

#### **5.3.0.4.3.0.0 H12a: Social support will moderate the entrapment-suicidal ideation pathway**

The role of social support within the IMV model was then investigated. The model suggests that social support acts as a motivational moderator, moderating the entrapment-suicidal ideation pathway. Moderation analysis was therefore conducted to test this relationship. As only internal entrapment had a relationship with suicidal ideation, this was the entrapment variable used in the analysis.



**Figure 5.3: Social support as a moderator of the internal entrapment-suicidal ideation relationship**

To conduct the moderation analysis, firstly the IV (Internal Entrapment) and Moderator (Social Support) were mean centred. A new variable was also created to represent the interaction of internal entrapment X social support.

**Table 5.28: Hierarchical regression analysis of social support as a moderator of the internal entrapment-suicidal ideation relationship**

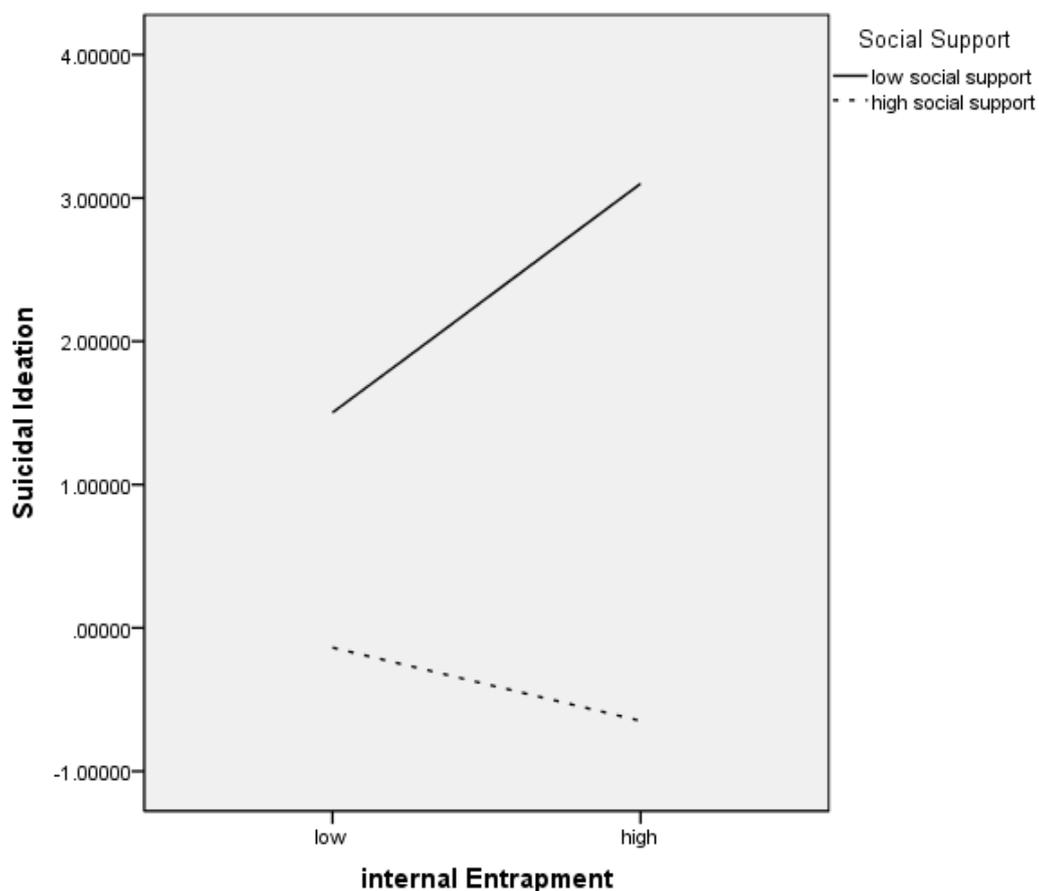
Step/Predictors	$\beta$	R <sup>2</sup> change	Total R <sup>2</sup> change
1: internal entrapment	.65***		
Social support	-.20**	.60**	
2: internal entrapment	.63***		
Social support	-.16*		
internal entrapment X social support	-.22***	.04**	.64

\*\*\*p<.001, \*\*p=.003, \*p=.018

Internal entrapment and social support were entered in step one, explaining 59% of the variance in suicidal ideation. After entry of the interaction at step 2, the total variance explained by the model as a whole was 63%,  $F(3,121) = 72.22$ ,  $p < .001$ . R square change indicated that the interaction explained a further 4% of the variance.

All of the variables made a significant unique contribution to explaining the variance in suicidal ideation (internal entrapment  $\beta = .63$ ,  $p < .001$ ; social support  $\beta = -.16$ ,  $p = .018$ ; interaction  $\beta = -.22$ ,  $p < .001$ ).

This analysis therefore suggests that social support is a significant moderator of the internal entrapment-suicidal ideation pathway, acting as a motivational moderator within the IMV Model, and supporting H12a. The results indicate that higher levels of internal entrapment and lower levels of social support increase suicidal ideation. Post-hoc analyses were conducted. Figure 5.4 below shows the interaction between the variables.



**Figure 5.4: Social support as a moderator of the internal entrapment-suicidal ideation relationship**

To investigate the interaction consistent with Aitken and West (1991), the regression lines were plotted at best fit at high (1 standard deviation above the

mean) and low (1 standard deviation below the mean) levels of internal entrapment and social support (see Figure 9.5).

Further tests were conducted on the high and low social support lines to determine if they differed significantly from zero. Application of the procedure outlined by Aitken and West revealed that the high social support slope was significantly different from zero ( $\beta = .62, p=.01$ ), and that the low internal entrapment slope was also significantly different from zero ( $\beta = -.19, p<.001$ ). This indicates that participants who scored low on social support and high on internal entrapment reported significantly higher levels of suicidal ideation. Those with high social support and high internal entrapment reported lower levels of suicidal ideation than those with low social support. However, although both the high and low lines differ significantly from zero, as is evident from the Figure 4 above, those with high social support report very low levels of suicidal ideation.

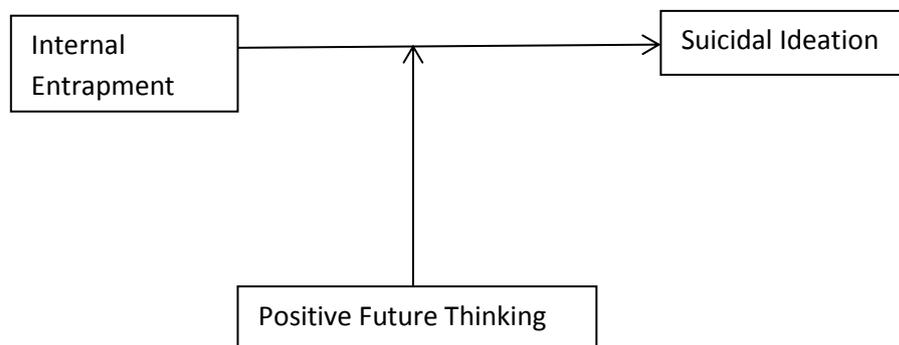
Therefore, H12a was supported as social support did act as a moderator of the relationship between internal entrapment and suicidal ideation.

#### **5.3.0.4.3.0.1 H12b: Social support will moderate the relationship between entrapment and suicide attempts.**

There is no relationship between social support and entrapment ( $r=.02, p>.05$ ) or suicide attempts ( $r=.04, p>.05$ ). Therefore no further analyses were conducted and H12b was not supported.

### 5.3.0.4.3.0.2 H12c: Positive future thinking will moderate the entrapment-suicidal ideation pathway

The role of positive future thinking within the IMV model was then investigated. The model suggests that positive future thinking acts as a motivational moderator, moderating the entrapment-suicidal ideation pathway. Moderation analysis was therefore conducted to test this relationship. As only internal entrapment had a relationship with suicidal ideation, this was the entrapment variable used in the analysis.



**Figure 5.5: Positive future thinking as a moderator of the internal entrapment-suicidal ideation relationship**

To conduct the moderation analysis, firstly the IV (Internal Entrapment) and Moderator (Positive Future Thinking) were mean centred. A new variable was also created to represent the interaction of internal entrapment X positive future thinking.

**Table 5.29: Hierarchical regression analysis of positive future thinking as a moderator of the internal entrapment-suicidal ideation relationship**

Step/Predictors	$\beta$	R <sup>2</sup> change	Total R <sup>2</sup> change
1: internal entrapment	.70**		
positive future thinking	-.22**	.62**	
2: internal entrapment	.66**		
positive future thinking	-.23**		
internal entrapment X positive future thinking	-.13*	.02*	.64

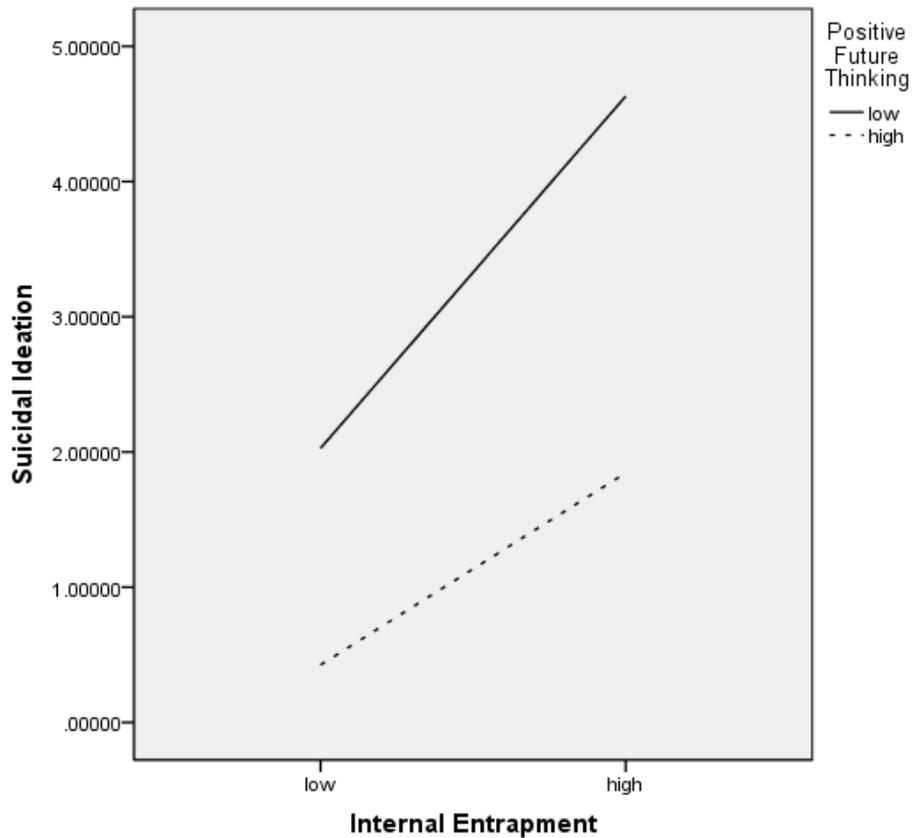
\*\*p<.001, \*p=.021

Internal entrapment and positive future thinking were entered in step one, explaining 61% of the variance in suicidal ideation. After entry of the interaction at step 2, the total variance explained by the model as a whole was 62%,  $F(3,120) = 151.71, p<.001$ . R squared change indicated that the interaction explained a further 2% of the variance.

All of the variables made a significant unique contribution to explaining the variance in suicidal ideation (internal entrapment  $\beta=.66, p<.001$ ; positive future thinking  $\beta= -.23, p<.001$ ; interaction  $\beta= -.13, p=.021$ ).

This analysis therefore suggests that positive future thinking is a significant moderator of the internal entrapment-suicidal ideation pathway, acting as a motivational moderator within the IMV Model, and supporting H12c. The results indicate that higher levels of internal entrapment and lower levels of positive future thinking increase suicidal ideation.

Post hoc analyses were then conducted. Figure 5.6 below shows the interaction between the variables.



**Figure 5.6: Positive future thinking as a moderator of the internal entrapment-suicidal ideation relationship**

To investigate the interaction consistent with Aitken and West (1991), the regression lines were plotted at best fit at high (1 standard deviation above the mean) and low (1 standard deviation below the mean) levels of internal entrapment and positive future thinking (see Figure 5.6).

Further tests were conducted on the high and low positive future thinking lines to determine if they differed significantly from zero. Application of the procedure outlined by Aitken and West revealed that the high positive future thinking slope was significantly different from zero ( $\beta = .60$   $p=.002$ ), and that the low positive future thinking slope was also significantly different from zero ( $\beta =.27$ ,  $p<.001$ ). This indicates that participants who were low on positive future thinking and high on internal entrapment reported significantly higher levels of suicidal ideation than those with high positive future thinking. Those with high positive future thinking and low internal entrapment reported significantly lower levels of suicidal ideation than those with low positive future thinking. However, although both the high and low lines differ significantly from zero, as is evident from the Figure 5 above, those with high positive future thinking have very low levels of suicidal ideation compared to those with low positive future thinking.

Therefore H12c was supported as positive future thinking acted as a moderator of the relationship between internal entrapment and suicidal ideation.

#### **5.3.0.4.3.0.3 H12d: Positive future thinking will moderate the relationship between entrapment and suicide attempts.**

There was no significant relationship between positive future thinking and entrapment ( $r=.03$ ,  $p>.05$ ) or suicide attempts ( $r=.05$ ,  $p>.05$ ). Therefore no further analysis was conducted, and H12d was not supported.

### 5.3.1. Summary

Table 5.30 below provides of summary of the hypotheses investigated and whether or not they were supported.

**Table 5.30 Summary of results for hypotheses**

Research Question	Hypotheses	Hypothesis supported?
RQ1: What is the relationship between IPA and suicidality?	H1a: Those with experience of IPA will demonstrate higher suicidality than those with no experience of IPA.	Yes
	H1b: Those experiencing IPA currently will show higher levels of suicidal ideation than those who experienced IPA previously or not at all. Those with previous IPA experience will show higher levels of suicide attempts than those with current or no IPA experience.	Partial
RQ2: Which factors predict suicidal ideation at T2?		Impact, LOS, Int Entrap, Soc Support and Positive ft predict ideation
RQ3: Which factors predict suicidal attempts at T2?		LOS and Int Entrap predict attempts
RQ4: Do those experiencing Situational Couple Violence (SCV) and those experiencing Intimate Terrorism (IT) differ significantly on any key variables?	H4: There will be significant differences between the SCV and IT groups on suicidality, IPA variables (impact, level of stalking), social support, self-esteem, depression and PTSD. The IT group will have higher levels of suicidality, greater impact of IPA, level of stalking, self-blame, defeat, entrapment, depression and PTSD than the SCV group. The IT group will also demonstrate lower self-esteem and social support than the SCV group.	Partial
RQ5: Which factors predict the impact of IPA?		Control, LOS, Planning, Int Entrap, Positive ft predict impact

RQ6: Do defeat and entrapment differ between those with and without IPA experience?	H6: Those with experience of IPA will demonstrate higher perceptions of defeat and entrapment than those with no experience of IPA.	Yes
RQ7: Does defeat mediate the relationship between IPA & entrapment?	H7: Defeat will mediate the relationship between IPA & entrapment.	Yes
RQ8: Do defeat and entrapment mediate the relationship between IPA and suicidality?	H8a: Defeat and entrapment will mediate the relationship between IPA and suicidal ideation.	Partial
	H8b: Defeat and entrapment will mediate the relationship between IPA and suicide attempts.	No
RQ9: Does defeat mediate the relationship between entrapment and suicidal ideation?	H9: Defeat will mediate the relationship between entrapment and suicidal ideation.	No
RQ10: Do personality factors such as SPP, SC, and self esteem increase perceptions of defeat and entrapment?	H10: SPP, SC, and self esteem will be associated with higher perceptions of defeat and entrapment	Yes
RQ11: Do coping, social problem solving or rumination moderate the defeat-entrapment pathway?	H11: Coping, social problem solving, or rumination will moderate the defeat-entrapment pathway.	No
RQ12: Do social support or positive future thinking moderate the entrapment-suicidality pathway?	H12a: Social support will moderate the entrapment-suicidal ideation pathway.	Yes
	H12b: Social support will moderate the relationship between entrapment and suicide attempts	No
	H12c: Positive future thinking will moderate the entrapment-suicidal ideation pathway.	Yes
	H12d: Positive future thinking will moderate the relationship between entrapment and suicide attempts.	No

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Key: IPA=intimate partner abuse; SPP=socially prescribed perfectionism; SC=self-criticism; PTSD=post-traumatic stress disorder, SCV=situational couple violence; IT=intimate terrorism; LOS=level of stalking; Int entrap=internal entrapment; Soc Support=social support; positive ft=positive future thinking

In relation to IPA and suicidality, the results demonstrated that those with experience of IPA reported higher levels of suicidal ideation and suicide attempts than those with no experience of IPA. In investigating the timing of the IPA experience, it was found that whilst those with current IPA experience showed

higher suicidal ideation than those with no IPA experience, there were no significant differences in suicidal ideation between those with current and past experience of IPA. The highest levels of suicide attempts were found in those with past IPA experience.

This study then examined predictors of suicidal ideation, finding that higher impact of IPA, experience of more severe stalking and harassment behaviours, higher perceptions of internal entrapment, lower positive future thinking and lower perceived social support were predictive of suicidal ideation.

Investigation of predictors of suicide attempts found that experience of more severe stalking and harassment behaviours and higher perceptions of internal entrapment were predictive of suicide attempts.

This study also aimed to increase our understanding of IPA. To this end, differences between those experiencing IT (high levels of control) and SCV (low levels of control) were investigated. The results demonstrated that those with experience of IT showed higher levels of suicidal ideation, greater impact of IPA, more severe stalking and harassment behaviours, greater perceptions of internal entrapment and external entrapment, greater perceptions of defeat, and lower self-esteem than those with experience of SCV. There was no significant difference between the two groups on perceived social support, depression or suicide attempts.

This study investigated predictors of the impact of IPA. Higher levels of control within a relationship, experience of more severe stalking and harassment behaviours, use of planning as a coping behaviour, greater perceptions of internal entrapment, and lower positive future thinking were predictive of IPA impact.

In relation to the key elements of the IMV Model of Suicidal Behaviour (O'Connor, 2011), namely defeat and entrapment, a number of interesting findings emerged. Those with experience of IPA reported higher perceptions of defeat and entrapment than those with no IPA experience. The Model was supported in that defeat was found to mediate the relationship between the stressor (IPA) and perceptions of entrapment. However, only internal entrapment was found to mediate the relationship between IPA and suicidal ideation, and there was also no role of defeat in mediating between entrapment and suicidal ideation. Neither defeat or entrapment acted as mediators of suicide attempts.

This study also tested the role of pre-motivational factors in the model, and found that high levels of socially prescribed perfectionism and self-criticism and low levels of self-esteem were associated with higher perceptions of defeat and entrapment.

The study then went on to test the role of threat-to-self moderators within the model. However, coping, social problem solving and rumination did not moderate the relationship between defeat and entrapment as expected.

Lastly, the role of motivational moderators was investigated. Social support and positive future thinking were found to act as moderators of the relationship between entrapment and suicidal ideation as the model suggests. However, they did not moderate the relationship between entrapment and suicide attempts.

## **5.4 Discussion**

### **5.4.0 Sample**

#### *Demographics*

Overall the recruitment strategy was successful in parts in addressing some of the limitations of the previous study with regards to sample. The percentage of students within the current study was lowered compared to the previous sample, and a more even split was achieved with regards to those with and without IPA experience. The percentage of male victims of IPA in the sample and of victims with sexual orientations other than heterosexual was very slightly increased compared to the previous sample, but unfortunately numbers still remained too low to conduct any meaningful analysis on these factors. This reinforces the difficulties of conducting IPA research with hard to reach groups. As this research was conducted in Scotland, it was particularly difficult to recruit due to the small number of organisations and services set up for male victims and for LGBT groups in this geographical area. This author would suggest that in order to recruit a greater number of participants to represent the full spectrum of IPA experiences, it is necessary to travel further afield and access a greater number of gatekeepers for these groups.

This study again found no significant differences in employment status between those with and without experience of IPA, with both groups equally likely to be in employment. With regards to level of education, those with experience of IPA

were likely to be educated to either high school or degree level, although the majority of those with no IPA experience were educated to degree level. Similar percentages were seen in both groups for post-graduate level education. These are important points to bear in mind in relation to IPA services and support. Individuals at all levels experience IPA, and these findings help to demonstrate that IPA is not confined to any social group or circumstance. Many IPA services and support groups are set up with meetings and non-emergency contact set up during the day, making them difficult to access for people in employment. Equally it is just as important for public awareness to communicate that IPA is not related to unemployment, and that a professional person is just as likely to experience IPA as someone doing an unqualified job.

#### *Normative data*

There are a couple of points which are worth making in relation to the normative data for some of the main study variables. Firstly with regard to the CTS-2 measure of IPA. The prevalence of the different forms of IPA (psychological aggression, physical assault, injury, and sexual coercion) was very similar in the current sample to that reported in the normative data for the measure (Straus et al. 1996) and in the previous study. However, in the current study, as in the previous one, higher rates of injury were found in the sample than reported in the normative data (32% injury compared to 9%). Levels of physical assault (38%) and sexual coercion (24%) were similar to that reported by the normative data, but slightly elevated compared to the sample in the previous study. As noted in the Chapter 4, Straus et al (1996) used a

student sample which demonstrated lower levels of more severe forms of abuse. This therefore supports the view that more severe IPA is demonstrated in a general population sample.

With regards to the measure of stalking and harassment behaviours (SHBS; Turmanis & Brown, 2006), the authors reported normative data showing that 78% of their sample had experienced stalking and/or harassment behaviours. In comparison, only 25% of the current sample reported such experiences, lower than the 34% reported in the previous study. This may be as noted in Chapter 4, a difference between a US and a UK sample, and as discussed there, may be due in part to under-reporting. This may also be a consequence of the demographics of the sample obtained in the current study. The demographics showed that the majority of those with experience of IPA were either in employment or in full-time education. It is therefore possible that in the current sample, their employment or participation in full time education has acted as a protective factor against stalking, perhaps by providing a safe environment away from the ex-partner. However, it is important to remember that this research has shown that for those with experience of IPA, when stalking is experienced, it is likely to be severe, and can be predictive of suicidal ideation. Therefore, whilst the prevalence may be lower in the current sample than reported in normative data, where it does occur, it has been shown to be a significant issue.

In relation to suicidality, Beck et al. (1988) reported normative data for suicidal ideation based on a sample of people seeking psychiatric treatment at a general

hospital. The mean score for suicidal ideation was found to be .62, and similar levels to this were found in the previous study. The current sample showed significantly higher levels of ideation, reporting a mean of 1.63. This may be due to the more even split in the sample between those with and without experience of IPA. In the previous study, the majority had no experience of IPA. This therefore gives an important view, that suicidal ideation in an IPA sample may be even higher than that found in those seeking psychiatric treatment. However, it must be remembered that this normative data is from a US sample, and more importantly was recorded in 1988. It is therefore difficult to make direct comparisons between the two.

With regards to perceptions of defeat and entrapment, Gilbert and Allan (1998) reported normative data based on a sample of students and patients with depression. The mean score for defeat for the student group was 17, with a mean of 47 in the depressed group. The current sample showed a mean of 41, being closet to the norms for depressed individuals. For external entrapment the normative data reported a mean of 10 for the student group, and 25 in the depressed group. The current sample showed a mean of 22, again similar to the depressed group. For internal entrapment, the normative data reported a mean of 5 for the student group, and 19 for the depressed group. The current sample demonstrated a mean of 14. This demonstrates therefore that perceptions of defeat and entrapment within the current sample are in line with those that could be expected from those suffering from depression. This again illustrates that IPA is an important issue, and one that has significant psychological impact on the individual.

### **5.4.1 Suicidality**

Hypothesis 1a addressed differences in suicidality between those with and without experience of IPA. The results found higher levels of suicidal ideation and higher rates of suicide attempts among those with experience of IPA. Hypothesis 1b expanded this to test differences in suicidality according to the timing of the IPA experience. This study demonstrated that there was no significant difference in suicidal ideation between those with current IPA experience, and those who had experienced IPA in the past. Additionally, those with past experience of IPA reported the highest levels of suicide attempts. These results support the findings of the study reported in Chapter 4, demonstrating that those who have experienced IPA in the past are at significant risk for suicidality. These findings imply that suicidal ideation does not decrease after the end of the abusive relationship, and indeed suicide attempts are more likely after the relationship has ended.

It is worth noting that the levels of suicidal ideation for those with experience of IPA in the current sample were significantly higher than those found in the previous study (mean 3.10 compared to 1.18) and this also demonstrated a larger effect size than previously found (.32 compared to .05). In the current study, a greater drive was made during recruitment to gain participants with experience of IPA, in order to gain more equal groups in the sample. As a result, it may be that more people with experience of IPA were recruited from various IPA services and support networks. It could be argued that people may be using such services due to a higher level of

distress. It may therefore be possible that this recruitment strategy, as opposed to a less targeted one, inadvertently picked up people who may be more likely to be experiencing suicidal thoughts.

Research question 2 investigated predictors of suicidal ideation, finding that higher impact of IPA, experience of more severe stalking and harassment behaviours, higher perceptions of internal entrapment, lower positive future thinking and lower perceived social support were predictive of suicidal ideation. These findings support the previous study reported in Chapter 4 in demonstrating that stalking and internal entrapment are key variables in predicting suicidality. They also support the findings of previous research which show that low levels of positive future thinking are predictive of suicidal ideation (e.g. MacLeod et al 1998; O'Connor et al 2007), and that low levels of social support can increase risk of suicidality (e.g. Clum & Febraro, 1994; Harrison et al 2010). These findings also demonstrated that with regards to IPA, it is the impact that it has on the individual which plays an important role in suicidality, rather than the experience of IPA itself. This is demonstrated not only by the finding that impact itself is a factor, but also by the predictive role of severity of stalking, a variable which encapsulates not only how often stalking behaviours are perpetrated on the victim, but also how disturbing or frightening the individual perceives the behaviours to be. Both of these variables together speak to the importance of understanding the context of IPA and how it affects the individual, rather than just the occurrence of a certain behaviour, or what severity that behaviour is categorised to be.

Stalking and internal entrapment were the only two variables to predict suicide attempts. This further supports the view that these factors play a key role in the prediction of suicidality. It was also of interest that whilst social support predicted suicidal ideation, it was not predictive of suicide attempts. However, research into IPA has highlighted that the experience of IPA is often an isolating one, and many lose touch with family and friends during the course of an abusive relationship (Arokach, 2006). Therefore during an abusive relationship, people may notice a more significant change in the social support they have available, and this may be the time that the lack of perceived social support has the greatest impact. A recent qualitative study into the experience of IPA (McLaughlin, O'Carroll, Dickson & O'Connor, submitted) highlighted that many participants who had left an abusive relationship found this to be the most difficult time. Many discussed that when the relationship had ended, this was a time when they felt that no one was able to help them, regardless of how much social support they had access to. If we assume, as discussed above, that the majority of suicide attempts occur after the end of an abusive relationship, this may help explain why social support does not play a role in predicting suicide attempts.

It is also of interest that stalking and internal entrapment are the two variables involved in predicting suicide attempts. As discussed in Chapter 4, it is possible that the experience of stalking may in fact lead to perceptions of internal entrapment, as the individual perhaps perceives that the abuse continues regardless of them trying to change the external situation/environment. In addition, the individual may continue to struggle with the psychological impact of the abuse

during this time, adding to perceptions of internal entrapment. Therefore, it must be noted that these two variables may in fact be inter-related, and a complex interaction may occur between the two. Future research is needed to investigate this further, and explore potential mechanisms.

In investigating predictors of suicidality, it is also worth noting that this study also supported the findings from the study reported in Chapter 4 in that perceptions of defeat were not found to predict suicidality. It was suggested in Chapter 4 that this may be explained by the fact that only a brief measure of defeat was used. However, in the current study, the full defeat scale was utilised to address this issue, and defeat did in fact emerge as a mediator of the relationship between IPA and entrapment. It may therefore be concluded that it is not in fact an issue with the measure of defeat, but that perhaps defeat has a less direct relationship with suicidality than may be hypothesised. There were also other variables whose role in suicidality could not be supported. For example, that of social problem solving (e.g. Pollock & Williams, 2001; Speckens & Hawton, 2005) and goal reengagement (O'Connor et al, 2009). These limitations will be addressed later in this section.

#### **5.4.2 Understanding IPA**

This study also aimed to increase our understanding of IPA. To this end, differences between those experiencing intimate terrorism (IT – high levels of control) and situational couple violence (SCV – low levels of control) were investigated. The results demonstrated that those with experience of IT showed

higher levels of suicidal ideation, greater impact of IPA, more severe stalking and harassment behaviours, greater perceptions of internal and external entrapment, greater perceptions of defeat, and lower self-esteem than those with experience of SCV. There was no significant differences between these two groups on perceived social support, depression or suicide attempts.

It is also worth noting that the IT group differed significantly on all variables from those with no levels of control within their relationship, however, there were no such differences between the SCV group and those with no control. This would fit with Johnson & Ferraro's (2000) view of SCV, that it is a type of IPA where the partner aims to control the situation rather than the person. Therefore we would not expect there to be significant differences between those experiencing SCV and those experiencing no control in their relationships.

The findings largely fit with Johnson and Ferraro's (2000) description of IT, particularly in that it is thought to diminish personal resources (lowering self-esteem, increasing perceptions of defeat), and it also illustrates what we may expect from a highly controlling relationship, in that it has a greater impact on the individual, makes the person feel more trapped, and that such a partner is more likely to engage in stalking and harassment behaviours. However, Johnson and Ferraro (2000) also propose that one of the key points that differentiates IT and SCV is the control of, and limiting of, social support. We would therefore expect that those in the IT group would show significantly lower levels of perceived social support. However, there were no significant differences between the two groups on

levels of social support. This author would argue that social contact may be considered to be an external situational factor, and as such may be likely to be a target of control in both those experiencing IT and SCV.

Johnson and Ferraro (2000) also suggest that the IT group would show higher levels of suicide attempts. However, if we assume, as discussed earlier, that the majority of suicide attempts occur after the end of the abusive relationship, then it may be that the control experienced in the relationship is no longer a determining factor at that time. Indeed, it was demonstrated earlier in this section that severity of stalking and harassment behaviours are key factors in predicting suicide attempts. This could be an artefact of a highly controlling relationship, and therefore after the relationship has ended, it is the form that this control takes that is predictive of suicide attempts, rather than the levels of control that had been experienced during the relationship.

Also in relation to the control aspect, it is important to note that whilst Johnson and Ferraro (2000) suggest that IT is rare, and SCV is more common in the general population, that does not match with the current sample. Only a minority of those with experience of IPA in the current sample fell into the SCV group, representing low levels of control. This is important as this is the first study to investigate levels of control in a UK sample, and the prevalence of these types of IPA are therefore not known. It is also relevant as those experiencing IT demonstrate greater negative impacts, demonstrating more severe stalking experiences, higher self-blame, depression, PTSD, perceptions of defeat and entrapment, and lower self-esteem and

perceived social support. Identification of individuals as experiencing this form of IPA therefore identifies areas of higher risk and specific areas for intervention.

This study also investigated which factors were predictive of the impact of IPA. The results showed that the impact IPA has on the individual is predicted by levels of control within the relationship, experience of more severe stalking and harassment behaviours, use of planning as a coping strategy, perceptions of internal entrapment, and lower levels of positive future thinking. This again highlights the importance of stalking and internal entrapment, and demonstrates that they play a key role in the relationship between IPA and suicidality. One aspect that may not be expected is the role of planning as a coping strategy in increasing the impact of IPA. Previous research has noted that the nature of IPA is highly unpredictable, and victims find it difficult to deal with the changeable moods and demands of the abusive partner. Therefore, it may be that those who normally use planning as a method for coping with stressful situations would find this aspect of the IPA even more difficult as planning is no longer effective, and as such, it may have a greater impact on the individual.

#### **5.4.3 IPA & Suicidality – Relationships with defeat and entrapment**

Research question 6 investigated differences between those with and without IPA experience in perceptions of defeat and entrapment. The results showed that those with experience of IPA reported higher perceptions of defeat and entrapment. Research question 2 then went on to test whether defeat acted as a mediator of the

relationship between IPA and entrapment, as the model would suggest. The results demonstrated that defeat did in fact mediate this relationship. Both of these findings are particularly important, as the findings of the study reported in Chapter 4 did not find any significant relationships between defeat and IPA. It was discussed that the brief measure of defeat used in that study may not have been sensitive enough to detect differences in defeat between the participants. Therefore, in the current study, the full version of the defeat scale was utilised, and this has indeed demonstrated a significant relationship between defeat and IPA. This would intuitively make sense as one would expect the experience of IPA to be associated with feelings of defeat. This has important implications for future research, as it demonstrates that the full defeat scale is a more effective measure with this sample than short versions.

It was tested whether defeat and entrapment mediated the relationship between IPA and suicidality. The analyses revealed that internal entrapment was the only type of entrapment to act as a mediator between IPA and suicidal ideation. The fact that internal entrapment fully mediated this relationship suggests that defeat may not have a direct effect on suicidal ideation, but that ideation is increased through perceptions of internal entrapment. Entrapment has been found to mediate the relationship between defeat and suicidal ideation (e.g. Rasmussen et al. 2010), but this is one of the first pieces of research to provide evidence of its mediating role of the relationship between the stressor and suicidal ideation. Neither defeat nor entrapment mediated the relationship between IPA and suicide attempts. This

suggests that whilst there is a relationship between IPA and defeat, defeat does not play a key role in the development of suicidality in this group.

These findings regarding the role of internal entrapment specifically rather than external entrapment, again point to the importance of this factor for those with experience of IPA. This is an important point to stress as many may view IPA as an external situation, that may lead to feelings of being trapped in that situation (i.e. external entrapment). Therefore, it may be assumed, and indeed it often is, that if the person is removed from that situation then the problem is fully addressed. This research highlights that IPA in fact is associated more with the person feeling trapped within themselves, and that this does not therefore go away when the situation is changed. This has important implications for how services and sources of help are structured, and emphasises the need for psychological support both at the time of the abuse and in the years afterwards. Yet it is also clear from this research that this is an area which is not well enough understood, and the mechanisms and complexities of the relationship between IPA and internal entrapment need further investigation in order to be able to develop appropriate interventions and strategies to help victims and survivors of IPA.

#### **5.4.4 Pre-Motivational factors**

The study then went on to investigate pre-motivational factors, threat-to-self moderators, and motivational moderators within the model. The results offered support for the role of socially prescribed perfectionism, self-criticism, and self-

esteem as pre-motivational factors, as high levels of socially prescribed perfectionism and self-criticism, and low levels of self-esteem were found to be associated with perceptions of defeat and entrapment. This study therefore provides support for previous research which has demonstrated that socially prescribed perfectionism is particularly concerned with sensitivity to perceptions of defeat (e.g. O'Connor, 2007).

However, this research has not been able to adequately address the relationship of these factors to IPA. Whilst it has shown that socially prescribed perfectionism and self-criticism are higher, and self-esteem is lower, in those with experience of IPA, it has not helped us to understand the interaction between these factors. There remains the debate around whether these are stable personality traits – if this is the case, then that leads us to conclude that people with these personality traits are at greater risk of being in abusive relationships. Or it may be that the experience of living with IPA and going through that experience does in fact change aspects of a persons personality, or at least make existing underlying traits more pronounced. Qualitative research would lead us in this direction (e.g. Sev'er. 2002) as it often comments on how individuals feel changed as a person by their experiences, how it has damaged their confidence, led them to be more critical of themselves etc. This is an important area to focus on, as if it is the case that the experience of IPA impacts on personality traits, then it may also be possible for interventions to work towards reversing this process. In doing so, this could not only relieve the individuals psychological distress and perhaps put them in a better position, but would also help to reduce the risk of suicidal ideation in this group. If it is not the

case, and it is simply that people with these personality traits are more likely to experience IPA, then this identifies a high risk group for IPA awareness and education strategies to target.

#### **5.4.5 Threat to self moderators**

This study was not able to provide support for the role of coping, social problem solving and rumination as threat-to-self moderators of the pathway between defeat and entrapment. However, it is important to note that whilst previous research has demonstrated that coping, social problem solving, and rumination are associated with suicidality (e.g. Ullman & Najdowski, 2009; Schotte & Clum, 1987; Weishaar & Beck, 1990; Pollock & Williams, 2001; Speckens & Hawton, 2005; Morrison & O'Connor, 2008), their specific relationship with defeat and entrapment has not been demonstrated. As such this is an area which needs further research in relation to the IMV Model.

The findings demonstrate that these are all factors which were not significant predictors of suicidality. It may therefore be that whilst these are significant predictors within other populations, in an IPA sample, other variables are exerting a more significant influence on suicide risk. The findings would suggest that variables associated with the IPA experience itself, such as stalking, control within the relationship, and the impact of IPA, may play a more key role in the relationship between IPA and suicidality.

#### **5.4.6 Motivational moderators**

This study was able to offer support for the role of motivational moderators (social support and future thinking) within the model, acting to moderate the relationship between entrapment and suicidal ideation. When an individual felt trapped, both low perceived social support and low levels of positive future thinking increased suicidal ideation. This supports previous research which demonstrates that social support moderates suicidality (e.g. Clum & Febraro, 1994; Harrison et al. 2010; Oyama et al. 2010; Yang & Clum, 1994) and that low social support is a risk factor for suicidality (e.g. Kleiman et al. 2012). It also support previous research which demonstrates that low positive future thinking is associated with suicide risk (e.g MacLeod et al. 1998; Hunter & O'Connor, 2003; O'Connor et al. 2007; O'Connor et al. 2004). The findings also demonstrated that low social support and low positive future thinking predicted suicidal ideation. Therefore the role of these motivational moderators within the IMV Model is strongly supported by previous research, and this research adds to that support.

In relation to IPA, these are important factors to consider. As has been discussed previously, low social support was found in those with experience of IPA, and indeed this social isolation is often considered to be a key aspect of IPA. However, during the abusive relationship itself, this is a particularly difficult aspect for strategies or interventions to address. Whilst the abusive partner may explicitly or implicitly isolate the person, as a result of the psychological abuse experienced, the victim themselves may also play a role by actively reducing their own social

contacts and activities in a belief that this may make the situation easier, and to avoid confrontations. The victim may also socially isolate themselves as they may feel they are protecting friends or family by not getting them involved, because they feel that they may not understand, or because they feel the relationship reflects badly on them. Often it may be the case that the victim is just not ready to get help, and is not yet at a stage where they feel ready and able to leave – at that time they may be reluctant to involve others as they do not want an unwanted pressure on them to leave the relationship at that time. Therefore, there are a variety of potential reasons why it may be difficult and problematic to develop strategies to increase social support for victims during the abusive relationship. However, after the abusive relationship has ended is a key time for such strategies. Increased social support at this difficult time, supporting the individual through the aftermath of the relationship, is something which is currently lacking in almost all services, and for those who attempt to provide it, such as Women's Aid, their resources to do so are extremely limited due to a lack of recognition of the importance of such support.

Positive future thinking is also a variable that may have an important relationship with IPA. Qualitative research (e.g. Sev'er, 2002; McLaughlin et al. submitted) demonstrates that victims and survivors often comment on the fact that they worked hard just to get through each day, and did not tend to think ahead, or have positive expectations that would likely be disappointed. It is clear that these types of cognitive strategies may well lead to an absence, or at least a low amount, of positive thoughts about the future. This again could be an important area for intervention, as future thinking is a cognitive process which could be modified.

#### **5.4.7 Implications for the IMV Model of suicidal behaviour**

The findings have implications for the IMV model and its usefulness in understanding the relationship between IPA and suicidality.

The current study found that perceptions of defeat did mediate the pathway between the pre-motivational phase and perceptions of entrapment, and perceptions of defeat were found to be higher in those who had experienced IPA. However, it did not mediate relationships between entrapment and ideation. Therefore, the current study was able to provide support for the role of defeat in the model, which was lacking in the previous study. This may largely be due to the use of the full defeat measure rather than a short version, giving greater sensitivity for the measure with this sample. The results suggest that the key role of defeat within the model is to mediate the relationship between factors in the pre-motivational phase and perceptions of entrapment. From that point on, entrapment, specifically internal entrapment, becomes one of the key variables that predicts suicidality. However, it may still be possible, as suggested in Chapter 4, that aspects of IPA tap directly in to perceptions of internal entrapment, irrespective of defeat. This research has shown that there is a strong relationship between IPA and internal entrapment, and understanding this association in more detail, would also give a more detailed understanding of the IMV Model.

This study was not able to support the role of rumination as a threat to self moderator, moderating the relationship between defeat and entrapment. Whilst it was found to act as a moderator in the previous study, this was only a very weak relationship. It was discussed in the previous chapter that it may be that the content and consequences of the ruminative thoughts may be more important than rumination itself, with negative thoughts perhaps leading to low self-esteem. This study did indeed show that factors such as self-criticism and low self-esteem were associated with perceptions of defeat and entrapment. This suggests some support for the idea that the content of the ruminative thoughts may have its own impact on the individual, which then in turn impacts on suicidality. These are clearly complex interactions which are in need of further investigation to better understand the processes involved.

This study was also not able to find support for the role of coping or social problem solving as threat to self moderators, and they also did not emerge as predictors of suicidality. Therefore, no support is offered for threat to self moderator pathway in the model. It may be that these would emerge as significant factors with a non-IPA sample. It is perhaps the case that in an IPA sample, there are simply stronger factors involved which influence suicidality. However, as is discussed later in the limitations section, there are limitations with the use of the measures of social problem solving and coping, and it must be conceded that perhaps the use of different measures may well demonstrate different results.

This study did offer support for the role of social support and positive future thinking as moderators of the relationship between entrapment and suicidal ideation, acting as motivational moderators. These variables therefore help to demonstrate the kinds of processes which are important in response to perceptions of entrapment, and highlight key areas for strategies and interventions to target.

This study therefore offers some support for the IMV Model of Suicidal Behaviour, but highlights some weaknesses. In particular the threat to self moderators are a key area which require further testing to establish their utility.

#### **5.4.8 Implications for practice**

This study supports the previous studies findings that those with past experience of IPA continue to be at increased risk of suicidality. This offers more support for the need for resources and services to address the needs of survivors of IPA, and to recognise the continuing impact on the individual.

This chapter has discussed that all the factors which were found to predict suicidal ideation (impact of IPA, severity of stalking, internal entrapment, social support, and positive future thinking) are all factors which arguably are connected to IPA. Therefore, those with experience of IPA must be recognised as a high risk group for suicidality, and these factors which are especially predictive of suicidal ideation are important areas for strategies and interventions to address for this group.

Practice must also recognise that the many of those experiencing IPA are experiencing high levels of control in their relationships, and that this has a significant detrimental impact on the individual. Any strategies or interventions aimed at those currently in abusive relationships therefore has to take account of this controlling environment the person is in, and ensure their approach is safe for the victim and can be effective even with this level of control. For example, awareness campaigns that direct people to helplines or to websites need to be aware that the victim may well have their telephone and internet use monitored, often without their awareness. It is therefore important that, for example, on a website, clear instructions are given to the viewer on how to cover their tracks and delete their search history etc. Equally, interventions such as attending a support group are unlikely to be effective or safe for this group, as time away from the partner may be difficult to get. Attending such a group raises a number of issues for the victim, such as where do they tell their partner they have gone? What if the partner checks up on where they say they are, or follows them? Is the intervention presenting more of a danger than a help? It is also a concern that within those experiencing IT, factors such as self-blame and internal entrapment are high, whilst factors such as self-esteem are low. This is therefore a group which may be less likely to view the IPA as a situation they can escape from, indeed they may be more likely to view it as something that is their fault, that they have caused, which makes it less likely that they would seek help. Perhaps one way of addressing the needs of this group is to increase knowledge and awareness of IPA, and of healthy relationships, from an early age, and continuing that awareness. This may at least pave the way for

enough doubt in the individual surrounding the relationship to approach someone for help and advice.

#### **5.4.9. Limitations**

There were some limitations of this study. The first of these relates to the measures used. It was noted earlier in this section that social problem solving was not found to be associated with suicidality, although previous research (e.g. Pollock & Williams, 2001; Speckens & Hawton, 2005) had demonstrated otherwise. It is worth noting that in the current study, there was very little difference in social problem solving scores between participants, regardless of IPA experience. When completing the measure in the research session, many participants commented that ‘this is not what I would do, but the best thing would be to.....’ Therefore the measure was not actually accessing how they would individually solve a problem, but more their knowledge of what they thought was the right thing to say. In addition, most participants over the age of 30 commented that they felt the types of social problems presented were ones that would concern younger people more. Therefore, overall the measure did not seem to work well with the current sample, and may not have been a good assessment of social problem solving ability.

Coping was another variable which was not found to play the expected role in the IMV Model. The measure used covered a wide range of coping behaviours, however each coping style was assessed by only two items. Due to the range of styles, participants obviously demonstrated a number of different styles. Therefore

the data was quite diffuse, and it may have been difficult to pick up differences, as most people demonstrated some elements of many of the styles. Perhaps a measure which allows a more composite picture of how an individual copes with situations, rather than an array of different behaviours they may adopt, may be more relevant to this sample. Equally, the measure simply asks what types of things they do in a stressful situation, allowing them to think of a wide variety of situations to guide their answers. In fact, many commented that whether they did a specific coping behaviour or not depended on what the specific stressor was. Therefore, it may be useful for future research to give the participant a specific type of stressor to think of, for example, when experiencing problems in their relationship. Therefore, due to the limitations with this measure, it is difficult to reach a firm conclusion with regards to the role of coping.

Another limitation of the study concerns the sample. As with previous studies reported in this thesis, it was difficult to recruit male victims of IPA to the study, and as such the findings regarding IPA largely reflected female victims. Also regarding the sample, there was only a small number of participants who could be categorised as being in the SCV group. Therefore the findings regarding differences between IT and SCV are only tentative. However, this is an important finding in itself from a theoretical viewpoint, as Johnson (2008) suggests that SCV is more common in general population samples, and IT in refuge based or clinical samples. Therefore, the finding that the majority of those with IPA experience, in a non-refuge and general population sample, had experience of IT, is notable,

particularly as this is one of the first studies to incorporate these typologies of IPA in the UK.

A limitation of this current study is that it does not investigate the relationship between IPA and personality factors, only their role within the IMV Model. As discussed previously, the temporal relationship and the interaction between IPA and personality factors such as socially prescribed perfectionism, self-criticism, and self-esteem, is of particular interest and relevance, not only to theory, but to understanding the impact of IPA on the individual, and for directing interventions.

One of the main limitations was the lack of findings in relation to suicide attempts. This study investigated suicidality, including both suicidal ideation and suicide attempts. However, where variables were found to be significant mediators or moderators of suicidal ideation, this was not demonstrated for suicide attempts. However, this may be expected as the IMV model suggests that different factors are involved in the move from suicidal ideation to suicide attempts (volitional moderators). Also, there was a low amount of suicide attempts within the sample, making it difficult to draw any real conclusions regarding suicidal behaviours.

Also, this study did not measure any of the volitional moderators within the IMV Model of Suicidal Behaviour. As such, it was not able to explore mediators and moderators of suicide attempts, and the findings of interest have mainly been confined to relationships with suicidal ideation. Another important limitation regarding suicide attempts is that the study was not able to provide an understanding

of the temporal relationship between IPA and suicide attempts. Whilst the pattern of results found over the course of these studies, along with previous research in the area, suggests that suicide attempts are most likely after the end of an abusive relationship, this aspect has not been explored.

#### **5.4.10 Directions for future research**

This study has supported the previous research in Chapter 4 in demonstrating the continuing risk for those who have experienced IPA in the past. Not only do they show equivalent levels of suicidal ideation to those in current abusive relationships, but they are at higher risk of suicide attempts. This is an area which has not been investigated by previous research. This study has managed to investigate some of the mechanisms that may be involved, identifying perceptions of internal entrapment and experience of severe stalking and harassment behaviours as important predictors of suicidality. Research is needed which focuses on those with past experience of IPA and looks at how we can address these key predictors. Future research is also needed to identify key areas for interventions and strategies to target to address the needs of survivors of IPA.

This research has identified the strong need for research to investigate IPA in greater depth and gain a better understanding of its complex relationship with suicidality. In particular, perceptions of internal entrapment and a ruminative response style have been identified as areas which are not well understood in relation to IPA and the mechanisms by which they interact with IPA and suicidality

need to be explored. Potentially these are very important areas for intervention that could make a significant difference to the quality of life for survivors of IPA.

This study has also represented an important first step in investigating the importance of control within abusive relationships in the UK, and within a general population sample. As discussed earlier, the low control group in the current study was small, and as such, the findings can only suggest implications. However, it is important for future research in the UK to investigate these typologies and the impact of these types of abuse on the individual, as this study has demonstrated that the distinction between IT and SCV is an important one to make. An important area for future research would be to additionally investigate any role of gender differences. Johnson and Ferraro (2000) suggest that these typologies explain gender differences found in IPA research, with females being more likely to be the victims of IT and males being more likely to be the victim of SCV. Due to the limited number of males experiencing IPA in the current sample, this was not able to be investigated. However, this author can see no reason why there should be this difference, and it is possible that males are just as likely to be victims of IT. This has important implications for how male victims of IPA are supported, and the resources that are available to them. This is therefore an important area for future research to address.

This study has offered a great deal of support for the IMV model of suicidal behaviour. However, the lack of support for threat-to-self moderators is an area which needs further investigation within an IPA sample to clarify these processes.

As discussed above, it needs to be established whether this finding is a result of the measures used, or if these factors are in some way less relevant to an IPA sample. Future research is needed in this area in order to further test and understand the IMV Model

As has been discussed, this study was not able to adequately investigate the process of moving from suicidal ideation to suicide attempt or test the role of the suggested volitional moderators in this. Future research would benefit from testing volitional moderators on the pathway between suicidal ideation and suicidal behaviour. It would also be of particular benefit to IPA research to investigate the temporal relationship between IPA and suicidal behaviours, to determine whether there is in fact a causal link between the two, and at which times people are at the greatest risk. This could help to guide practice in supporting those with experience of IPA.

#### **5.4.11 Conclusions**

The current study expanded on the earlier exploratory study by addressing many of the limitations identified and investigating a greater number of relevant factors to gain a more in-depth understanding of the relationship between IPA and suicidality and the processes involved in the IMV Model of Suicidal Behaviour. Measures were used to give a comprehensive view of the experience of IPA and to test the key variables suggested in the IMV Model. The current study has been able to provide a more detailed understanding, and to highlight the complexity of the relationships under investigation.

This study was one of the first prospective studies to investigate the relationship between IPA and suicidality, and one of the first in the UK to incorporate measures of control and impact of IPA. This study has demonstrated that those with past experience of IPA are at significant risk for suicidality, and has identified that two of the key factors involved in this process are perceptions of internal entrapment, and experiences of stalking and harassment. It has also been demonstrated that different outcomes and levels of risk are associated with different levels of control within abusive relationships, with higher levels of control associated with greater risk and more negative outcomes for the victim.

This study was one of the first studies to test the IMV Model of Suicidal Behaviour, and to do this in the context of investigating the relationship between IPA and suicidality. This study has demonstrated that the IMV Model is a useful framework for understanding the relationship between IPA and suicidality. However, it has also identified that it cannot completely explain suicide risk in this group, and that there are a number of factors which require further investigation. Testing the IMV Model in this way has not only allowed an understanding of the processes involved in suicidality, but has also deepened our understanding of the experience of IPA, and its relationship with suicidality.

## **Chapter 6: General Discussion**

### **6.0 Structured Abstract**

#### **6.0.1 Background**

The current chapter discusses and synthesises the findings from across the empirical studies contained within this thesis in relation to IPA and suicidality and in relation to the IMV Model of Suicidal Behaviour specifically.

#### **6.0.2 Method**

The results of the thesis are summarised, including the findings which are particularly pertinent to IPA and the testing of the IMV Model. The chapter then offers a discussion of the key findings and highlights the contributions this research has made to this area. The implications of these findings for theory and for practice are discussed, and the limitations of this research are highlighted. The chapter then goes on to discuss directions for future research, and offers key conclusions which can be drawn from this programme of research.

#### **6.0.3 Results**

This chapter identifies the key findings of this thesis. This research identified a number of important aspects relating to intimate partner abuse which are involved in increasing suicide risk within this group, such as the frequency of the abuse experienced, levels of control within the abusive relationship, and severity of stalking and harassment behaviours experienced. Investigation of the key elements of the IMV Model revealed that perceptions of internal entrapment play a significant mediating role in the relationship between intimate partner abuse and suicidality. In addition, social support and future thinking were found to act as

moderators of this relationship. This chapter discusses what these findings can tell us about the relationship between IPA and suicidality and their implications for research and applied value. The contributions of this research are highlighted and limitations discussed.

#### **6.0.4 Conclusions**

The thesis was summarised and discussed, and its contribution evaluated, in relation to IPA and suicidality, and as a test of the IMV Model.

This chapter begins by summarising the results of this thesis relating to IPA, and to the testing of the IMV Model of Suicidal Behaviour (O'Connor, 2011). Key differences between the samples used in the two studies will then be outlined and discussed with relevance to demographics and to normative data for the main study variables. The results will be discussed, and implications for the IMV Model and for practice will be outlined. This chapter will then discuss the limitations of this research and directions for future research, before presenting a conclusion to this research.

## **6.1 Summary of Results**

This section provides a brief overview of the findings from this research.

### **6.1.0 Intimate partner abuse and suicidality**

Both studies demonstrated an association between IPA and suicidality, consistently finding that those with experience of IPA reported higher levels of suicidal ideation and of suicide attempts than those with no IPA experience. In addition, both studies demonstrated that those with past experience of IPA continued to be at increased risk of suicidality. Not only did the research show high levels of suicidal ideation in this group, but indicated that those with past IPA experience reported the highest levels of suicide attempts. The results also demonstrated that the *frequency* of the IPA experienced is a key factor, which acts to mediate the relationship between IPA and suicidality. In addition, the incidence of injury and sexual coercion made a unique contribution to explaining suicidal ideation, demonstrating that different aspects of IPA have differential impacts on suicidality.

The research further demonstrated a strong association between the experience of IPA and experiencing stalking and harassment behaviours. Those with experience of IPA also experienced more severe stalking and harassment than those with no IPA experience. In addition, the severity of stalking experienced mediated the relationship between IPA and suicidal ideation. Severity of stalking emerged as a

key predictor variable throughout the research, acting as a predictor of suicidal ideation, suicide attempts, and of the impact of IPA on the individual.

This research has identified a number of predictors of suicidal ideation; impact of IPA; severity of stalking; internal entrapment; low positive future thinking; and low perceived social support. Only severity of stalking and internal entrapment predicted suicide attempts. These were also important factors in predicting the impact of IPA, along with high levels of control tactics used by the abusive partner within the relationship, the use of planning as a coping style, and low positive future thinking.

This thesis also investigated the constructs of intimate terrorism (IT) (a general pattern of power and control over the victim) and situational couple violence (SCV) (a response to a situation specific conflict), representing high and low levels of control respectively within the relationship. Findings demonstrated that different outcomes are associated with these constructs, with those with experience of IT demonstrating higher levels of suicidal ideation, greater impact of IPA, greater severity of stalking, higher perceptions of internal and external entrapment and of defeat, and lower self-esteem than those with experience of SCV. However, there were no differences between the two groups on social support, depression or suicide attempts.

### **6.1.1 Testing the IMV Model of Suicidal Behaviour**

This research demonstrated that those with experience of IPA reported higher levels of socially prescribed perfectionism, self-criticism and rumination than those with no IPA experience, and that these variables were in turn associated with suicidal ideation, and with perceptions of defeat and entrapment. This association with defeat and entrapment supported the view that they act within the pre-motivational phase of the model. Whilst there were slightly contradictory findings regarding the role of rumination as threat-to-self moderator, moderating the relationship between defeat and entrapment, with only one study (Chapter 4) finding support for this, it must be noted that whilst this relationship was significant in this study, it demonstrated only a very weak relationship, which diminished to non-significance in the second study. The research was not able to offer support for the other threat-to-self moderators investigated (coping and social problem solving). However, the role of the motivational moderators (social support and positive future thinking) in moderating the relationship between entrapment and suicidal ideation was supported.

The other key area of investigation regarding the IMV Model focused on the defeat and entrapment constructs. The research reported slightly conflicting findings regarding the relationship of IPA to perceptions of defeat and entrapment. Whilst one study (Chapter 5) demonstrated that those with experience of IPA reported greater perceptions of defeat and entrapment than those with no IPA experience, the other (Chapter 4) found that the two groups only differed significantly on

perceptions of internal entrapment. This conflicting result is likely to be due to the measures of defeat and entrapment used in the studies. Chapter 4 utilised a short version of the defeat and entrapment scales, using only the 3 highest loading factors for each scale. When the full measures were used in Chapter 5, a relationship between IPA and perceptions of defeat and entrapment was found.

The research demonstrated that internal entrapment mediates the relationship between IPA and suicidal ideation, as well as the relationship between defeat and ideation. The studies also found that perceptions of internal entrapment did not differ significantly according to the severity of IPA experienced, but was predicted by the frequency of the IPA. Results further demonstrated that defeat did not mediate the relationship between IPA and suicidal ideation, or between entrapment and suicidal ideation, but it does mediate the relationship between IPA and entrapment as the IMV Model would predict. The findings showed that neither defeat nor entrapment mediated suicide attempts.

## **6.2 Samples across the two studies**

For the most part, the samples used in the two studies were very similar. This is not particularly surprising as the recruitment strategy for both studies was essentially the same. However, there were some differences between the two samples which are worthwhile highlighting and discussing.

## *Demographics*

The sample in study one (sample 1) resided in a number of different countries, whilst the sample in study two (sample 2) all resided in the UK. This was an artefact of the study design, with study one being a survey design, and study two requiring the participant to attend a session with the researcher. However, despite this difference, the percentage of British and other nationalities in the two samples was very similar.

With regards to employment status, the majority of participants in both studies were in employment. The second largest group in both studies was those in full time education. However, the second study did manage to reduce the percentage of students in the sample, as it aimed to gain a wider general population sample. Both samples had low percentages of unemployed participants, however the percentages gained (around 7%) are in fact in line with the country's current reported rate of unemployment in the population. Suicidal ideation varied significantly across employment status for sample 2 only, where those who were unemployed demonstrated the highest levels of suicidal ideation. However, this finding must be treated with caution as there were relatively small numbers in the unemployed group compared to the other two employment status categories.

The majority of sample 2 demonstrated a higher level of education than sample 1, with the majority being educated to degree level compared to high school level.

However, sample 2 had a lower percentage of people educated to post-graduate level. In sample 2 only, suicidal ideation varied significantly across level of education, with the highest rates of suicidal ideation in those educated to college/vocational level and the lowest rates in those educated to degree level. It may be that those who are educated to college/vocational level perhaps feel that less opportunities are available to them than those who have went to university. If they do feel less positive about their futures, then this would fit with the findings that low positive future thinking is predictive of suicidal ideation. However, this is only a hypothesis as to why this difference may occur, and it is also important to remember that no such significant differences were found in sample 1, so these findings are therefore not consistent.

#### *Normative data*

With regards to the normative data for the main study variables, the two samples generally demonstrated findings in line with the reported normative data. There are a few points which are worth highlighting in relation to this normative data.

With regards to the CTS-2 measure of IPA, both samples demonstrated similar prevalence rates to the normative data for three of the four forms of IPA covered (psychological aggression, physical assault, and sexual coercion). However, both samples demonstrated a significantly higher prevalence of injury than would be expected from the normative data. However, it is important to remember that the normative data in this case is perhaps not a good comparison as it is from a US

sample, and is also from the 1980's. Therefore, it may be a result of differences between a US sample and a UK sample, between a wholly student sample and a wider population sample, or it may be differences across time. Irrespective of these issues, the current research demonstrates that the prevalence of injury in those with experience of IPA is significant.

Experiences of stalking and harassment were lower in both samples than that reported in the normative data. As previously discussed, this may be due to under-reporting by the samples in this research. Many people still have a perception of stalking as something that is perpetrated by strangers and may not identify with this terminology in relation to a partner or an ex-partner. It may also be that for those with experience of IPA who do experience this from ex-partners, it is seen as a continuation of the abuse. Therefore when participants are asked about stalking and harassment behaviours separate from the questions on IPA, they may think this is only for stalking behaviours experienced outside of the abusive relationship.

With regards to suicidal ideation in those with experience of IPA, sample 1 reported levels of suicidal ideation consistent with the normative data reported for those with psychiatric and affective disorders. However, sample 2 reported significantly higher levels of suicidal ideation. This demonstrates that at the very least those with experience of IPA report similar levels of suicidal ideation to those seeking psychiatric help. The higher levels of suicidal ideation reported in sample 2 may be due to the fact that there is a more even split in this study between those with and without experience of IPA, whereas in sample 1 those with experience of IPA were

in the minority. Therefore, there is a greater percentage of participants in the sample who may be more likely to be experiencing psychological distress. It may also be the case, as discussed previously, that recruitment in the second study was aimed at gaining a greater percentage of those with experience of IPA, and therefore targeted organisations and agencies that support those with IPA experience. It could be argued that those accessing such forms of support may be those who are in greatest distress at the time, and therefore those with experience of IPA in sample 2 were more likely to demonstrate higher suicidal ideation than those in sample 1.

Lastly, in regard to perceptions of defeat and entrapment, both samples demonstrated similar levels as that reported in the normative data by those with depression. This again highlights the serious impact of IPA on the psychological well-being of the individual, and demonstrates that defeat and entrapment are important constructs to consider in this area of research.

### **6.3 Discussion of findings**

This piece of research has supported the findings of previous research in demonstrating a strong association between IPA and suicidality (e.g. Olson et al. 2003; Kendall & Tackett, 1998). Throughout the studies reported here, those with experience of IPA have reported significantly higher levels of suicidal ideation and of suicide attempts than those with no IPA experience. An important finding of this research has been the continuing and increased risk of suicidality for those who have experienced IPA in the past. This is particularly relevant as the majority of

research investigating the relationship between IPA and suicidality focuses on those who are currently in abusive relationships. This is one of the first studies to demonstrate that those with past experience show comparable levels of suicidal ideation, and in fact are at greater risk of suicide attempts than those currently experiencing IPA.

As has been discussed throughout this thesis, IPA is a multifaceted construct, but despite this, research in this area often focuses on only one aspect of IPA (see Chapter 2 for a more detailed discussion). Previous research had identified the need for studies gaining data on the different aspects of IPA (e.g. Hall, Walters & Basile, 2012). This research therefore aimed throughout to take a more comprehensive view of IPA, and in doing so, has found support for the view that different aspects of IPA can have differential effects on suicidality (e.g. Blasco-Ros et al. 2010; Pico-Alfonso et al. 2006; Kaslow et al. 1998; Thompson et al. 1999).

However, in study 1, the regression model with all the measured forms of IPA (psychological aggression, physical assault, injury and sexual coercion) only explained 2% of the variance in suicidal ideation. So whilst injury and sexual coercion were found to be predictive of ideation, the role that they play is clearly a small one. Study 2 aimed to measure IPA in a more comprehensive way. A regression model used in this second study with different aspects of IPA (e.g. level of control, impact of IPA, severity of stalking, and frequency of IPA) explained 71% of the variance in suicidal ideation, and 17% of the variance in suicide attempts. This demonstrates that whilst some specific types of abusive behaviours

may increase risk slightly, a far more in-depth view of the IPA and the context around it is needed to understand suicidality beyond merely which behaviours occur.

In addition, it is also worth noting that whilst study 1 found no specific role of psychological abuse (as measured by the CTS-2) in increasing suicidal ideation, study 2 demonstrated a strong role for levels of control within the relationship and for the impact of IPA in predicting suicidal ideation. This suggests that control and impact may be important dimensions of psychological abuse which are not addressed by the CTS-2, and that a better measure of psychological abuse is needed.

These findings also demonstrate that a measure such as the CTS-2 which focuses on specific behaviours only, and the majority of which are orientated towards physical abuse, has limited use in understanding IPA. This research has shown that a wider range of behaviours (e.g. stalking, control within the relationship), and measures which can detect the psychological impact on the individual to a greater degree, need to be involved in IPA research.

The systematic review in Chapter 2 highlighted that the existing research suggested a dose-response relationship between IPA and suicidality, however it was unclear whether this related to the severity of IPA experienced or the frequency. The current research has been able to demonstrate that it is the frequency of IPA which plays a key role, finding that it in fact mediates the relationship between IPA and suicidality, and also predicts perceptions of internal entrapment. However, it must

be noted that the frequency of IPA explained only 2% of the variance in internal entrapment, with the majority of the variance in this factor (74%) being explained by perceptions of defeat. This may be expected as there are a number of factors which may act within the pre-motivational phase, and we would not expect them all to have a large influence on perceptions of defeat and entrapment, but for that influence to be more diffuse. Nevertheless, it is important to note that the severity of IPA was not found to play any role in the relationship between IPA and suicidality. This would suggest that frequency of IPA is a more relevant measure in the investigation of suicidality than severity, and that internal entrapment may be the mechanism through which IPA frequency increases suicide risk.

This is particularly important as very little research in this area measures frequency, and in both research and in practice, severity is seen as a more important construct. Indeed, within services, severity can be a key factor in determining what help and support an individual gets. These findings again suggest the importance of gaining a full understanding of the context of the abuse. Understanding how frequent it is and what impact it has on the individual is more important than placing someone in a category according to perceived severity.

Another key finding has been the relationship between IPA and the experience of stalking and harassment behaviours. Those with experience of IPA have been found to be more likely to be victims of stalking and harassment, and also to experience more severe stalking than those with no experience of IPA. The severity of stalking experienced was found to mediate the relationship between IPA and

suicidal ideation, as well as to predict suicidal ideation, suicide attempts and the impact of IPA on the individual. This is particularly interesting as the experience of stalking often occurs after the relationship has ended. This supports the view that stalking should be considered as a form of IPA (e.g Melton, 2007) and highlights the importance of measuring stalking in relation to IPA and suicidality. The fact that something occurring after the relationship has ended can predict not only suicidality, but also the impact the IPA has on the person, is consistent with the finding that those who experienced IPA in the past continue to be at risk. It also highlights that the impact of IPA continues and indeed increases in the years after the abusive relationship. This is an area which is in desperate need of research. There is very little understanding of this continuing impact, and what forms of support and intervention would improve the lives of survivors.

It is also worth noting that stalking by an ex-partner is often viewed as an attempt to continue to control the victim (Tyson, Herting & Randell, 2007). Indeed, the current research demonstrated that those who experienced high levels of control in their relationship (i.e with experience of intimate terrorism) experienced more severe stalking than those with low levels of control in the relationship. In the current research, those with high levels of control in their relationship reported higher suicidal ideation than those with low levels of control, whilst severity of stalking predicted suicide attempts. It may therefore be that these are both elements of control, and the severity of stalking is simply the form that control takes after the relationship has ended.

There may also be another factor involved in this process. Throughout this thesis, those with experience of IPA consistently demonstrate high perceptions of internal entrapment. Internal entrapment in turn predicts suicidal ideation, suicide attempts, and the impact of IPA. It may therefore be that the control experienced in the relationship, and severe stalking behaviours representing a form of control, are factors which increase perceptions of internal entrapment, and internal entrapment is in fact the mechanism by which these aspects increase suicide risk in this group. For example, high levels of control within a relationship often means that the partner has influence over all aspects of the victims life and explicitly and implicitly influences the victims decisions, whilst at the same time socially isolates the victim from others who may contradict or challenge this control. In such a situation, it is easy to see how victims may experience issues such as self-doubt, low self-esteem, and feel that they are not meeting the standards the partner expects of them. This can help contribute towards feelings of self-blame and self-criticism, and perhaps perceptions that problems within the relationship are in fact caused by themselves. It is clear to see that these types of thought processes could lead to internal entrapment. This therefore demonstrates that many of the constructs in this research are in fact in many ways inter-related and there may be complex interactions between these. The experience of IPA, experiences of stalking, levels of control, self-esteem, self-criticism, socially prescribed perfectionism, internal entrapment, etc. may not be variables that we can treat as separate independent constructs – rather it is more important that we aim to understand the complex interactions between them.

This research has demonstrated that control, and the distinction between high and low levels of control, is a worthwhile measure in the attempt to understand the relationship between IPA and suicidality. Johnson's (2008) typologies of intimate terrorism (IT; high control) and situational couple violence (SCV; low control) are useful constructs, and this research supported the view that different outcomes are associated with these groups. In the context of suicidality, those with experience of IT are at greatest risk. This research also showed interesting findings in that the majority of participants with experience of IPA fell into the IT category. Johnson (2008) posits that IT is more common in clinical samples, whilst SCV is more prevalent in the general population. However the current research utilised a non-clinical and non-refuge based sample, and found higher rates of IT in the general population. This is an important finding as this is not the pattern that would be expected, and speaks to the fact that IPA is a greater issue for the general population than has been hypothesised. This tells us that the majority of those experiencing IPA in the current research have experienced high levels of control, and significant negative impacts and increased risk. However, this has been the first study to investigate these typologies in the UK, and further research is needed to test this aspect.

With regards to testing the IMV Model of Suicidal Behaviour (O'Connor, 2011) this research found some support for the model, particularly for the role of defeat and entrapment, and for motivational moderators within the model. Indeed, investigation of the key variables involved in the model significantly increased our understanding of the relationship between IPA and suicidality. For example, the

important role of internal entrapment in this relationship which was repeatedly demonstrated throughout this research. These findings suggest that perceptions of internal entrapment are more pertinent to those with experience of IPA than perceptions of external entrapment. This may seem counter-intuitive as IPA is an external situation. However, these findings support the view suggested by qualitative research into the experience of IPA (e.g. McLaughlin et al, submitted; Sev'er, 2002); that the greatest impact of IPA is on the psychological well-being of the victim. The findings that those with experience of IPA report higher perceptions of internal entrapment (feeling trapped within themselves) than external entrapment (feeling trapped in a situation) suggests that IPA has the greatest impact on how the individual feels about, and views, themselves.

#### **6.4 Implications for the IMV Model of Suicidal Behaviour**

The research highlighted some important points regarding the model. For example, the results demonstrated that perceptions of defeat and entrapment did not mediate the relationship of variables with suicide attempts. However, internal entrapment was found to predict suicide attempts. These findings suggest that perceptions of defeat and entrapment can act to increase suicidal thoughts but may have less of an influence on whether these thoughts and intentions are translated into actions.

The influence of factors such as IPA and severity of stalking on entrapment, ideation and attempts, suggests that the influence of such life events may extend beyond the pre-motivational phase, with these factors interacting at various points

throughout the model. This perhaps suggests that the structure of the model as it stands is rather rigid. It is not the case that these life events influence only perceptions of defeat and entrapment, and then other factors determine risk from that point on. IPA, and various aspects of IPA, have an influence throughout the model.

In addition, whilst study 2 did demonstrate a relationship between IPA and both defeat and entrapment, it is clear that some aspects of IPA, for example frequency and severity of stalking, have direct relationships with internal entrapment and not with defeat. This suggests that some aspects of the stressor, or perhaps types of stressors, can bypass perceptions of defeat and influence suicidality directly through entrapment. As the model stands, defeat has a fairly key role, being the link between the pre-motivational phase and perceptions of entrapment, however this research demonstrates that this is not always the case, and whilst defeat has a relationship with entrapment, it does not appear to have any relationships with any other factors within the model. It may therefore be that defeat would be more usefully conceptualised as a moderator between the pre-motivational phase and entrapment.

In addition, this research has highlighted that there are potentially complex interactions between many of the variables. For example, IPA as a life event could interact with personality factors presenting a diathesis, and with many of the moderators within the model, such as rumination, future thinking, and social support. At the moment, the model is not able to account for such interactions, or

for a direct influence of factors within the pre-motivational phase on those within the motivational phase. There may also be important mechanisms involved which are not accounted for in the model. For example, there may be a number of mechanisms by which IPA leads to perceptions of internal entrapment such as self-esteem, attribution processes etc.

This research was not able to find support for the role of threat to self moderators within the model. As previously discussed, this research found that some aspects within the pre-motivational phase were associated more directly with entrapment, and did not demonstrate relationships with defeat. Therefore, this pathway between defeat and entrapment has been demonstrated to be rather weak, and that in turn may partly explain why these threat to self variables were not found to moderate this relationship. In addition, within an IPA sample, it may be that it is the mechanisms by which IPA interacts with coping, rumination etc that are in fact more relevant than these aspects themselves. For example, the control and psychological abuse experienced in IPA could affect the coping styles a person uses, or is able to use, and could impact significantly on the content of ruminative thoughts. As discussed previously, the content of ruminative thoughts could have its own influence, leading to self-criticism, or self-blame, or internal attributions. Therefore, perhaps when the stressor within the pre-motivational phase is something which can actively influence the moderators, the moderators themselves become less important.

Another area of the model which is important to discuss is that it does not help to explain or understand the temporal relationship between the variables. Whilst it appears to be set out in a relatively clear linear fashion, it is not in fact known whether defeat must occur before entrapment can be perceived, or whether the moderators come in to play at separate times, or whether there can be complex interactions between all the variables involved in the model, and whether the progression from pre-motivational phase to suicidality is in fact an iterative process. The model therefore needs to set out more clearly what the hypothesised temporal relationships may be between the variables in order to allow a more in-depth understanding of the process.

Therefore, overall, whilst the model has been useful in suggesting key variables for investigation, this research has demonstrated that it cannot fully explain the relationship between IPA and suicidality. There are two main changes to the IMV model that this research would suggest. Firstly, that perceptions of defeat should be removed as a key mediator and instead be conceptualised as a moderator between the pre-motivational phase and perceptions of entrapment. Secondly, the structure of the model needs to be less rigid, and allow for greater interaction between the variables, particularly between factors within the pre-motivational phase and the moderators throughout the model. The complex interaction between these factors needs to be better understood.

## **6.5 Implications for practice**

This research has demonstrated that the majority of those with experience of IPA are experiencing high levels of control within the relationship, that the abuse is frequent, and has a significant impact on the individual. In addition the severity of the abuse does not have a relationship with the impact it has or on outcomes for the victim or survivor. These are all key points which need to be taken account of by IPA services. In dealing with those currently experiencing abuse, it is important to recognise these points when attempting to make these services accessible to victims, and to tailor such services to their needs. Many such services are set up to help the victim to leave the abusive relationship. Whilst that is a desirable outcome, it is one which many victims are not yet able to deal with. Therefore, recognising that they may be subject to high levels of control within the relationship, and the impact that the abusive experience is having on the individual, means that services can also be tailored to address these points. For example, working with someone on their cognitive processes, addressing issues such as self-blame, perceptions of internal entrapment, and self-worth, are aspects that may benefit the victim in both the short and long term, enabling them to be in a stronger position to leave the abusive relationship in the future.

Related to this is the finding that those with experience of IPA are more likely to experience stalking behaviours, and that they are likely to experience severe stalking. Victims of IPA seeking help from services need to be informed of the potential for stalking from the partner when they leave the relationship, and need

advice on practical measures they can take to protect themselves and enhance their safety during this time. Local services such as housing need to be aware of this risk and danger to the victim, and work to re-home the person in a safe area away from the ex-partner, and protect their confidentiality. Police services need to be aware that if the victim reports that there was previous abuse, regardless of whether this is documented in police records or not, any stalking experienced by the ex-partner is likely to be severe and presents a real risk to the victim. This cannot be perceived as just a heart-broken ex-partner making a temporary nuisance of themselves. Police services and agencies such as Victim Support therefore need to take the victims concerns seriously, work with them to protect their safety and give appropriate support at this time. In addition, it must be recognised by all services involved that the experience of stalking in this group may lead to increased risk of suicidality. It is important therefore for services to be alert to, and to take seriously, any indications of suicidality, and perhaps for services such as Victim Support to offer specific support to the victim to help address this.

Despite the significant impact of IPA and the many difficulties presented to the victim, some people do somehow manage to escape the abusive relationship. It must be recognised that for these survivors, the impact continues for a significant period of time, indeed it may never completely disappear. As discussed in previous chapters, the full impact of IPA on the individual is not known. It was discussed that perhaps IPA impacts on personality traits, and may lead to factors such as greater self-criticism and lower self-esteem. If this type of chronic abuse does alter and affect personality, then these personality changes may be long lasting.

Perceptions of internal entrapment also seem to remain high for those who have experienced IPA in the past. There may therefore be a significant and long lasting impact on the individual. At the moment, there is very little help and support for survivors of IPA in dealing with these changes and the impact it continues to have on their lives. There is a clear need for interventions to address this impact, to reduce the psychological and emotional consequences of IPA. It is therefore essential that an in-depth understanding of the short and long term impact of IPA is investigated, in order to allow the development and testing of interventions for this group. Multicomponent interventions which involve aspects such as psychosocial, psychoeducational, and counselling and support elements which can address psychological and cognitive processes and provide support and training in dealing with the impact of IPA may be extremely useful. Such interventions could not only reduce suicidality in this group, but may significantly improve levels of psychological distress and overall quality of life for survivors.

## **6.6 Limitations**

As discussed previously, this research has identified that control is an important construct to measure within the context of IPA and suicidality. It has also been discussed that Johnson's (2008) typologies of IT and SCV, relating to high and low control, have yielded interesting findings. However, there were limitations regarding this aspect of the research. One of the main limitations was in the sample size as there were only a small number of participants in the SCV group. Therefore

the findings regarding differences between the two groups are only tentative, and further research would be needed to investigate these types of IPA further.

In addition, it was discussed in Chapter 1 that the majority of IPA research focuses on female victims of IPA, and the few studies which have included both genders have demonstrated conflicting results regarding differential outcomes for males and females (e.g. Hiner & Douglas, 2009; Straus, 2011). Johnson (2008) suggested that these gender differences in research were due to the studies measuring different kinds of IPA. Johnson (2008) posits that IT generally involves female victims whilst SCV is more gender symmetrical. However, the current research did not have a high enough number of males with experience of IPA, or a significant enough amount of male and female victims within the IT and SCV categories, to test this aspect.

Another main limitation of this research has been that it has not been able to adequately investigate the relationship between IPA and suicide attempts, partly due to a low number of suicide attempts in the samples as a whole. A better understanding is needed of the temporal relationship between IPA and suicide attempts, and also of the processes involved. This research did not include volitional moderators from the IMV Model which may have been able to help explain the relationship better. Related to this is the fact that this research was unable to investigate the temporal relationship between the variables. Whilst the research suggests that those with past experience of IPA are at highest risk of

suicidality, there is a need to understand what the mechanisms for this are, and identify the best point for intervention.

This research has discussed ways in which the experience of IPA may influence and affect various factors, however this has just been speculation into potential mechanisms. One of the limitations of this research is that it did not include a qualitative element. Qualitative interviews with participants may have helped to identify links between variables and potential mechanisms for impact, as well as clearly establishing temporal relationships, that have been missed by this quantitative research. In these studies, there was a limit to the number of factors which could be measured, and indeed there are many more factors of interest which may potentially play an important role in the experience of IPA and in its relationship with suicidality. For example, factors such as attributional style, and feelings of self-worth, may have helped to shed more light on the processes involved. In addition, this research was not able to determine the exact relationship between personality factors (self-criticism, self-esteem and socially prescribed perfectionism) and IPA, and the potential interactions between them. A qualitative element to the research in addition to the quantitative therefore may have helped to pick up on a wider range of factors and expand our understanding of the mechanisms between the different variables.

## **6.7 Directions for future research**

One of the main areas for future research identified is that of the need for development of a comprehensive measure of IPA. At the moment, no one measure of IPA is available which fully and adequately addresses psychological abuse, stalking and harassment behaviours, frequency of abuse, and the impact of the abuse on the individual. Development of such a measure would significantly increase our understanding of IPA and strengthen research in this area. This research has also demonstrated that it is important to measure frequency of abuse, not just severity. This, along with the findings that a comprehensive view of IPA must be taken, highlights the need to move away from research which focuses on single aspects of IPA or defines IPA through a proxy measure of severity such as presentation at hospital following IPA. This research has highlighted that it is the impact the abuse has on the individual which is most important in determining outcomes rather than the experience itself.

In relation to this, this research has highlighted the strong need for interventions to be developed which more adequately address the needs of those with experience of IPA, and particularly those of survivors of IPA. Interventions need to be developed which target key areas of personality, cognitive processes, and provide support, and these need to be tailored to the different needs of victims of survivors of IPA, and trialled, with the aim of reducing the impact of IPA, the psychological distress experienced, and risk of suicidality, and improving overall quality of life and well-being for these groups. Research could also focus on how our understanding of the

nature of, and impact of, IPA can be implemented across services to provide a more relevant and effective service for victims and survivors. For example, the understanding that many may be experiencing high levels of control within the relationship has implications for the accessibility of information and support, and the increased and continued risk for survivors highlights the need for the availability of more resources and services to address the needs of this group.

This research has not been able to explore IPA across gender, and this is clearly an area where future research is needed. It is important to establish whether there are in fact any gender differences in IPA experience, and if there is, if this can be explained by the control typologies. However, it is just as important a finding to demonstrate that there are no gender differences in IPA experience, as this would help determine the need for resources and services for male victims, raised awareness of male victims and survivors, and appropriate help and support for victims and survivors of IPA regardless of gender.

As discussed previously, this research was not able to fully understand the relationship between IPA and personality variables, and this is an area where future research is needed. It is important to understand whether certain personality traits lead to someone being at higher risk of entering an abusive relationship, or whether IPA can impact on and change personality, or whether it is in fact a combination of both. Being able to understand this complex relationship will enable us to identify groups at increased risk, and target areas for intervention, to help reduce the

numbers of people in abusive relationships, and also to improve outcomes for those with experience of IPA.

The fact that this research was not able to provide a detailed understanding of the temporal relationship between the variables, speaks to the need for longitudinal research in this area. This may also be better able to deal with factors surrounding suicide attempts. It may also capture something that has been outwith the scope of the current research, and that is the relationship between IPA and completed suicides. An ideal situation for future research would be to follow individuals over a significant period of time, monitoring abusive experiences, their impact on personality and cognitive factors and on the individual as a whole, and long term outcomes.

With regards to the IMV Model of Suicidal Behaviour (O'Connor, 2011) it has been highlighted that there is a need for further research into the role of defeat and of threat to self moderators within the model, and also a need for research to investigate the potential interactions between variables and phases within the model. Future research needs to find a way to make the model more flexible and adaptive to different forms of stressors in order to better explain suicidality, as it appears to have limited utility in relation to a chronic and complex stressor such as IPA.

## **6.8 Conclusion**

This research has made a valuable contribution to the understanding of the relationship between IPA and suicidality. It has highlighted a number of important issues with regards to the conceptualisation and measurement of IPA. It has also identified the importance of considering aspects such as stalking, perceptions of internal entrapment, and levels of control within relationships, when investigating suicidality within this group. This research has also used the context of IPA and suicidality to test the IMV Model of Suicidal Behaviour (O'Connor, 2011), and a number of the elements of this model have significantly increased our understanding of suicidality in relation to IPA. The IMV Model has been a useful framework for understanding this relationship, however further research is needed to test the model further and to explore the relationship of some of the elements within the context of IPA and suicidality.

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# APPENDICES

**Please note that the measures included in the appendices must not be copied, reproduced or used without the required permissions**

**Appendix 1: Table 2.1: Cross-Sectional Studies of Intimate Partner Abuse and Suicidality**

Population					
Study	Source	Gender and Age (years)	Intimate Partner Abuse	Suicidality	Results
Country					
<i>General Population (N=13)</i>					
Vitanza et al (1995) USA	93 in long-term “bad” or “stressful” relationships	All female	Screening instrument for psychological abuse.  SVAWS (Marshall,1992) threats, acts and sexual aggression subscales.	Self-report number of suicide attempts	Severe violence group showed higher prevalence of suicide attempts. Attempted suicide partially explained by private self-consciousness. In severe violence group, cognitive failure helped explain attempted suicide.
Wingood et al (2000) USA	203, recruited from IPA shelters	All female  Mean age 32.1yrs	Sexual and physical abuse during 60 days before entering shelter.	Diagnostic Interview Schedule, Version II	Women who had experienced both physical and sexual abuse were more likely to have attempted suicide compared to women experiencing physical abuse.
Seedat et al (2005) USA	637 from the Memphis Area Study	All female  Abused mean age 37.9 (SD 10.4)  Non-Abused mean age 40.3 (SD 14.6)	1 screening question and F/U questions. Focus on physical abuse.	Self-report lifetime suicide attempts.	23% of abused group reported a suicide attempt compared to 3% in non-abused group. No significant association between suicide attempts and PTSD diagnosis.

Weaver et al (2007) USA	50, recruited from IPA shelter	All female Mean age 31 (SD 9.4)	PASPH (Hudson, 1990) measures physical and sexual abuse	Intensity of suicidal ideation in past week assessed by asking about "thoughts about wanting to die"	58% experienced intimate partner rape which was significantly associated with suicidal ideation. PTSD and depressive symptoms mediated the relationship between intimate partner rape and suicidal ideation.
Afifi et al (2008) USA	2,254 from US National Comorbidity Survey Replication (NCS-R) data.	1116 (M), 1138(F) 18 – 60+ yrs	Items taken from physical assault items of the CTS.	Self-report thoughts about committing suicide, and suicide attempts over the past year	Relationship between IPA and poor mental health outcomes differs according to sex. Females with experience of IPA demonstrate a wider range of poor mental health outcomes, including suicidal ideation, than male victims.
Ellsberg et al (2008) Multi-Country Study	24,097 from WHO multi-country study on women's health and domestic violence.	All female 15-49 yrs	Self-report experiences of physically and sexually violent acts by a current or former male partner.	SRQ-20 - screens for emotional distress. Self-report suicidal thoughts in previous 4 weeks. Self-report lifetime suicidal thoughts and attempts.	IPA group reported significantly more emotional distress, suicidal thoughts, and suicide attempts than non-abused group.
Naved & Akhtar (2008) Bangladesh	2,702 from WHO multi-country study on women's health and domestic violence conducted in Bangladesh.	All female 15-49 yrs	Self-report experiences of physically and sexually violent acts by a current or former male partner.	SRQ-20. Self-report suicidal thoughts in previous 4 weeks. Self-report lifetime suicidal thoughts and attempts.	Suicidal ideation twice as likely among rural women, and 3 times more likely among urban women, reporting emotional violence in past year. Suicidal ideation in the past 4 weeks was 4 times more likely among rural women, and twice as likely among urban women, reporting severe

					physical abuse over past year. Dose-response effect observed in suicidal ideation over past 4 weeks – increase in number of forms of violence experienced associated with increase in suicidal ideation.
Renner & Markward (2009)	95 recruited from IPA shelter	All female 18 – 50+ yrs.	Self report lifetime physical abuse.	Self-report lifetime suicidal ideation	Suicidal ideation was associated with a shorter duration of IPA (under 1 year).
USA					
Vung et al (2009)	883 recruited from a demographic surveillance site in Bavi District. Participants married or in a stable relationship.	All female 17-60 yrs	Women’s Health and Life Experiences Questionnaire (WHO, 2000). Measured physical and sexual violence over past year.	Self-report suicidal thoughts.	IPA in past year increased risk of suicidal ideation.
Vietnam					
Calder et al (2010)	4081 from Washington state	1692 (M) 2389 (F).	Self report physical (last 12 months) and sexual abuse (since age 18)	Self report suicidal thoughts in past 12 months	History of physical and sexual abuse related to current suicidal ideation.
USA	(2002) Behavioral Risk Factor Surveillance System data	18-55+ yrs			
Haarr (2010)	400 married women of childbearing and rearing ages in Tajikistan	All female 17-49 yrs	Self report physical and sexual abuse by husband (ever, and last 12 months)	Self report lifetime thoughts and attempts	Those with experience of marital violence were more likely to have experienced suicidal thoughts and attempts. Women who had also told someone about the abuse were at highest risk.
Tajikistan					

Ishida et al (2010) Paraguay	6540 from the 2008 Paraguayan National Survey of Demography and Sexual and Reproductive Health	All female 15-44 yrs	Self report emotional physical and sexual abuse over lifetime and in last 12 months. Based on CTS items.	Self report suicidal thoughts, single question from SRQ-20.	IPA associated with increased suicidal ideation. Those experiencing recent physical abuse are at greatest risk.
Vachher & Sharma (2010) India	350 from Raj Nagar- I, urban locality in west Delhi	All female 15-49 yrs	Self report physical, sexual and emotional abuse. Questions from WHO multi-country study on women's health and domestic violence.	Self report thoughts and attempts over lifetime and past month, based on SRQ-20.	Those with experience of IPA more likely to report mental ill health and suicidality.

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**Clinical Population  
(N=9)**

McCauley et al (1995) USA	1,952 recruited from medical practices	All female 18-46+ yrs	2 questions from the Abuse Assessment Screen (MacFarlane et al 1992) to assess physical and sexual abuse.	Medical history	Participants with current experience of IPA were more likely to have attempted suicide. IPA also associated with multiple somatic symptoms and emotional distress.
Stark & Flitcraft, (1995) USA	176 recruited from ED	All female 16-69 yrs, mean age 30 yrs	Medical records. Classified as abused if participant attended the hospital with at least one abusive injury during the sample year. Adult Trauma History Screen used to determine probability of abuse.	Attended ED as attempted suicide or self-inflicted injuries. Timing, nature and frequency of suicidal behaviour recorded.	Mention of marital conflict the single best predictor of a history of at-risk trauma. Black women who attempted suicide were significantly more likely than Caucasians to have a history of IPA. Abused women were also significantly more likely than non-abused women to be pregnant when they attempted suicide.

Boyle & Todd (2003) UK	256 recruited from ED	Mean age (M) 38.5yrs, (F) 47.6	Physical and non-physical abuse, current and lifetime	Self-report deliberate self-harm	Significant association between reported IPA and self-harm in females
Houry et al (2005) USA	200 African Americans with experiences of IPA, recruited from medical or psychiatric ED	All female  Mean age 32 (SD 9.7)	Modified UVPSP measures physical and emotional abuse.	Presented to ED following a suicide attempt. Participants presenting for other reasons were asked if they had ever attempted suicide.  BDI-II.	Attempters reported significantly higher scores on all BDI-II items than non-attempters. Risk of attempting suicide could be predicted correctly 78% of the time based on scores on 4 items: sadness, self-dislike, suicidal thoughts, and feelings of worthlessness.
Heru et al (2006) USA	110 psychiatric inpatients with suicidal ideation/behaviour.	44 (M), 66 (F). Mean age (M) 42.5 (SD 10.7), (F) 40.9 (SD 9.7)	CTS2	BSI (Beck, 1991)	Over 90% of suicidal inpatients reported IPA perpetration and victimization in the past year, most reporting severe IPA. No significant differences between sexes on any CTS2 subscale for perpetration or victimization. Poor family functioning predicted physical violence victimization in both sexes.
Sansone et al (2007b) USA	113 psychiatric inpatients	All female  Mean age 35.98 (SD 10.43)	SVAWS, threats and acts subscales used.	SHI (Sansone et al 1998)	Significant positive correlations between the SHI bodily self harm subscale and the SVAWS Acts and Threats subscales, as well as SVAWS total score.
Leiner et al (2008)	323 African American ED patients with	All female	UVPSP (Dutton et al 1996).	BSI	Abused women with elevated depressive symptoms demonstrated higher levels of suicidal

USA	experience of IPA	Mean age 3.9 (SD 11)	WEB (Smith et al 1995)		thinking. PTSD not directly related to suicidal ideation but the relationship is mediated by depression.
Pantalone (2010) USA	178 HIV outpatients in medical care	All male Mean age 44.1 yrs	Physical, sexual and psychological abuse. Revised CTS. Current and previous relationships in the last year.	Frequency of suicidal ideation measured by Passive Suicidal Behaviour subscale of the Harkavy Asnis Suicide Survey (Harkavy Friedman & Asnis, 1989)	Final model demonstrated acceptable fit, and accounted for mental health problems. There was also a positive correlation between physical abuse and suicidal ideation.
Siemieniuk et al (2010) Canada	1053 from outpatient clinic for HIV	659 (M) 194 (F) <30 - >45 yrs	Screening question. Then asked to identify the type of abuse and when the abuse occurred. Also asked about safety concerns.	Suicidal ideation from medical history	IPA associated with suicidal ideation.

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Notes: SVAWS=Severity of violence against women scale; CTS=Conflicts Tactics Scale; F/U=follow-up; PASPH =Partner Abuse Scale: Physical;SRQ-20=Self Reporting Questionnaire; ED=emergency department; IPA=intimate partner abuse; BDI-II= Beck Depression Inventory; CTS2=Revised Conflicts Tactics Scale; BSSI=Beck Scale for Suicide Ideation; SHI=Self-Harm Inventory; UVVSP= George Washington University Universal Violence Prevention Screening Protocol; WEB=Women's Experience with Battering Scale; PTSD=Post-Traumatic Stress Disorder

**Appendix 2: Table 2.2: Case-Control Studies of Intimate Partner Abuse and Suicidality**

Study	Population		Intimate Partner Abuse	Suicide Risk	Results
	Cases	Controls			
Country					
<i>General Population (N=2)</i>					
Scott-Gliba et al (1995)	15 recruited from IPA refuge.	15 non-abused recruited from GP Clinic. Matched for age and status.	Detailed information taken about nature and extent of physical abuse, and participant responses to the abuse.	Medical and psychiatric history. BDI	Case group showed higher rates of suicidal ideation
UK	Mean age 33.4				
Pico-Alfonso et al (2006)	75 physically/psychologically abused, 55 psychologically abused.	52 non-abused recruited from women's clubs	Detailed information about the incidence of types of abuse	Self-report lifetime incidence of thoughts and attempts of suicide	Both case groups had higher incidence and severity of suicidal thoughts than controls. Sexual violence associated with higher incidence of suicide attempts in the physically/psychologically abused group. Incidence of suicidal thoughts higher in physically/psychologically abused women with depressive symptoms or comorbidity with PTSD. Therefore, sexual violence increases the risk of suicide attempts only when it's concomitant with physical/psychological abuse.
Spain	Recruited from IPA centres				

**Clinical Population  
(N=7)**

Back et al (1982) USA	30 female psychiatric inpatients with history of physical abuse.  Mean age 30.5	61 female psychiatric inpatients reporting no history of physical abuse  Mean age 39.5	History of physical abuse documented in patients charts	History of suicide attempts documented in patients charts	Significantly higher prevalence of suicide attempts in the case group. When participants matched on age, this finding became to non-significant.
Kaslow et al (1998) USA	148 African American females presenting to hospital following a non-fatal suicide attempt.  Age range for whole sample – 18-64.	137 African American females presenting to hospital for medical problems with no history of suicidal behaviour	ISA (Hudson & McIntosh, 1981). Measures physical and non-physical abuse.	Presenting to hospital as a result of a non-fatal suicide attempt	Higher rates of physical and non-physical partner abuse among case group. The IPA-suicidal behaviour link was mediated by psychological distress, hopelessness and drug use, and moderated by social support. Non-physical partner abuse accounted for unique variance in the prediction of suicide attempt status.
Thompson et al (1999) USA	119 low-income females presenting to hospital following a non-fatal suicide attempt. Age range for whole sample – 18-64.	85 low-income females presenting to hospital for medical problems with no history of suicidal behaviour	ISA	Presenting to hospital as a result of a self-injurious act requiring medical attention.	Case group 3 times more likely to have experienced physical and non-physical partner abuse, and to have PTSD. Physical partner abuse associated with an increased risk for PTSD. PTSD mediated the link between physical partner abuse and suicidality.
Kaslow et al (2000) USA	148 African American females presenting to hospital following a non-fatal suicide attempt.	137 African American females presenting to hospital for medical problems with no history of	ISA	Presenting to hospital as a result of a non-fatal suicide attempt	IPA found to be a risk factor for suicide attempts.

	Age range for whole sample – 18-64.	suicidal behaviour			
Kaslow et al (2002) USA	100 African American females, presenting to hospital following a non-fatal suicide attempt, who had experienced IPA within the preceding year.  Age range for whole sample –18-59.	100 African American females presenting to hospital for medical problems with no history of suicidal behaviour, who had experienced IPA within the preceding year.	UVPSP  ISA	Presenting to hospital as a result of a non-fatal suicide attempt. Risk-Rescue Ratio (Weissman & Worden, 1972) to measure suicide attempt lethality.	Risk factors – numerous/severe negative life events, history of child maltreatment, high psychological distress and depression, hopelessness about the future, and alcohol and drug problems, all associated with attempter status. Protective factors – hopefulness, self-efficacy, coping skills, social support, and effectiveness in obtaining material resources, associated with non-attempter status.
Reviere et al (2007) USA	100 African American females presenting to hospital following a non-fatal suicide attempt, who had experienced IPA within the preceding year.  Further 20 for qualitative analysis.	100 African American females presenting to hospital for medical problems with no history of suicidal behaviour, who had experienced IPA within the preceding year. Further 20 for qualitative analysis.	UVPSP  ISA	Presenting to hospital as a result of a non-fatal suicide attempt	Non-attempters showed greater general coping, more efficacious behaviour strategies in response to IPA, more effective use of resources, greater use of social support and less substance use than attempters.
Sansone et al (2007) USA	73 female psychiatric inpatients with a history of suicide attempts	34 female psychiatric inpatients with no history of suicide attempts	SVAWS, threats and acts subscales used.	Participants asked if they had ever attempted suicide	Compared to control group, women with a history of suicide attempts had significantly higher scores on the SVAWS.

Notes: GP=General Practitioner;ISA=Index of Spouse Abuse;UST= Universal Screening Tool for Domestic Violence ;SVAWS=Severity of violence against women scale; IPA=intimate partner abuse; BDI= Beck Depression Inventory; UVPSP= George Washington University Universal Violence Prevention Screening Protocol; PTSD=Post-Traumatic Stress Disorder

**Appendix 3: Table 2.3: Longitudinal/Prospective Studies of Intimate Partner Abuse and Suicidality**

Population					
Study	Source and Follow-up	Gender and Age	Intimate Partner Abuse	Suicidality	Results
Country					
<b>General Population (N=3)</b>					
Parsons & Harper (1999)	41 F/U investigations of death certificates of injury related maternal deaths from 1992 –1994	All female	Questionnaire sent to medical examiner and obstetric provider asking about knowledge of physical, emotional or sexual abuse by an intimate partner.	Deaths classified by mechanism and intent.	21 women (51.2%) known to have, or suspected of having been abused, 2 of whom committed suicide. Overall, 14 (34.1%) deaths were known or suspected to have experienced IPA. 8 women were killed by an intimate partner.
USA					
Chowdhary & Patel (2008)	1750 married females taking part in a study of common health problems conducted between 2001-2004. F/U at 6 and 12 months (n = 1563)	All female Age range 18-50.	Asked about lifetime and recent (past 3 months) exposure to verbal, physical and sexual violence by a spouse.	CIS-R (Lewis et al 1992)	Lifetime IPA reported by 290 (16.6%), and recent exposure to abuse by 230 (13%). Cross-sectional and longitudinal data showed an association between IPA and attempted suicide, finding it to be an independent risk factor for suicide attempts.
India					
Blasco-Ros et al (2010)	126. 91 from previous cross sectional study, 35 non abused control group. F/U at 3 years.	All female 40+ yrs	Asked for detailed information about the pattern of abuse over time and the types of abuse experienced.	Incidence of thoughts and attempts over lifetime and during the follow up period	IPA associated with suicidal thoughts and attempts. Mental health recovery in those experiencing physical and psychological abuse, but not in those with experience of psychological abuse alone.
Spain					
<b>Clinical Population</b>					

(N=2)

Bergman & Brismar (1991) Sweden	117 women with experience of IPA, presenting to ED. Recruited between 1983-1984, follow-up at 6 years. 117 control group women selected through the population register and matched for age, nationality and geographic area. 380, treated in the hospital between 1988-1989 as a result of suicide attempts.	All female  Mean age at time of recruitment – 33	Records investigated from approx 10 years before to 6 years after participant recruited. Defined by presence of physical injuries as a result of abuse.	Records investigated from approx 10 years before to 6 years after participant recruited.	Of abused group, 22 (19%) had made at least 1 suicide attempt during the 16 year study period. However, results suggest that the relationship between experience of abuse and suicide attempts may be mediated by substance use.
Boyle et al (2006) UK	294 presenting to ED due to IPA. 2 controls for each case. F/U for the period 1996-2004	78 (M), 216 (F), in each group.  Mean age 34.2 yrs (SD 13.3)	Presentation at ED as a result of domestic assault	Presentation to the ED with self-harm during the follow-up period.	Case group were more likely to present with self-harm than controls, and had more ED contacts than controls. A moderate correlation was found between the number of episodes of self-harm and number of domestic assaults.

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Notes: F/U = follow-up; ED= emergency department; IPA=intimate partner abuse; CIS-R= The Revised Clinical Interview Schedule

#### **Appendix 4: Conflict Tactics Scale 2 Short Form (CTS2) (Straus & Douglas, 2004)**

1. I explained my side or suggested a compromise for a disagreement with my partner 1 2 3 4 5
2. My partner explained his or her side or suggested a compromise for a disagreement with me 1 2 3 4 5
3. I insulted or swore or shouted or yelled at my partner 1 2 3 4 5
4. My partner insulted or swore or shouted or yelled at me 1 2 3 4 5
5. I had a sprain, bruise, or small cut, or felt pain the next day because of a fight with my partner 1 2 3 4 5
6. My partner had a sprain, bruise, or small cut or felt pain the next day because of a fight with me 1 2 3 4 5
7. I showed respect for, or showed that I cared about my partner's feelings about an issue we disagreed on 1 2 3 4 5
8. My partner showed respect for, or showed that he or she cared about my feeling about an issue we disagreed on 1 2 3 4 5
9. I pushed, shoved, or slapped my partner 1 2 3 4 5
10. My partner pushed, shoved, or slapped me 1 2 3 4 5
11. I punched or kicked or beat-up my partner 1 2 3 4 5
12. My partner punched or kicked or beat-me-up 1 2 3 4 5
13. I destroyed something belonging to my partner or threatened to hit my partner 1 2 3 4 5
14. My partner destroyed something belonging to me or threatened to hit me 1 2 3 4 5
15. I went see a doctor (M.D.) or needed to see a doctor because of a fight with my partner 1 2 3 4 5
16. My partner went to see a doctor (M.D.) or needed to see a doctor because of a fight

with me 1 2 3 4 5

17. I used force (like hitting, holding down, or using a weapon) to make my partner

have sex 1 2 3 4 5

18. My partner used force (like hitting, holding down, or using a weapon) to make me

have sex 1 2 3 4 5

19. I insisted on sex when my partner did not want to or insisted on sex without a

condom (but did not use physical force) 1 2 3 4 5

20. My partner insisted on sex when I did not want to or insisted on sex without a

condom (but did not use physical force) 1 2 3 4 5

## Appendix 5: Stalking & Harassment Behaviour Scale (Turmanis & Brown, 2006)

These questions will ask about whether or not you have ever experienced **stalking or harassment** behaviours.

Stalking and harassment behaviours are when you receive unwanted attention, more than once, such as by letters, notes left for you, emails, phone calls, texts, following you, attempts to approach you, driving by your home, sending you gifts, finding out information about you, etc.

This unwanted attention is often conducted in a manner which can disturb, intimidate, distress or scare you, to the point where it seriously disrupts your life and causes you to fear for you or your family's/partner's/friend's health.

Do you feel that you have experienced stalking or harassment behaviours at any time in your life? **If your response is 'No', then please proceed to Section D (page 17).**

**Otherwise, please continue to complete the questions in this section.**

Yes

No

What was your relationship with the person who stalked and harassed you (e.g. was it someone you know, an ex-partner, or a stranger)?

Please read the list of stalking and harassment behaviours below. **For each behaviour that you have experienced, please indicate on the scales how often the behaviour occurred, and also how disturbing or scary you found the behaviour.**

In the **first column**, please indicate how often the behaviour happened, using a 7 point scale, where **1** is hardly ever, **4** is regularly, and **7** is all the time. So if the behaviour happened **all the time**, you would enter a **7** in this column.

In the **second column**, please indicate, again on a 7 point scale, how disturbing/scary you found the behaviour, where **1** is not at all, and **7** is extremely disturbing. So if you found that particular behaviour to be only **moderately** disturbing, you would enter a **4** in this column.

So for each behaviour you have experienced, you should have one number written in each column - one for how often, and one for how disturbing. **If there are behaviours that you have not experienced, simply leave those rows blank.**

<b>How often?</b>	<b>How Disturbing/scary?</b>
1   2   3   4   5   6   7	1   2   3   4   5   6
7	
Hardly ever extremely	Not at all moderately

Behaviour	How Often (1-7)	How Disturbing/Scary (1-7)
Telephoned you at work		
Telephoned you at home		
Made hang up calls		
Left messages on answerphone		
Emailed you		
Written you letters or sent texts		

Left you notes		
Written graffiti about you		
Followed you on foot		
Followed you by car		
Driven or walked by your home		
Approached you in public		
Come to your home		
Knocked on door and fled		
Come to your workplace		
Spied on you		
Sent flowers or gifts		
Broken into your home		
Stolen something of yours		
Left things on your property		
Harmed pets		
Damaged your property		
Damaged property of your new partner		
Stolen/read your post		
Tried to discredit you		
Violated restraining order		
Attempted break into car		
Went through your rubbish		
Threatened to cause self harm		
Threatened you		
Threatened your friends		

Threatened your family		
Threatened your partner		
Verbally abused you		
Physically harmed you		
Sexually abused you		
Harmed your new partner		
Boasted of information they'd gained about you		
Threatened suicide		

How long did or has this person's behaviour towards you last/ed for?

- Less than 1 month
- 1-3 months
- 4-12 months
- More than 1 year

**Appendix 6: Beck Scale for Suicidal Ideation (SSI: Beck, Kovacs & Weissman, 1979)**

**Directions:** Please carefully read each group of statements below. Circle one statement in each group that **best describes** how you have been feeling for the **past week, including today**. Be sure to read all of the statements in each group before making a choice.

- |   |  |
|---|--|
| 1. 0 I have a moderate to strong wish to live.<br>1 I have a weak wish to live.<br>2 I have no wish to live.  | 4. 0 I have no desire to kill myself.<br>1 I have a weak desire to kill myself<br>2 I have a moderate to strong desire to kill myself  |
| 2. 0 I have no wish to die.<br>1 I have a weak wish to die.<br>2 I have a moderate to strong wish to die.   | 5. 0 I would try to save my life if I found myself in a life-threatening situation.<br>1 I would take a chance on life or death if I found myself in a life-threatening situation.<br>2 I would not take the steps necessary to avoid death if I found myself in a life-threatening situation. |
| 3. 0 My reasons for living outweigh My reasons for dying.<br>1 My reasons for living and dying are about equal.<br>2 My reasons for dying outweigh my reasons for living. |  |

**If you have circled the 0 statements in both Groups 4 and 5 above, then skip down to Group 20 at the bottom of the next page. If you have marked a 1 or a 2 in either Group 4 and 5 then go to Group 6 below.**

- |   |  |
|---|--|
| 6. 0 I have brief periods of thinking about killing myself which pass quickly.<br>1 I have periods of thinking about killing myself which last for moderate amounts of time.<br>2 I have long periods of thinking about killing myself. | 11. 0 My reasons for wanting to commit suicide are primarily aimed at influencing other people, such as getting even with people, making people happier, making people pay attention to me, etc.<br>1 My reasons for wanting to commit suicide are not only aimed at influencing other people, but also represent a way of solving my problems.<br>2 My reasons for wanting to commit suicide are primarily based upon escaping from my problems |
| 7. 0 I rarely or only occasionally think about killing myself.<br>1 I have frequent thoughts about killing myself.<br>2 I continuously think about killing myself.  | 12. 0 I have no specific plan about how to kill myself.<br>1 I have considered ways of killing myself, but have not worked out the details.<br>2 I have a specific plan for killing myself.  |
| 8. 0 I do not accept the idea of killing myself.<br>1 I neither accept nor reject the idea of killing myself.<br>2 I accept the idea of killing myself.   | 13. 0 I do not have access to a method or an opportunity to kill myself.<br>1 The method that I would use for committing suicide takes time, and I really do not have a good opportunity to use this method.<br>2 I have access or anticipate having access to the method that I would choose for killing myself and also have or shall have the opportunity to use it.  |
| 9. 0 I can keep myself from committing suicide.<br>1 I am unsure that I can keep myself from committing suicide.<br>2 I cannot keep myself from committing suicide.   | 14. 0 I do not have the courage or the ability to commit   |
| 10. 0 I would not kill myself because of my family, friends, religion, possible injury from an attempt, etc.<br>1 I am somewhat concerned about killing myself  |  |

because of my family, friends, religion, possible injury from an attempt, etc.

- 2 I am not or a little concerned about killing myself because of my family, friends, religion, possible injury from an attempt, etc.

15. 0 I do not expect to make a suicide attempt.

- 1 I am unsure that I shall make a suicide attempt.
- 2 I am sure that I will make a suicide attempt.

16. 0 I have made no preparations for committing suicide.

- 1 I have made some preparations for committing suicide.
- 2 I have almost finished or completed my preparations for committing suicide.

17. 0 I have not written a suicide note.

- 1 I have thought about writing a suicide note, but have not completed it.
- 2 I have completed a suicide note.

suicide.

- 1 I am unsure that I have the courage or the ability to commit suicide.
- 2 I have the courage and the ability to commit suicide.

18. 0 I have made no arrangements for what will happen after I have committed suicide.

- 1 I have thought about making some arrangements for what will happen after I have committed suicide.
- 2 I have made definite arrangements for what will happen after I have committed suicide.

19. 0 I have not hidden my desire to kill myself from people.

- 1 I have held back telling people about wanting to kill myself.
- 2 I have attempted to hide, conceal, or lie about wanting to commit suicide.

**Go to Group 20, below.**

20. 0 I have never attempted suicide.

- 1 I have attempted suicide once.
- 2 I have attempted suicide two times or more times.

**If you have previously attempted suicide, please continue with the next statement group.**

21. 0 My wish to die during the last suicide attempt was low.

- 1 My wish to die during the last suicide attempt was moderate.
- 2 My wish to die during the last suicide attempt was high.

**Appendix 7: Patient Health Questionnaire (PHQ-9; Kroenke, Spitzer & Williams, 2001)**

**Patient Health Questionnaire (PHQ-9)**

The PHQ-9 is the depression module, which scores each of the 9 DSM-IV criteria as "0" (not at all) to "3" (nearly every day). It has been validated for use in Primary Care.<sup>2</sup>

<b>Patient Health Questionnaire (PHQ-9)</b>	
Over the last 2 weeks, how often have you been bothered by any of the following problems?	
Little interest or pleasure in doing things?	<input type="radio"/> Not at all <input checked="" type="radio"/> Several days <input type="radio"/> More than half the days <input type="radio"/> Nearly every day
Feeling down, depressed, or hopeless?	<input type="radio"/> Not at all <input type="radio"/> Several days <input type="radio"/> More than half the days <input type="radio"/> Nearly every day
Trouble falling or staying asleep, or sleeping too much?	<input type="radio"/> Not at all <input type="radio"/> Several days <input type="radio"/> More than half the days <input type="radio"/> Nearly every day
Feeling tired or having little energy?	<input type="radio"/> Not at all <input type="radio"/> Several days <input type="radio"/> More than half the days <input type="radio"/> Nearly every day
Poor appetite or overeating?	<input type="radio"/> Not at all <input type="radio"/> Several days <input type="radio"/> More than half the days <input type="radio"/> Nearly every day
Feeling bad about yourself - or that you are a failure or have let yourself or your family down?	<input type="radio"/> Not at all <input type="radio"/> Several days <input type="radio"/> More than half the days <input type="radio"/> Nearly every day

<p>Trouble concentrating on things, such as reading the newspaper or watching television?</p>	<p>Not at all Several days More than half the days Nearly every day</p>
<p>Moving or speaking so slowly that other people could have noticed? Or the opposite - being so fidgety or restless that you have been moving around a lot more than usual?</p>	<p>Not at all Several days More than half the days Nearly every day</p>
<p>Thoughts that you would be better off dead, or of hurting yourself in some way?</p>	<p>Not at all Several days More than half the days Nearly every day</p>
<p style="text-align: right;"><b>Total=</b> <input type="text"/> <b>/27</b></p>	<p>Answer all questions</p>

PHQ-9 score  $\geq 10$  had a sensitivity of 88% and a specificity of 88% for major depression. It can even be used over the telephone.

Depression Severity:

0-4 None

5-9 Mild depression

10-14 Moderate depression

15-19 Moderately severe depression

20-27 Severe depression.

## Appendix 8: The Posttraumatic Diagnostic Scale (Foa, Cashman, Jaycox, & Perry, 1997)

Part 1 - **Many people have lived through or witnessed a very stressful and traumatic event at some point in their lives. Please bear in mind this could be a single event, a recurring incident, or prolonged exposure to one or more of the incident types listed below.**

266519

**Below is a list of traumatic events. Select ALL of the events that have happened to you or that you have witnessed.**

**IF YOU HAVE NOT EXPERIENCED ANY TRAUMATIC EVENT, PLEASE PROCEED TO THE NEXT PAGE.**

- Serious accident, fire, or explosion (for example, an industrial, farm, car, plane or boating accident)
- Natural disaster (for example, tornado, hurricane, flood, or major earthquake)
- Non-sexual assault by a partner, family member or someone you know (for example, partner abuse, being mugged, physically attacked, shot, stabbed or held at gunpoint)
- Non-sexual assault by a stranger (for example being mugged, physically attacked, shot, stabbed or held at gunpoint)
- Sexual assault by a partner, family member or someone you know (for example, any unwanted sexual contact, rape or attempted rape)
- Sexual assault by a stranger (for example, any unwanted sexual contact, rape or attempted rape)
- Military combat or a war zone
- Sexual contact when you were younger than 18 with someone who was 5 or more years older than you (for example, contact with genitals, breasts)
- Imprisonment (for example, prison inmate, prisoner of war, hostage)

- Torture
- Life-threatening illness
- Other, please specify:

Part 2 - **If you marked more than one traumatic event in Part 1, select below the event that *bothers you the most*. If you selected only one traumatic event in Part 1, select the same one below.**

266521

- Accident
- Disaster
- Non-sexual assault/someone you know
- Non-sexual assault/stranger
- Sexual assault/someone you know
- Sexual assault/stranger
- Combat
- Sexual contact under 18 with someone 5 or more years older
- Imprisonment
- Torture
- Life-threatening illness
- Other, please specify:

In the box below, briefly describe the traumatic event you selected above

266524

266528

How long ago did the traumatic event happen?

During this traumatic event;

266529

Were you physically injured?

Yes  No

266532

Was someone else physically injured?

Yes  No

266533

Did you think that your life was in danger?

Yes  No

---

266534

Did you think that someone else's life was in danger?

Yes  No

---

266536

Did you feel helpless?

Yes  No

---

266546

Did you feel terrified?

Yes  No

---

**Below is a list of problems that people sometimes have after experiencing a traumatic event. Read each one carefully and then select an option from the drop down box that best describes how often that problem has bothered you IN THE PAST MONTH. Rate each problem with respect to the traumatic event you described previously.**

266589

**0= Not at all or only once**

**1 = Once a week or less/once in a while**

**2 = 2-4 times a week/half the time**

**3 = 5 or more times a week/almost always**

How often in past

month

Having upsetting thoughts or images about the traumatic event that came into your head when you didn't want them to

Having bad dreams or nightmares about the traumatic event

Reliving the traumatic event, acting or feeling as if it was happening again

Feeling emotionally upset when you were reminded of the traumatic event (for example, feeling scared, angry, sad, guilty, etc)

Experiencing physical reactions when you were reminded of the traumatic event (for example, breaking out in a sweat, heart beating fast)

Trying not to think about, talk about, or have feelings about the traumatic event

Trying to avoid activities, people, or places that remind you of the traumatic event

Not being able to remember an important part of the traumatic event

Having much less interest or participating much less often in important activities

Feeling distant or cut off from people around you

Feeling emotionally numb (for example, being unable to cry or unable to have loving feelings)

Feeling as if your future plans or hopes will not come true (for example, you will not have a career, marriage, children, or a long life)

Having trouble falling or staying asleep

Feeling irritable or having fits of anger

Having trouble concentrating (for example, drifting in and out of conversations, losing track of a story on television, forgetting what you read)

Being overly alert (for example, checking to see who is around you, being uncomfortable with your back to a door, etc)

Being jumpy or easily startled (for example,

when someone walks up behind you)

266594

How long have you experienced the problems that you reported above?

- Less than 1 month     1 to 3 months     More than 3 months

266595

How long after the traumatic event did these problems begin?

- less than 6 months     6 or more months

266599

**Part 4 - Indicate below if the problems you rated in Part 3 have interfered with any of the following areas of your life DURING THE PAST MONTH. Select yes or no.**

Interfered in the past month?

Work

Household chores and duties

Relationships with friends	<input type="checkbox"/>
Fun and leisure activities	<input type="checkbox"/>
Schoolwork	<input type="checkbox"/>
Relationships with your family	<input type="checkbox"/>
Sex life	<input type="checkbox"/>
General satisfaction with life	<input type="checkbox"/>
Overall level of functioning in all areas of your life	<input type="checkbox"/>

**Appendix 9: McGill Revised Depressive Experiences Questionnaire (Santor, Zuroff & Fielding, 1997)**

**Directions:** Listed below are a number of statements concerning personal characteristics and traits. **Read each item and decide whether you agree or disagree and to what extent.**

If you strongly agree, circle 7; if you strongly disagree, circle 1; if you feel somewhere in between, circle any one of the numbers between 1 and 7. The midpoint, if you are neutral or undecided, is 4.

	<b>Strongly Disagree</b>			<b>Strongly agree</b>		
When I am closely involved with someone, I never feel jealous.	1	2	3	4	5	6 7
I often find that I don't live up to my own standards or ideals.	1	2	3	4	5	6 7
If I fail to live up to expectations, I feel unworthy.	1	2	3	4	5	6 7
Many times I feel helpless.	1	2	3	4	5	6 7
There is a considerable difference between how I am now and how I would like to be.	1	2	3	4	5	6 7
There are times when I feel "empty" inside.	1	2	3	4	5	6 7
I tend not to be satisfied with what I have.	1	2	3	4	5	6 7
People will accept me no matter how many mistakes I have made.	1	2	3	4	5	6 7
Often, I feel I have disappointed others.	1	2	3	4	5	6 7

The way I feel about myself frequently varies: there are times when I feel extremely good about myself and other times when I see only bad in me and feel like a total failure.

1 2 3 4 5 6 7

One must continually work to gain love from another person; that is, love has to be earned.

1 2 3 4 5 6 7

I often feel guilty.

1 2 3 4 5 6 7

I have a difficult time accepting weakness in myself.

1 2 3 4 5 6 7

In my relationships with others, I am very concerned about what they can give to me.

1 2 3 4 5 6 7

Very frequently, my feelings toward someone close to me vary; there are times when I feel completely angry and other times when I feel all-loving towards that person.

1 2 3 4 5 6 7

I grew up in an extremely close family.

1 2 3 4 5 6 7

I tend to be very critical of myself.

1 2 3 4 5 6 7

I very frequently compare myself to standards or goals.

1 2 3 4 5 6 7

**Appendix 10: Socially Prescribed Perfectionism sub-scale of the Multidimensional Perfectionism Scale (MPS-H; Hewitt & Flett, 1991)**

**Directions:** Please read the following statements and **decide to what extent you agree or disagree with them. If you strongly agree**, circle 7; if you strongly disagree, circle 1; if you feel somewhere in between, circle one of the numbers from 2 to 6; if you feel neutral or undecided, the midpoint is 4.

	<b>Strongly Disagree</b>						<b>Strongly agree</b>	
	1	2	3	4	5	6	7	
I find it difficult to meet others' expectations of me.	1	2	3	4	5	6	7	
Those around me readily accept that I can make mistakes too.	1	2	3	4	5	6	7	
The better I do, the better I am expected to do.	1	2	3	4	5	6	7	
Anything I do that is less than excellent will be seen as poor work by those around me.	1	2	3	4	5	6	7	
The people around me expect me to succeed at everything I do.	1	2	3	4	5	6	7	
Others will like me even if I don't excel at everything.	1	2	3	4	5	6	7	

Success means that I must work even harder to please others. 1 2 3 4 5 6 7

Others think I am okay, even when I do not succeed. 1 2 3 4 5 6 7

I feel that people are too demanding of me. 1 2 3 4 5 6 7

Although they may not show it, other people get very upset with me when I slip up. 1 2 3 4 5 6 7

My family expects me to be perfect. 1 2 3 4 5 6 7

My parents rarely expect me to excel in all aspects of my life. 1 2 3 4 5 6 7

People expect nothing less than perfection from me. 1 2 3 4 5 6 7

People expect more from me than I am capable of giving. 1 2 3 4 5 6 7

People around me think I am still competent even if I make a mistake. 1 2 3 4 5 6 7

## Appendix 11: The Defeat Scale (Gilbert & Allan, 1998)

### THE D SCALE

Below is a series of statements which describe how people can feel about themselves. Read each item carefully and circle the number to the right of the statement that best describes how you have felt in the last 7 days. Use the scale below. Please do not omit any item.

#### SCALE

**0 = NEVER   1 = RARELY   2 = SOMETIMES   3 = MOSTLY (a lot)   4 = ALWAYS**

I feel that I have sunk to the bottom of the ladder.                      0 1 2 3 4

I feel that I can meet life's challenges    0 1 2 3 4

I feel completely knocked out of action.    0 1 2 3 4

I feel there are a lot of positive things in my life    0 1 2 3 4

I feel that I am one of life's losers.    0 1 2 3 4

## Appendix 12: The Entrapment Scale (Gilbert & Allan, 1998)

### The Entrapment Scale

For each of the following attitude statements indicate the extent to which you think it represents your own view of yourself. Read each item carefully and circle the number to the right of the statement that best describes the degree to which each statement is Like You. Use the scale below. Please do not omit any item.

#### SCALE

**0 = Not at all   1 = A little bit   2 = Moderately   3 = Quite a bit   4 = Extremely**

	<b>like me</b>				
1. I am in situation I feel trapped in.					0 1 2 3 4
2. I have a strong desire to escape from things in my life.					0 1 2 3 4
3. I feel trapped by other people.					0 1 2 3 4
4. I want to get away from myself.					0 1 2 3 4
5. I feel trapped inside myself.					0 1 2 3 4
6. I would like to get away from who I am and start again.					0 1 2 3 4

*Note Items 1-3 are External Entrapment   Items 4-6 are internal Entrapment*

**Appendix 13: Response Styles Scale (Treyner, Gonzales & Nolen-Hoeksema, 2003)**

**Directions:** People think and do many different things when they feel sad, blue or depressed. Please read each of the items below and indicate whether you never, sometimes, often or always do each one **when you feel sad, down, or depressed**. Please indicate what you generally do, not what you think you should do.

1. **Think “What am I doing to deserve this?”**
  - 1 Almost Never
  - 2 Sometimes
  - 3 Often
  - 4 Almost Always
2. **Analyse recent events to try to understand why you are depressed**
  - 1 Almost Never
  - 2 Sometimes
  - 3 Often
  - 4 Almost Always
3. **Think “Why do I always react this way?”**
  - 1 Almost Never
  - 2 Sometimes
  - 3 Often
  - 4 Almost Always
4. **Go away by yourself and think about why you feel this way**
  - 1 Almost Never
  - 2 Sometimes
  - 3 Often
  - 4 Almost Always
5. **Write down what you are thinking and analyse it**
  - 1 Almost Never
  - 2 Sometimes
  - 3 Often
  - 4 Almost Always
6. **Think about a recent situation wishing it had Gone better**
  - 1 Almost Never
  - 2 Sometimes
  - 3 Often
  - 4 Almost Always
7. **Think “Why do I have problems other people don’t have?”**
  - 1 Almost Never
  - 2 Sometimes
  - 3 Often
  - 4 Almost Always
8. **Think “Why can’t I handle things better?”**
  - 1 Almost Never
  - 2 Sometimes
  - 3 Often
  - 4 Almost Always
9. **Analyse your personality and try to understand why you are depressed**
  - 1 Almost Never
  - 2 Sometimes
  - 3 Often
  - 4 Almost Always
10. **Go someplace alone to think about your feelings**
  - 1 Almost Never
  - 2 Sometimes
  - 3 Often
  - 4 Almost Always

**Appendix 14: Socially Desirable Response Set (SDRS-5: Hays, Hayashi & Stewart, 1989)**

Listed below are a few statements about your relationships with others. How much is each statement TRUE or FALSE for you?

1. I am always courteous even to people who are disagreeable  
Definitely True  
Mostly True  
Don't Know  
Mostly False  
Definitely False
  
2. There have been occasions when I took advantage of someone  
Definitely True  
Mostly True  
Don't Know  
Mostly False  
Definitely False
  
3. I sometimes try to get even rather than forgive and forget  
Definitely True  
Mostly True  
Don't Know  
Mostly False  
Definitely False
  
4. I sometimes feel resentful when I don't get my way  
Definitely True  
Mostly True  
Don't Know  
Mostly False  
Definitely False
  
5. No matter who I'm talking to, I'm always a good listener  
Definitely True  
Mostly True  
Don't Know  
Mostly False  
Definitely False

**Appendix 15: Measure of Impact of abusive relationships (McCarry, Hester, & Donovan, 2008)**

Thinking about the types of behaviours outlined in this section, we would like now to focus on the impact of these behaviours. Below is a list of ways in which these types of behaviours can impact on you and your life. **Please select all the items you feel you have experienced as a result of these behaviours.**

Didn't have an impact	<input type="checkbox"/>
Made you feel loved/wanted	<input type="checkbox"/>
Lost respect for your partner	<input type="checkbox"/>
Made you want to leave your partner	<input type="checkbox"/>
Emotional/sleeping problems/depression	<input type="checkbox"/>
Stopped trusting people	<input type="checkbox"/>
Stopped trusting partner	<input type="checkbox"/>
Felt unable to cope	<input type="checkbox"/>
Felt worthless/lost confidence	<input type="checkbox"/>
Felt sadness	<input type="checkbox"/>
Felt anxious/panic/lost concentration	<input type="checkbox"/>
Felt embarrassed/stupid	<input type="checkbox"/>
Felt isolated/stopped going out	<input type="checkbox"/>
Felt angry/shocked	<input type="checkbox"/>
Self-harmed/felt suicidal	<input type="checkbox"/>
Worried partner might leave you	<input type="checkbox"/>
Defended yourself/children/property/pets	<input type="checkbox"/>
Feared for your life	<input type="checkbox"/>
Retaliated by shouting at partner	<input type="checkbox"/>
Retaliated by hitting your partner	<input type="checkbox"/>
Affected sexual side of your relationship	<input type="checkbox"/>

Worked harder to make partner happy	<input type="checkbox"/>
Worked harder to stop making mistakes	<input type="checkbox"/>
Felt had to watch what you say/do	<input type="checkbox"/>
Lost contact with your children	<input type="checkbox"/>
Negatively affected your children	<input type="checkbox"/>
Negatively affected your relationship with children	<input type="checkbox"/>

## Appendix 16: Measure of Control within relationships (Johnson, 2008)

The following is a list of statements that some people have used to describe their partner. Please **indicate whether or not each statement describes your partner**.

	Yes	No
He or she tries to limit your contact with family or friends	<input type="checkbox"/>	<input type="checkbox"/>
He or she puts you down or calls you names to make you feel bad	<input type="checkbox"/>	<input type="checkbox"/>
He or she is jealous and doesn't want you to talk to or socialise with other men/women	<input type="checkbox"/>	<input type="checkbox"/>
He or she harms, or threatens to harm, someone close to you	<input type="checkbox"/>	<input type="checkbox"/>
He or she demands to know who you are with and where you are at all times	<input type="checkbox"/>	<input type="checkbox"/>
He or she damages or destroys your possessions or property	<input type="checkbox"/>	<input type="checkbox"/>
He or she prevents you from knowing about or having access to the family income, or controls spending	<input type="checkbox"/>	<input type="checkbox"/>

### Appendix 17: Rosenberg's Self-Esteem Scale (1965)

Please read each statement and **indicate to what extent you agree or disagree** with each item.

	Strongly Agree	Agree	Disagree	Strongly Disagree
I feel that I am a person of worth, at least on an equal plane with others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel that I have a number of good qualities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All in all, I am inclined to feel that I am a failure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am able to do things as well as most other people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel I do not have much to be proud of	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I take a positive attitude toward myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On the whole, I am satisfied with myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I wish I could have more respect for myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I certainly feel useless at times	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
At times I think I am no good at all	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## **Appendix 18: Brief COPE (Carver, 1997)**

These questions deal with ways you cope with stress in your life. There are many ways to try to deal with problems. Each item says something about a particular way of coping.

I am interested in the **extent to which you've done what the item says when you have had to deal with stress or problems in your life**. Don't answer on the basis of whether it works or not - just whether or not you have done it. Make your answers as true **for you** as you can.

	I haven't done this at all	I've done this a little bit	I've done this a medium amount	I've done this a lot
Turning to work or other activities as a distraction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Concentrating efforts on doing something about the situation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Saying to myself "this isn't real"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using alcohol or other drugs to feel better	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Getting emotional support from others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Giving up trying to deal with it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Taking action to try to make the situation better	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Refusing to believe that it's happened	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Saying things to let my unpleasant feelings escape	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Getting help and advice from others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using alcohol or other drugs to help me get through it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Criticizing myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Trying to come up with a strategy about what to do	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Getting comfort and understanding from someone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Giving up the attempt to cope	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Looking for something good in what's happening	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Making jokes about it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Doing something to think about it less, such as watching a movie, reading, taking part in a hobby, etc	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Accepting the reality of the fact that it's happened	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expressing my negative feelings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Trying to find comfort in religious or spiritual beliefs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Trying to get advice or help from others about what to do	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Learning to live with it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thinking hard about what steps to take	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Blaming myself for things that happened	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Praying or meditating	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Making fun of the situation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Appendix 19: The Means-End Problem Solving Test (MEPS; Platt, Spivack & Bloom, 1975).**

In this section we are interested in **how you solve problems**.

You will be given a number of stories to complete. For each story you will be given the **beginning** of the story **and how the story ends**. We'd like you to **provide the ideal strategy** that will allow the beginning and the end of the story to become connected.

We would like you to **describe** this strategy in very specific terms so that it would be **possible for anyone to follow your plan of action**. Describe this aloud to the researcher, who will write your answers in the boxes below.

**Story 1**

Joanne notices that her friends seemed to be avoiding her. She wants to have friends and be liked.

The story ends when her friends like her again.

Describe to the researcher the best strategy to overcome this problem. **You begin where she first notices her friends avoiding her.**

**Story 2**

Joanne is having trouble getting along with her boss at work. She is very unhappy about this.

The story ends with her boss liking her.

Describe to the researcher the best strategy to overcome this problem. **You begin the story where she isn't getting along with her boss.**

### Story 3

Joanne loved her partner very much, but they had many arguments. One day her partner left her. She wanted things to be better.

The story ends with everything fine between her and her partner.

Describe to the researcher the best strategy to overcome this problem. **You begin the story with her partner leaving her after an argument.**

### Story 4

Joanne has just moved in that day and didn't know anyone else. She wanted to have friends in the neighbourhood.

The story ends with her having many good friends and feeling at home in the neighbourhood.

Describe to the researcher the best strategy to overcome this problem . **You begin the story when she has just arrived in the neighbourhood.**

**Appendix 20: The ENRICHD Social Support Instrument (Freedland, 2000)**

This section asks questions about the people around you. Please indicate **how often someone is available for each of the items below.**

	None of the time	A little of the time	Some of the time	Most of the time	All of the time
Is there is someone available that you can count on to listen to you when you need to talk?	<input type="checkbox"/>				
Is there someone available to you to give you good advice about a problem?	<input type="checkbox"/>				
Is there someone available to you who shows you love and affection?	<input type="checkbox"/>				
Is there someone available to help with daily chores?	<input type="checkbox"/>				
Can you count on anyone to provide you with emotional support?	<input type="checkbox"/>				

Do you have as much contact as you would like with someone you feel close to, whom you can trust and confide in?	<input type="checkbox"/>				
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## **Appendix 21: Goal Adjustment Scale (Wrosch, Scheier, Miller, Schulz, & Carver, 2003)**

During their lives **people cannot always attain the things they want and are sometimes forced to stop pursuing goals they want to achieve.**

A goal can be anything at all that is important to you, such as having a family, gaining a specific qualification, getting a particular job, or being in a good relationship.

We are interested in understanding **how you usually react** when this happens to you. Think about a time **when you have not been able to attain the things you want, or have had to stop pursuing a goal you wanted to achieve.** Please **indicate the extent to which you agree or disagree with each of the following statements**, as it usually applies to you.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
It's easy for me to reduce my effort towards the goal	<input type="radio"/>				
I convince myself that i have other meaningful goals to pursue	<input type="radio"/>				
I stay committed to the goal for a long time; I can't let it go	<input type="radio"/>				
I start working on other new goals	<input type="radio"/>				
I think about other new goals to pursue	<input type="radio"/>				
I find it difficult to stop trying to achieve the goal	<input type="radio"/>				
I seek other meaningful goals	<input type="radio"/>				
It's easy for me to stop thinking about the goal and let it go	<input type="radio"/>				
I tell myself that I have a number of other new goals to draw upon	<input type="radio"/>				
I put effort toward other meaningful goals	<input type="radio"/>				

## Appendix 22: Future Thinking Task (FTT; MacLeod, Pankhania & Mitchell, 1997)

This section is interested in your expectations for the future.

The researcher will ask you to **think of as many potential positive experiences as you can** that might occur across 3 time periods - in the next week, in the next year, and over the next 5-10 years.

You should not spend a lot of time thinking of potential experiences. You should spend no more than one minute thinking about potential experiences for each of the time periods. The researcher will time this, and will write down each experience you name

The content of the future experiences is not important, and you do not have to describe the experience in detail - it can simply be one or two words.

Spend one minute now thinking of as many potential **positive** experiences as you can **(things you are looking forward to)** that might occur **over the next week**, saying each one aloud to the researcher.

Spend one minute now thinking of as many potential **positive** experiences as you can **(things you are looking forward to)** that might occur **over the next year**, saying each one aloud to the researcher.

Now spend one minute thinking of as many potential **positive** experiences as you can **(things you are looking forward to)** that might occur **over the next 5-10 years**, saying each one aloud to the researcher

The researcher will now ask you to **think of as many potential negative experiences as you can** that might occur across 3 time periods - in the next week, in the next year, and over the next 5-10 years.

You should not spend a lot of time thinking of potential experiences. You should spend no more than one minute thinking about potential experiences for each of the time periods. The researcher will time this, and will write down each experience you name.

The content of the future experiences is not important, and you do not have to describe the experience in detail - it can simply be one or two words.

Spend one minute now thinking of as many potential **negative** experiences as you can **(things you are not looking forward to)** that might occur **over the next week**, saying each one aloud to the researcher.

Spend one minute now thinking of as many potential **negative** experiences as you can **(things you are not looking forward to)** that might occur **over the next year**, saying each one aloud to the researcher

Now spend one minute thinking of as many potential **negative** experiences as you can **(things you are not looking forward to)** that might occur **over the next 5-10 years**, saying each one aloud to the researcher.

**Appendix 23: Full Defeat Measure (Gilbert & Allan, 1998)**

Below is a series of statements which describe **how people can feel about themselves**.  
Read each item carefully and tick the box under the column that best describes how you  
have felt in the **last 7 days**.

	Never	Rarely	Sometimes	Mostly	Always/All the time
I feel that I have not made it in life	<input type="checkbox"/>				
I feel that I am a successful person	<input type="checkbox"/>				
I feel defeated by life	<input type="checkbox"/>				
I feel that I am basically a winner	<input type="checkbox"/>				
I feel that I have lost my standing in the world	<input type="checkbox"/>				
I feel that life has treated me like a punchbag	<input type="checkbox"/>				
I feel powerless	<input type="checkbox"/>				
I feel that my confidence has been knocked out of me	<input type="checkbox"/>				
I feel able to deal with whatever life throws at me	<input type="checkbox"/>				
I feel that I have sunk to the bottom of the ladder	<input type="checkbox"/>				
I feel completely knocked out of action	<input type="checkbox"/>				
I feel that I am one of life's losers	<input type="checkbox"/>				
I feel that I have given up	<input type="checkbox"/>				
I feel down and out	<input type="checkbox"/>				
I feel I have lost important battles in life	<input type="checkbox"/>				
I feel that there is no fight left in me	<input type="checkbox"/>				

**Appendix 24: Full Entrapment Measure (Gilbert & Allan, 1998)**

For each of the following statements, please indicate the extent to which you think it represents **your own view of yourself**. Read each item carefully and tick the box under the column that best describes the degree to which each statement is **like you**.

	Not at all like me	A little bit like me	Moderately like me	Quite a bit like me	Extremely like me
I want to get away from myself	<input type="checkbox"/>				
I feel powerless to change myself	<input type="checkbox"/>				
I would like to escape from my thoughts and feelings	<input type="checkbox"/>				
I feel trapped inside myself	<input type="checkbox"/>				
I would like to get away from who I am and start again	<input type="checkbox"/>				
I feel I'm in a deep hole I can't get out of	<input type="checkbox"/>				
I am in a situation I feel trapped in	<input type="checkbox"/>				
I have a strong desire to escape from things in my life	<input type="checkbox"/>				
I am in a relationship I can't get out of	<input type="checkbox"/>				
I often have the feeling that I would just like to run away	<input type="checkbox"/>				
I feel powerless to change things	<input type="checkbox"/>				
I feel trapped by my obligations	<input type="checkbox"/>				
I can see no way out of my current situation	<input type="checkbox"/>				
I would like to get away from other more powerful people in my life	<input type="checkbox"/>				
I have a strong desire to get away and stay away from where I am now	<input type="checkbox"/>				
I feel trapped by other people	<input type="checkbox"/>				

## Appendix 25: Consent Form

### **Participant Information Sheet and Consent Form**

**Why do this study?** - We are interested in the impact of relationships and personality and cognitive factors, on stress and psychological distress.

**What will participation involve?** - This research involves meeting with the researcher and completing a variety of questionnaires, along with some simple cognitive tasks. Taking part in this project should take around 1 hour. This study is conducted in two phases, and the second phase would involve completing some of the same measures again in six months time. You are under no obligation to take part in both phases, and you can withdraw from the study at any time.

This study will ask potentially sensitive questions about your relationships, including any relationships difficulties. Questions will also be asked about your experience of psychological distress and coping, including questions about suicidal thoughts and behaviours. All data is completely anonymous and confidential, and during each session, you are free to omit any questions or sections that do not apply to you or you do not wish to answer.

All data will be identified by a unique reference code, which will be assigned to you at the start of the first session. This will enable us to link your data together at both phases. Any contact details you provide will be separate from the data, to ensure anonymity and confidentiality. All data will be stored in a password protected area. Only the researcher will have access to this confidential information.

**How long will participation take?** The session is expected to take around 1 hour to complete.

**Researchers Contact Details** – Please feel free to contact the researcher if you wish any further information, or have any questions.

Jennifer McLaughlin  
Email: [Jennifer.mclaughlin@stir.ac.uk](mailto:Jennifer.mclaughlin@stir.ac.uk)  
Phone: 01786 466853  
University of Stirling  
Department of Psychology  
Stirling  
FK9 4LA

**As an informed participant of this experiment, I understand that:**

1. My participation is voluntary and I may cease to take part in this experiment at any time, without penalty. I can withdraw my data at any time by contacting the researcher.
2. I am aware of what my participation involves.
3. There are no risks involved in the participation of this study.
4. I have the opportunity to ask any questions I wish before and during each session, and I can contact the researcher at any time. In taking part, I will be provided with details of organisations where I can seek help, advice or support if I wish to.
5. The researcher will ensure my confidentiality, and my contact details will not be stored with my data.
6. All my questions about the study have been satisfactorily answered.

**I have read and understood the above, and give consent to participate:**

**Participant's Signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**I have explained the above and answered all questions asked by the participant:**

**Researcher's Signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_