

AN INVESTIGATION INTO SAME-SEX INTIMATE PARTNER VIOLENCE

by

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Abstract

This thesis aims to advance academic understanding of same-sex intimate partner violence (SSIPV). This is achieved via three pieces of research. First, a systematic review of the literature investigating risk factors of male SSIPV is presented. This highlighted the lack of research in this field, together with methodological and definitional problems. However, findings indicated that risk factors for male SSIPV are similar to those established for heterosexual male IPV, with some specific exceptions. Second, an empirical investigation into a sample of women's beliefs and approval of heterosexual and same-sex intimate partner violence (IPV) and their involvement as a risk factor to perpetration is presented. Results showed that certain types of IPV are deemed to be more acceptable than others and that approval of IPV is tentatively linked as a risk factor for perpetration. Finally, a critique of a psychometric measure used in the research project is presented, namely the Revised Conflict Tactics Scales (CTS2). This highlighted many strengths of the CTS2 for use in the field, particularly its ability to quickly obtain large amounts of data, and the inclusion of many acts of IPV. However, it has some limitations, namely the lack of ability to ascertain the context of IPV. The implications of the thesis findings for the early identification, support, treatment, and education for perpetrators, victims, services, and the general public are discussed.

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Chapter One

GENERAL INTRODUCTION

General Introduction

Intimate Partner Violence

The terms violence and aggression are frequently used interchangeably when discussing abusive acts directed at others. However, the two have been described as having a different focus, with aggression concentrating on the act itself and violence on the consequences of the act (Archer, 2000). When aggression and violence is used in the family home, this is commonly termed domestic violence (DV). As DV can refer to any form of aggression taking place within the domestic context, specific terms have been developed to refer to particular types of DV. Of relevance to this thesis, aggression and violence against an intimate partner is often termed intimate partner aggression (IPA) or violence (IPV). Whilst there are technical differences between IPA and IPV, to date the academic literature has generally accepted using the term IPV to refer to aggression and violence that may take place within intimate relationships. IPV can be understood as “any form of aggression and/or controlling behaviors used against a current or past intimate partner of any gender or relationship status” (Dixon & Graham-Kevan, 2011, p. 1145), which can include physical, sexual or psychological aggression. IPV has been shown to occur in roughly 10-25% (Straus & Gelles, 1986; Tjarden & Thoennes, 2000) of Western populations, demonstrating it as a social problem that needs to be addressed. The effects of IPV can have a very severe impact on a person’s physical and mental wellbeing, for example chronic pain, depression, and their occupational and socioeconomic status (e.g., Anderson, 2002; Campbell, 2002; Lloyd, 1997). Therefore, research into IPV is necessary in order to reduce the prevalence of all forms of IPV, and

devise and utilise empirically supported practice initiatives (Dixon & Graham-Kevan, 2011).

Theories of IPV

Research into IPV has typically been driven by a gendered perspective, which asserts that IPV is caused by the norms and beliefs promoted by patriarchal societies. This necessitates that men show dominance over women and use various types of aggression and violence in order to achieve this (e.g., Hamberger, Lohr, Bonge, & Tolin, 1997). Therefore, from this perspective it is sensible to assume that male gender is *the* strongest risk factor for IPV perpetration (Respect, 2008). The gendered perspective argues that females are invariably the victim of IPV, highlighting prevalence rates of 25% of females to only 8% of males of physical or sexual IPV (Tjarden & Thoennes, 2000). Similarly, female IPV perpetration is only utilised in self-defence (e.g., Saunders, 2002). The commonly held view is that female aggression is trivial and that women are less able to cause serious consequences due to their smaller physical size (Dobash & Dobash, 2004; Tracey, 2007). As a result of this perspective influencing societal views, research into IPV has been largely focused on heterosexual male IPV, (Burke & Follingstad, 1999).

Various problems have been reported with the gendered perspective, such as publication bias (Straus, 2007a) and its definition of IPV and what acts it encompasses (Archer, 2000). Furthermore, the methodology undertaken is often flawed, with conclusions being made about the nature of IPV from interviews with female victims only, or female perpetration in the context of male violence (Medina-Ariza & Barbaret, 2003). Similarly,

surveys are often conducive to the reporting of male perpetration only (Straus, 2007a; Dutton & Nicholls, 2005). Reporting bias will influence findings as females are significantly more likely to report being a victim of IPV than men (Tjaden & Thoennes, 1998). Male victims of IPV are less able to recognise their own victimisation of IPV as a crime from a female partner (Dutton & Nicholls, 2005). Furthermore, due to a male's physical size, they are more likely to cause a serious injury than a female (Archer, 2000), which would be more likely to be reported, particularly if medical help is required. Subsequent research has shown that IPV can occur in all types of relationship, regardless of marital status and sex of the couple (Dixon & Graham-Kevan, 2011). Additionally, using more improved and representative methods has demonstrated that approximately equal rates of IPV perpetration and controlling behaviours exist between heterosexual males and females (Archer, 2000; Dutton & Nicholls, 2005; Graham-Kevan & Archer, 2009; Straus & Gelles, 1986), arguing a gender inclusive approach is necessary. This approach asserts that perpetration by both sexes is roughly equal, and that gender is not the strongest risk factor for perpetration, but instead that there are many interacting factors causing IPV perpetration. Research supporting this has found that mutual partner violence (MPV) is the most frequent form of IPV and the female partner is more commonly the perpetrator in situations with just one aggressor (Straus, 2007b; Straus & Ramirez, 2002). Straus and Gelles (1986) completed two U.S. national surveys of IPV and found in 1975 that males perpetrate 12.1% and females perpetrate 11.6%, but in 1985 they found slightly higher levels of female perpetration at 12.1%, to only 11.3% of male perpetration.

Same-Sex IPV

There has been a paucity of research into same-sex intimate partner violence (SSIPV) in comparison to heterosexual IPV literature. However, literature has shown that SSIPV is very much evident in society, at a similar (e.g., 11-12% for physical SSIPV; Rohrbaugh, 2006), or potentially higher rate, than heterosexual IPV (Messinger, 2011; Waldner-Haugrud, Gratch, & Magruder, 1997). Indeed, Fountain, Mitchell-Brody, Jones, and Nichols (2009) found that 67% of all individuals reporting DV incidents describe themselves as gay (male or female). Additionally, rates of SSIPV may be underestimated due to sampling and methodological problems, whereby general probability samples do not always enquire about sexual orientation so rates of SSIPV are underestimated (Greenwood, et al., 2002). Specific factors unique to same-sex couples may create underreporting, such as homophobia, minority stress, fear of reporting due to concealment of sexuality (McClennen, Summers, & Vaughan, 2002; St Pierre & Senn 2010) and the limited, ill-equipped, and unhelpful resources available for them (Letellier, 1994; Merrill & Wolfe, 2000). Furthermore, the process of “outing” of sexuality may also increase the abuse they endure, resulting in greater isolation and rejection from family, loss of support networks and loss of employment. Therefore, SSIPV must not be ignored and this thesis attempts to overcome these issues.

Gendered theorists argue that SSIPV is qualitatively different to heterosexual IPV as these relationships do not reflect conventional power relations (Respect, 2004). The gendered perspective also asserts that SSIPV is higher in gay males than gay females (Tjaden, Thoennes, & Allison, 1999) due to males being more biologically predisposed to aggression than females (e.g., Maccoby & Jacklin, 1974). However, research has not

supported this. For example, some literature has shown similar experiences between males and females of SSIPV (Kulkin, Williams, Borne, de la Bretonne, & Laurendine, 2007) and indeed higher rates in female SSIPV compared to male SSIPV (Halpern, Young, Waller, Martin, & Lawrence, 2004).

The gender inclusive perspective can be applied to SSIPV. Dutton's (1995; 2006) nested ecological theory, which is gender inclusive, argues that IPV is likely caused by many interacting factors (i.e., not solely patriarchy) which are relevant for both heterosexual IPV and SSIPV. These include: substance use, dependency, intergenerational violence, relationship satisfaction (Renzetti, 1992; Stith, Smith, Penn, Ward, & Tritt, 2004), jealousy, anger, and/or control (Graham-Kevan & Archer, 2005). There are also specific aspects such as internalised homophobia (Meyer, 1995), homophobic societal views, and HIV/AIDS which may contribute to SSIPV (Letellier, 1994). Furthermore, researchers have argued that one specific, homogenous group of IPV perpetrators is unlikely (Dixon & Browne, 2003; Holtzworth-Munroe & Stuart, 2004) further promoting the idea that there is not one superior risk factor predictive of IPV. It is also argued that IPV perpetrated by males and females has similar complex aetiology (O'Leary, Smith Slep, & O'Leary, 2007). It is essential that SSIPV is investigated in its own right, to fully understand it in the same depth as heterosexual IPV, and the factors involved, which this thesis aims to address.

Research into homosexuality and same-sex relationships may have been further impeded because it has only relatively recently become accepted in society, courtesy of the Wolfenden Report in 1957 leading to the legalisation of homosexual acts between two men in 1967. However, same-sex relationships are still not regarded as the norm which may have contributed to the lack of research investigating SSIPV, compared to

the extensive research undertaken upon heterosexual relationships. Initial research attempted to understand and normalise same-sex relationships to reduce homophobic attitudes (Cass, 1979; Greenberg, 1988). Literature developed to investigate other problematic behaviours and issues prominent in this population (e.g., childhood abuse, sexual risk behaviour and HIV/AIDS, substance use, e.g., Brennan, Hellerstedt, Ross, & Welles, 2007; Gore-Felton et al., 2006; Island & Letellier, 1991; Kalichman, Gore-Felton, Benotsch, Cage, & Rompa, 2004). In the late 1980s/early 1990s, research began to focus onSSIPV, involving studies exploring the prevalence in this population, thus raising awareness of its occurrence. Investigators started to address help-seeking behaviours and the risk factors and characteristics ofSSIPV, so that support and resources could be guided more appropriately. However, investigation and reviewing of the literature aroundSSIPV has focused more upon gay females than gay males. This may be because historically, IPV research has been undertaken from a gendered perspective, with the main concern being females. Another reason could be that research into gay males has tended to concentrate on HIV/AIDS, because of its prevalence in this population (Burke & Follinstad, 1999). It is estimated that 4 to 17% of American adults have experienced a same-sex intimate relationship (Gonsiorek & Weinrich, 1991), demonstrating a significant minority, so it is vital that understanding ofSSIPV improves as there are potentially many individuals requiring support that is not yet available to them.

Aims of the Thesis

This thesis aims to advance academic understanding of SSIPV. This is achieved via three pieces of work, each of which is presented in its own chapter within this thesis.

Chapter Two provides a systematic review of the SSIPV literature. Research has been conducted investigating characteristics in male SSIPV, but less fully than with female SSIPV. Further to this, systematic reviewing of this literature is limited, with methodological flaws influencing the conclusions. This review improves on previous attempts and aims to systematically ascertain specific risk factors that are present for perpetrators and victims of male SSIPV, compared to non-SSIPV controls. It includes articles that only examine risk factors of male SSIPV compared to a control group of non-SSIPV males. It explores both perpetrator and victim risk factors due to the gender equality in the dyad and the occurrence of mutual partner violence (also evident in heterosexual IPV, e.g., Straus, 2007b), meaning there may be similarities or overlap between perpetrator and victim risk factors. An improved understanding of risk factors involved in SSIPV may help to reduce its occurrence, by educating those in support services to guide resources appropriately for all types of victims/perpetrators. Similarly, it will provide information to aid the development of risk assessment tools and treatment.

Chapter Three provides an empirical investigation exploring the rates, beliefs and approval of heterosexual IPV and SSIPV and the relationship of this approval to perpetration by heterosexual and same-sex couples. The literature in this field is limited, particularly regarding beliefs about SSIPV, which are somewhat inconsistent. It suggests that individuals' beliefs are biased depending upon the gender and sexuality of

perpetrator and victim. This is particularly pertinent to understand as the public needs to be educated about the destructive nature of IPV and to recognise that all forms of IPV are unacceptable. Furthermore, there is minimal exploration into approval and its association as a risk factor for perpetration. This is vital to address as beliefs and approval could be a contributor or risk factor for perpetration, and if so, would need to be incorporated into methods to reduce IPV/SSIPV. This would include ensuring that all individuals are aware that any form of IPV is unacceptable, and approval should be addressed in perpetrator treatment programmes to reduce recidivism.

Chapter Four presents a critique of a psychometric measure used in the research project, the Revised Conflict Tactics Scales (CTS2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996), which is widely used in IPV empirical studies. This will provide insight into the accuracy and potential limitations of the findings in the research project, which could have implications for any recommendations made as a result. This will also offer more understanding into other research which has used the CTS2 and the accuracy of their findings. It is important, particularly in the field of SSIPV, to ensure the methodology used is valid and reliable, due to the problems mentioned above whereby tools may not incorporate or be appropriate for use with same-sex couples. This causes inaccuracies in findings and also may create biases in the theories regarding IPV and SSIPV. A strength of the CTS2 is that the terminology is gender neutral, so it is able to be used with this population and hence was included in this research, alongside demographic information.

A general discussion of the findings concludes the thesis. This will summarise and draw together the main results from the thesis and offer insights about the collective contribution of the research to the wider field of IPV and specifically SSIPV.

Chapter Two

INVESTIGATING THE RISK FACTORS FOR PERPETRATORS AND VICTIMS OF MALE SAME-SEX INTIMATE PARTNER VIOLENCE: A SYSTEMATIC REVIEW

Abstract

Whilst intimate partner violence (IPV) in heterosexual relationships is a well-researched phenomenon, IPV in same-sex relationships (SSIPV) is less well studied, particularly for males. The aim of this review was to systematically ascertain specific risk factors that were present for male perpetrators and victims of SSIPV, compared to non-SSIPV controls. The peer reviewed empirical literature investigating risk factors for perpetrators and victims of SSIPV, in comparison to a control group of non-SSIPV men, was systematically reviewed. 1918 studies were identified from three electronic databases (PsycINFO, EMBASE, Web of Science) and the reference lists of relevant hits. Six studies met the inclusion criteria specified based on information in the titles and abstracts, and were consequently quality assessed. All six reached the threshold for inclusion. Results highlighted a lack of case-control, empirical literature for male SSIPV, and problems with definitions of IPV and also methodology. However, the review showed there were risk factors associated with the perpetration and victimisation of male SSIPV. Factors highlighted for perpetrators included substance use, unprotected sex, stigma consciousness, possible mental health difficulties, low social economic status in family of origin, and less education. For victims, factors included substance use, unprotected sex, stigma consciousness, mental/physical health difficulties, and young age. There was also a synergistic interaction observed between the factors which exacerbated the effects for both victims and perpetrators. The risk factors found to be related to SSIPV have similarities to those factors identified for heterosexual IPV. However, results indicated that certain risk factors (stigma consciousness, and unprotected sex with HIV status) are specific to SSIPV. The implications of findings for

the early identification, support and treatment for men experiencing SSIPV are discussed.

Introduction

Intimate partner violence (IPV) has been shown to be evident in many individuals' lives, but the majority of the literature has focused on heterosexual IPV and males especially have been regarded as the sole perpetrator in these relationships through research from a gendered perspective. The literature investigating same-sex intimate partner violence (SSIPV) is gradually increasing, but little research has systemically reviewed study findings to obtain aggregate results. However, the available literature suggests that SSIPV occurs at an equal or higher rate to heterosexual IPV (Fountain, Mitchell-Brody, Jones, & Nichols, 2009; Messinger, 2011; Rohrbaugh, 2006; Waldner-Haugrud, Gratch, & Magruder, 1997). Furthermore, IPV among gay men is the third largest health problem, after HIV/AIDS and substance abuse (Island & Letellier, 1991). Therefore, it must not be ignored, and should be investigated in its own right.

Causes and Characteristics of IPV & SSIPV

Gendered perspectives to understanding IPV assert that IPV is caused by the norms and beliefs promoted by patriarchal societies, which necessitates that men show dominance over women and use various types of aggression and violence in order to achieve this (e.g., Hamberger, Lohr, Bonge, & Tolin, 1997). Therefore, from this perspective it is sensible to assume that male gender is *the* strongest risk factor for IPV perpetration (Respect, 2008). However, a more holistic approach is the gender inclusive perspective, which highlights the similarities in perpetration from both males and females and incorporates various theories, including the nested ecological theory (Dutton, 1995;

2006). This suggests that IPV is caused by many interacting factors at four levels of an ecological model. The innermost layer is the ontogenic level, which is reflecting the individual's development, history, attitudes and thinking (e.g., substance use, mental health difficulties), followed by the microsystem level, which is the immediate context/environment or family where IPV results (e.g., the interaction of the couple). The next level is the exosystem level, which are the immediate social aspects surrounding the individual that may impact them (e.g., homophobic attitudes from peers, lack of social support). The outermost layer is the macrosystem level, which contains influences from beliefs and attitudes within the culture they live, which impact upon all the other levels (e.g., heterosexist society creating minority stress in same-sex couples, or patriarchal society creating expectations of how relationships should be and how others around them react). The large quantity of research to establish factors of heterosexual male perpetration has enabled risk assessment tools (e.g., Spousal Assault Risk Assessment; SARA; Kropp, Hart, Webster, & Eaves, 1995) and treatment interventions to be created to reduce heterosexual male perpetrated IPV.

It is only recently that literature has started to examine factors and characteristics of SSIPV, and consequently these are less well understood. The gendered theory cannot be applied to same-sex relationships due to the gender equality within the couple.

Gendered theorists assert that SSIPV is qualitatively different to heterosexual IPV and that these relationships do not reflect conventional power relations (Respect, 2004).

Hence the causes of SSIPV would be different to heterosexual IPV. However, previous research has indicated that similar factors may be involved for SSIPV, such as substance abuse, dependency (Renzetti, 1992), and family of origin violence (Lie, Schilit, Bush, Montagne, & Reyes, 1991). Furthermore, Wise and Bowman (1997)

claim that “the similarities between heterosexual and homosexual abusive relationships are greater than the differences” (p. 127).

There is the suggestion that some factors may uniquely contribute to the aetiology of SSIPV, possibly through their minority status and societal heterosexism (Peterman & Dixon, 2003), creating concealment of sexuality and internalised homophobia (Renzetti, 1998; Zierler et al., 2000). Minority stress has also been found to increase substance use, due to increased stress, anger or coping in a heterosexist society and lack of support (Letellier, 1994). Furthermore, given the high prevalence of HIV/AIDS in gay males (Island & Letellier, 1991), the relationship between this and the involvement with SSIPV becomes particularly relevant to this population and the negotiation of safe sex (Heintz & Melendez, 2006). Sexual risk behaviours may have an involvement with SSIPV (Nieves-Rosa, Carballo-Diequez, & Dolezal, 2000), which will have more severe consequences, and there are indications that HIV serostatus is associated with the aetiology of SSIPV (Zierler et al., 2000).

Previous Literature Reviews for Characteristics of SSIPV

Previous literature reviews have attempted to provide aggregate findings of factors involved in the aetiology of SSIPV. These literature reviews have varied in quality, population, and focus; for example, with some examination of the methodology used in studies (e.g., Murray & Mobley, 2009), and others on the help-seeking behaviours used by SSIPV victims (e.g., Duke & Davidson, 2009). Some literature reviews have also attempted to establish the prevalence and correlates related to SSIPV. However, a lot of

this research has focused mainly on gay females, demonstrated by the violence to women agenda (Burke & Follingstad, 1999).

When reviews have included gay males they have combined them with gay females (as demonstrated in Rohrbaugh, 2006), or have compared gay males to heterosexual samples, transgender samples or examined differences between gay males and females (as demonstrated in Burke & Follingstad, 1999; Katz-Wise & Hyde, 2012; West, 2012). However, there may well be variations in terms of characteristics between gay males and females, due to obvious gender differences. It should not be assumed that they have the same experiences simply because they are both involved in same-sex relationships. There are differences in behaviour between the groups, for example there are diverse sexual behaviours (Doll & Carballo-Diequez, 1998) and a higher prevalence of HIV/AIDS in gay males (Island & Letellier, 1991). Also, jealousy and dependency were found to be higher in gay females than gay males (McClennen et al., 2002). Similarly, levels of substance and alcohol use have been shown to be higher in gay individuals than heterosexuals (Bux, 1996; Cochran, Ackerman, Mays, & Ross, 2004). These factors may change the environment and dynamics in which maleSSIPV occurs, meaning specific factors may be relevant to maleSSIPV but are different to that of other populations, and are not present in heterosexual IPV. It is important to establish factors that are specific to gay males, so that risk assessment tools, resources and services for maleSSIPV perpetrators and victims can be provided, because this is currently limited (Merrill & Wolfe, 2000).

When previous reviews have examined gay males as a separate entity, certain problems have made it difficult for risk factors to be established that are specific only to this population. For example, many investigate ‘correlates’ ofSSIPV (e.g., Finneran &

Stephenson, 2012; Relf, 2001) which include research studies that merely establish an association of correlates or characteristics in those involved with SSIPV. This does not distinguish with certainty whether a particular risk factor is predictive of IPV in this population alone, and it is important to distinguish between correlates/characteristics and risk factors of IPV (Relf, 2001). A way to determine risk factors that are present exclusively in male SSIPV is to include research articles with a control group of gay males who are not perpetrators or victims, which are compared to gay male perpetrators or victims of SSIPV. It is important to examine both the perpetrator and the victim risk factors because of the occurrence of mutual partner violence (MPV; Langhinrichsen-Rohling, Misra, Selwyn, & Rohling, 2012) and the equality of gender roles, as there may be similarities or overlap between risk factors of perpetrators and victims.

Aim

There has not yet been a systematic review examining the risk factors associated with perpetration and victimisation of male SSIPV, compared to a control group. The aim of this review is to systematically ascertain specific risk factors that are present for perpetrators and victims of male SSIPV, compared to non-SSIPV controls.

Method

Scoping Exercise

An initial scoping search was undertaken to investigate the depth and breadth of the literature relating to perpetrator and victim risk factors of maleSSIPV and also to identify any existing reviews or meta-analyses. The search was performed on the Cochrane Library (completed on 1st April 2013) and was extended to PsycINFO (1988 to April Week 1 2013). Some reviews were obtained (as discussed above) and it was apparent thatSSIPV is becoming increasingly investigated with attention paid to differences with heterosexual IPV. However, no systematic review identified specific risk factors for IPV perpetration or victimisation within the gay male population, where they are compared to a control group of non-SSIPV males. This was therefore investigated.

Scoping Search

A comprehensive search of electronic databases was implemented to extract any relevant publications for the systematic review. Reference lists of the publications were also examined. The search was completed using three bibliographic databases, from the time periods as shown:

- OVID: PsycINFO (1988 to April Week 1 2013)
- OVID: EMBASE (1988 to 2013 Week 14)
- ISI Web of Science (10.04.1988 to 10.04.2013)

Specific search terms relating to the topic under investigation were devised, as shown in Box 1. Terms such as physical or sexual or psychological violence/abuse were not used as the results related more to general violence, rather than IPV. All possible terms relating to gay males were included, for example ‘queer’ and ‘camp’, to account for any potential historical changes in terminology. The same terms were applied to each database and used to examine the title and abstract of each journal article, although the actual syntax varied for each database (see Appendix 1). The search did not include terms to identify an ‘outcome’ (i.e., specific risk factors) as this restricted the results and increased the likelihood that some relevant publications would be overlooked.

Box 1 - Search Terms

Population

gay* OR homosexual* OR bisexual* OR same-sex OR queer* OR camp* OR
men who have sex with men

AND

Intervention

domestic violen* OR domestic abus* OR batter* OR intimate partner violen* OR
intimate partner abus* OR partner violen* OR partner abus* OR marital violence
OR marital abuse OR marital conflict OR spous* violen* OR spous* abus* OR
spous* assault* OR inter partner violen* OR inter partner abus*

Inclusion/Exclusion Criteria

Previous literature reviews have investigated some aspects of maleSSIPV, but the aim of this review was to isolate specific risk factors for IPV that are unique to gay male perpetrators and victims as a population. In order to achieve this, it is important to have a control group of gay males who are not perpetrators or victims of IPV as a comparator, to highlight risk factors present in gay male perpetrators or victims. Studies were included if it could be established that there was at least oneSSIPV risk factor analysed in perpetrators or victims of maleSSIPV with a relevant control group. Any analyses without a control group, or with comparison to other populations, were disregarded.

Due to time constraints, access and use of every single article was not always possible, thus exclusion criteria was applied. Articles were restricted to English language only. Additionally, ‘grey’ literature (e.g., unpublished papers, dissertation abstracts) was excluded to ensure only peer reviewed articles which have undergone rigorous scrutiny were utilised. Similarly, papers that were not primary research were omitted, and qualitative research was excluded. This ensured only empirical research was analysed. Any studies where the focus of the investigation was either on general violence or not on the specific risk factors ofSSIPV were also excluded.

Box 2 shows the inclusion/exclusion criteria used to screen the results (Appendix 2 contains the table used to ensure studies met the inclusion criteria). Based on the information from the title and abstract, the publications were filtered manually and any duplicates were discarded. Any provisionally included studies, where more information was required to assess their eligibility, were downloaded if available and analysed further.

Box 2 – Inclusion/Exclusion Criteria

<i>Population:</i>	Gay or bisexual men aged 18 or above who are currently, or have previously been, in a same-sex relationship and perpetrated or been a victim of SSIPV.
<i>Intervention:</i>	Empirical, quantitative studies investigating the risk factors of male perpetrators or victims of IPV within their same-sex relationship.
<i>Comparator:</i>	Comparison to gay males who are not perpetrators or victims of IPV.
<i>Outcome:</i>	Ontogenic, microsystem, exosystem or macrosystem risk factors of perpetrators or victims of SSIPV in gay male relationships.
<i>Study design:</i>	Case control studies of gay males who are perpetrators or victims of SSIPV, to gay males who are not perpetrators or victims of SSIPV.
<i>Exclusion:</i>	Grey literature, narrative reviews, editorials, commentaries or other opinion papers; purely gay females or heterosexual samples; no control group or comparisons to gay females or heterosexual samples; risk factors of perpetrators or victims where the violence was not IPV; studies not looking specifically at risk factors of perpetrators or victims.
<i>Language:</i>	English only.

Data Extraction

Data was extracted from each of the studies that met the inclusion criteria and passed the quality assessment. This was recorded on a data extraction form that was devised (see Appendix 3) so that relevant information was reported in a structured way. This included verification of study eligibility (i.e., inclusion/exclusion criteria, target population, control population), study aims and design, outcome measures (validity and reliability), dropout rates and reasons, results, and limitations. However, time

constraints meant that any aspects that were unclear in studies were not able to be clarified by authors and could not be reported, which may impact upon the conclusions. Table 1 contains a description of the key information from each study.

Figure 1 depicts the process of extracting the relevant studies for the review. The initial searches obtained 1918 articles from the three databases (PsycINFO = 342, Web of Science = 248 and EMBASE = 1238), with no extra studies being identified in the reference lists. 344 were duplicate articles and 1568 did not meet the inclusion criteria so were removed. There were six resultant articles which met the minimum threshold criteria, so these underwent detailed evaluation. None were excluded for poor quality.

Quality Assessment

Once the studies had been filtered and only those which met the inclusion criteria were isolated, each one was assessed for its methodological quality and significance of results. This was done using a checklist for case-control studies (see Appendix 4) adapted from the Critical Appraisal Skills Programme (CASP), containing criteria to allow for all aspects of the case control studies to be accurately recorded and biases assessed in a structured way. The areas that were assessed include study design, selection/sampling bias, measurement bias, attrition bias and applicability of findings, as these were deemed the relevant factors to assess literature in this field. Each item was scored using a three point scale:

Item fully met (Y) = 2

Item partially met (P) = 1

Item not met (N) = 0

Unclear/insufficient information (U) = Counted separately

The scores are shown in Table 2, with a detailed table of information relating to study quality in Appendix 5. The overall score was then calculated by adding all the scores together making the maximum possible score 40 (unless 'unclear' items were evident), representing the highest quality of study. This was converted to a percentage to enable comparison of quality between studies, accounting for 'unclear' items. A minimum threshold level of 60% quality was used, as this was regarded a reasonable level to ensure only good quality studies were included and has previously been used by other forensic psychology students. Any study not reaching 60% was excluded. All six studies achieved this score and were deemed of good quality to be reviewed.

Figure 1 – Flow Chart of Search Results

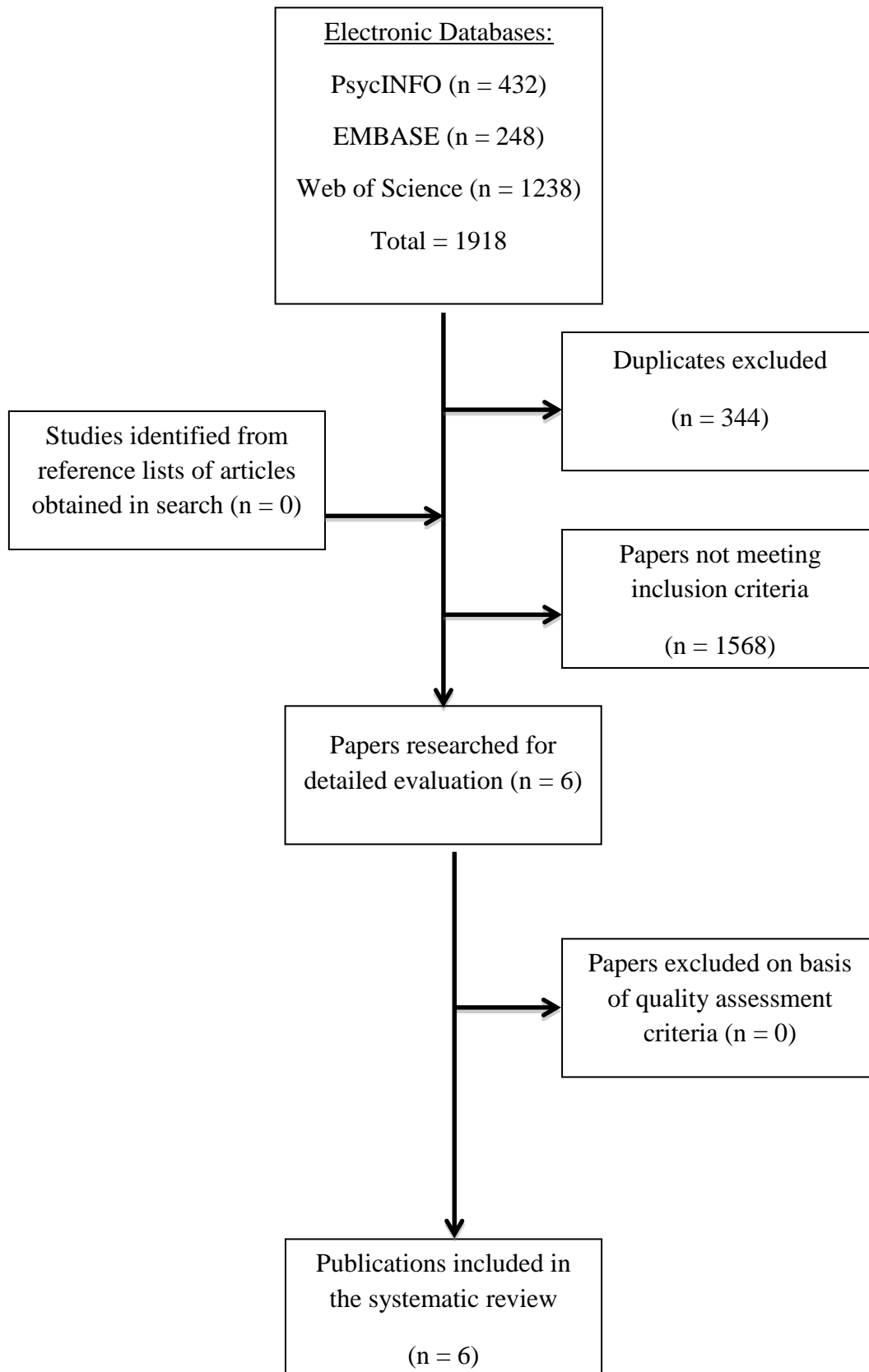


Table 1 - Key Information & Risk Factors of Included Studies

<i>AUTHOR, YEAR AND COUNTRY OF STUDY</i>	<i>PARTICIPANTS</i>	<i>STUDY AIMS</i>	<i>OUTCOME MEASURES</i> <i>(See Appendix 6 for full unabbreviated terms)</i>	<i>FINDINGS</i>	
				<i>PERPETRATOR RISK FACTORS</i>	<i>VICTIM RISK FACTORS</i>
Pantalone, Schneider, Valentine, & Simoni (2012) USA	n = 168 HIV positive men who have sex with men (MSM) 91 = victims of any IPV in past year 77 = no IPV victimisation	To investigate if HIV positive, IPV victimised MSM have poorer mental and physical health than non- IPV victimised MSM.	Demographics questionnaire CTS-2 (IPV) STPI (state anxiety) CES-D (depression) MOS-SS (social support) Passive Suicidal subscale of the HASS (suicidal ideation) Brief COPE (avoidant coping) DDTQ (substance use) MOS-HIV (health related quality of life) Authors devised questions for: stigma/ discrimination re HIV status; patient-	N/A	Victims of any IPV more likely to: - have higher depression levels - be younger - have lower income, less education, & more unemployment (all not significant) No differences in: - alcohol or substance use - other mental health difficulties - HIV medication adherence - race

			provider relationship; HIV medication adherence		
Carvalho, Lewis, Derlega, Winstead, & Viggiano (2011) USA	n = 303 adult gay men 71 (23%) = victims 26 (8.3%) = perpetrators Remainder no IPV.	To investigate the effect of internalised minority stressors on IPV perpetration and victimisation compared to those who are not perpetrators or victims.	Demographics OI (outness of sexual orientation) IHP (internalised homophobia) SCQ (stigma consciousness) Authors own devised questionnaires relating to: IPV victimisation and perpetration	Perpetrators of IPV have higher levels than non-perpetrators of: - stigma consciousness No differences in levels of: - internalised homophobia - outness of sexual orientation	Victims of IPV have higher levels than non-victims of: - stigma consciousness - outness of sexual orientation No differences in levels of: - internalised homophobia
Kelly, Izienicki, Bimbi, & Parsons (2011) USA	n = 1782 adult gay/bisexual men 289 (16.2%) = victims 73 (4.1%) = perpetrators 415 (23.3%) =	To investigate substance use in gay, lesbian, and bisexual individuals in different patterns of IPV compared to those who report no IPV.	Authors own devised questionnaires relating to: Demographics Physical & psychological IPV victimisation & perpetration in past 5 years (physical questions adapted from Greenwood et al.,	Perpetrators of physical and psychological violence: - had more substance abuse treatment than NO IPV - were more likely to use more marijuana (not significant)	Victims of physical and psychological violence had no significant differences , but were more likely to: - use more alcohol; marijuana; cocaine; and had substance abuse treatment than NO IPV (not significant).

	<p>mutual partner violence (MPV)</p> <p>1005 (56.4%) = no IPV.</p>		<p>2002).</p> <p>Alcohol and drug use in last 3 months ('yes/no' to list of substances) and any substance treatment.</p>	<p>Mutual Partner Violence participants (both perpetrator AND victim) of physical & psychological IPV significantly more likely to:</p> <ul style="list-style-type: none"> - use more alcohol; marijuana; cocaine; ecstasy; and had substance abuse treatment than NO IPV - use more marijuana; ecstasy; and had substance abuse treatment than purely VICTIMS - use more alcohol than purely PERPETRATORS 	
<p>Houston & McKirnan (2007)</p> <p>USA</p>	<p>n = 817 men who have sex with men (MSM)</p> <p>265 (32.4%) = victims</p> <p>Remainder non-victims.</p>	<p>Investigate the risk correlates and health outcomes of MSM victims of IPV compared to non-victims.</p>	<p>CES-D (depression)</p> <p>Authors own devised questionnaires relating to:</p> <p>Demographics</p> <p>IPV victimisation</p> <p>Health care (primary care and related issues, e.g., STIs, HIV)</p> <p>Sexual risk behaviour</p> <p>Drug & alcohol use (11 substances-general use and use with sex)</p> <p>Psychosocial factors (appraisal of own sexuality, "outness", burnout of</p>	<p>N/A</p>	<p>Victims of verbal, physical and sexual violence more likely to have:</p> <ul style="list-style-type: none"> - HEALTH CARE: at least 1 health problem (e.g., high blood pressure, obesity); more mental health diagnoses; more depressive symptoms - SEX RISK BHVRS: unprotected sex; sex with transmission risk (i.e., sero-discordant unprotected sex) - SUBSTANCE USE: more frequent alcohol intoxication; more substance use before & during sex (all substances); more problems caused by substances

			sexual safety, & social support).		<ul style="list-style-type: none"> - PSYCHOSOCIAL: none <p>No differences in:</p> <ul style="list-style-type: none"> - SEX RISK BHVRS: overall number of sexual partners; HIV serostatus - SUBSTANCE USE: general use of “hard” drugs - PSYCHOSOCIAL: burnout of sexual safety; social support; appraisal of own sexuality; “outness”.
McKenry, Serovich, Mason, & Mosack (2006) USA	n = 40 adult gay men 14 (39%) perpetrators Remainder non-perpetrators.	Investigate the function of disempowerment upon IPV perpetrators compared to non-perpetrators, in three conceptual domains: - Individual characteristics (IC) - Family of origin	Demographics questionnaire PAQ (gender role orientation) RSQ (insecure attachment) BSI (psychological symptoms) Self-Esteem Scale SMAST (alcohol use) Internalized Homophobia	Perpetrators of physical violence more likely to: - be less educated - IC: have higher psychological symptomatology; have lower self-esteem; drink more alcohol - FO: lower family of origin social economic status - IR: none	N/A

		<p>factors (FO)</p> <p>- Intimate relationship factors (IR)</p>	<p>Scale</p> <p>CTS2 (own perpetration & family violence)</p> <p>CTSPC (child abuse)</p> <p>Homophobic scale (parental homophobia)</p> <p>2 Factor Index of Social Position (SES)</p> <p>PSS-Fr/Fa (friend & family support)</p> <p>KMSS (relationship satisfaction)</p> <p>FILE (stress)</p> <p>IDI (emotional dependency)</p> <p>PMWI (relationship dominance)</p> <p>Authors devised questions for: status differential</p>	<p>No differences in:</p> <ul style="list-style-type: none"> - other demographics (race; occupation) - IC: gender orientation (masculinity), insecure attachment, internalised homophobia - FO: domestic violence; child abuse; homophobia; support from family and friends - IR: relationship satisfaction; relationship stress; perceived power differential; outing; interpersonal dependency 	
<p>Bogart et al. (2005) USA</p>	<p>n = 292 HIV positive MSM</p> <p>16.3 % = perpetrators</p>	<p>To investigate the synergising effect of IPV (perpetrators, victims, and no IPV), with the</p>	<p>Authors devised questions for past 6 months asking:</p> <p>Demographics</p> <p>Frequency of substance use before or during sex (both</p>	<p>Perpetrators of physical and sexual IPV:</p> <ul style="list-style-type: none"> - more likely to have unprotected sex in past 6 months than no IPV group 	<p>Victims of physical and sexual violence more likely to:</p> <ul style="list-style-type: none"> - have unprotected sex in past 6 months.

	16.7% = victims Remainder = no IPV	use of substances and sexual risk behaviour.	self & partner) Frequency of sexual and physical abuse (any perpetration & victimisation) Frequency of condom use (both self & partner).	- All perpetrators (including females and heterosexual men) even more likely to have unprotected sex if substances were used in association with sex [i.e., effects of IPV and unprotected sex may be exacerbated by substance use].	Effect of IPV victimisation and unprotected sex was not moderated by substance use.
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Table 2 - Quality of Included Studies

<i>STUDY</i>	<i>STUDY DESIGN</i>	<i>SELECTION & SAMPLING BIAS</i>	<i>MEASUREMENT BIAS</i>	<i>ATTRITION BIAS</i>	<i>APPLICABILITY OF FINDINGS</i>	<i>METHOD OF STATISTICAL ANALYSIS</i>	<i>QUALITY SCORE (%)</i> <i>(Number of unclear questions)</i>
Pantalone et al. (2012)	4 (100%)	6 (60%)	11 (92%)	8 (80%)	3 (75%)	Chi-squared for categorical data. T-tests for continuous data. Fisher's Exact Test used when necessary.	80% (0)
Carvalho et al. (2011)	4 (100%)	4 (40%)	8 (67%)	5 (50%)	4 (100%)	Multivariate analysis of variance (MANOVA) and univariate ANOVAs.	62.5% (0)
Kelly et al. (2011)	4 (100%)	8 (80%)	8 (67%)	9 (90%)	4 (100%)	Chi squared for prevalence. Logistic regression analyses to examine differences between drug use and patterns of IPV.	82.5% (0)
Houston & McKirnan (2007)	4 (100%)	7 (70%)	9 (75%)	6 (60%)	4 (100%)	Wald statistic producing chi-squared value, in regression model.	75% (0)

McKenry et al. (2006)	4 (100%)	3 (33%) (1 unclear)	10 (83%)	5 (50%)	3 (75%)	Two-way ANOVA.	65.8% (1)
Bogart et al. (2005)	4 (100%)	6 (60%)	8 (67%)	7 (78%) (1 unclear)	3 (75%)	Multivariate logistical regression.	73.7% (1)

Results

The studies included in this literature review explore the different risk factors present in male perpetrators and victims of SSIPV as compared to males who are not perpetrators or victims of SSIPV. The studies are eclectic in their aims and assessment measures used, which makes it difficult to aggregate findings. However, they do provide an overview of the work that has been done to date around investigating risk factors associated with male SSIPV, which begins to explore the aetiology of this type of violent behaviour in this specific population. The risk factors found to differentiate this group are now discussed in more detail below in turn.

Risk Factors of Male SSIPV

SUBSTANCE USE

Three studies explored substance use as a risk factor of SSIPV. Pantalone, Schneider, Valentine, and Simoni (2012) investigated HIV positive victims of physical, sexual, and psychological IPV compared to no IPV. They found no differences in alcohol or substance use (cocaine and methamphetamines). However, Houston and McKirnan (2007) who addressed verbal, physical and sexual IPV found that victims were significantly more likely to engage in substance use (alcohol and marijuana, but not “hard” drugs) and had more problems caused by substances. In relation to perpetrators, McKenry, Serovich, Mason, and Mosack (2006) found that perpetrators of physical violence were more likely to drink alcohol.

Kelly, Izienicki, Bimbi, and Parsons (2011) included perpetrators, victims, and mutual partner violence (MPV) in their study, addressing physical and psychological IPV. They found that individuals involved in MPV compared to no IPV participants, were significantly more likely to use more alcohol, marijuana, cocaine, ecstasy, and had experienced substance abuse treatment. Perpetrators of IPV were significantly more likely to have engaged in substance abuse treatment compared to no IPV individuals, yet the findings regarding actual drug use were not significantly higher. Victims of IPV had no significant differences compared to no IPV, yet frequencies of alcohol, marijuana, and cocaine use, and engagement of substance abuse treatment were higher. They also compared groups, finding that MPV individuals had the highest substance use; in comparison to perpetrators (higher alcohol use), and to victims (higher marijuana and ecstasy use, and substance abuse treatment).

UNPROTECTED SEX, HIV RISK BEHAVIOURS, AND SUBSTANCE USE

Two studies examined unprotected sex and HIV risk behaviours as a risk factor of SSIPV, together with its relationship with substance use. Bogart et al. (2005) investigated physical and sexual IPV in HIV positive perpetrators and victims. They found that both perpetrators and victims were more likely to have had unprotected sex in the past six months than non-IPV individuals. Houston and McKirnan (2007) also found that victims of SSIPV were more likely to have engaged in unprotected sex in the past six months and had sex with HIV transmission risk (i.e., sero-discordant unprotected sex). However, they found no differences in participants' overall number of sexual partners and HIV serostatus.

In relation to substance use, Houston and McKirnan (2007) found that victims used significantly more substances before and during sex. Bogart et al. (2005) also found this synergistic effect, where perpetrators were even more likely to have unprotected sex if substances were used in association with sex (i.e., the effects of IPV and unprotected sex were exacerbated by substances). However, Bogart's whole sample was analysed together for this variable, i.e., including females and heterosexual men, so it is uncertain whether this finding is significant in only gay males.

PSYCHOSOCIAL FACTORS AND MINORITY STRESS

Three studies investigated psychosocial factors and its effect on IPV perpetration and victimisation. In relation to perpetrators, Carvalho, Lewis, Derlega, Winstead, and Viggiano (2011) found that IPV perpetrators had higher levels of stigma consciousness (i.e., the level of perceived stereotyping and discrimination) than non-perpetrators, in any kind of IPV reported. They found no differences between perpetrators and non-perpetrators regarding internalised homophobia (i.e., level of acceptance of one's own sexuality), consistent with McKenry et al.'s (2006) findings, when investigating only physical IPV.

It was found that victims have higher levels of stigma consciousness than non-victims, as demonstrated in Carvalho et al.'s (2011) study. Additionally, they found victims have higher levels of 'outness' of their sexual orientation (i.e., level of concealment or disclosure of gay identity) than non-victims. However, Houston and McKirnan (2007) found no differences in outness between victims and non-victims for physical IPV.

Houston and McKirnan, and Carvalho et al. (2011) found no differences between

victims and non-victims' appraisal of own sexuality/internalised homophobia. Houston and McKirnan (2007) also found no other differences in relation to burnout of sexual safety or social support.

MENTAL AND PHYSICAL HEALTH PROBLEMS

There were three studies which addressed mental and physical health problems in male SSIPV. In relation to mental health problems of SSIPV victims, Pantalone et al. (2012) found there to be higher levels of depression in HIV positive victims of physical, sexual, and psychological IPV compared to those reporting no IPV. However, they found no differences with other mental health problems, including anxiety, suicidal thoughts, and avoidant coping. Houston and McKirnan (2007) also found that victims of verbal, physical and sexual SSIPV reported more depressive symptoms, which was the strongest correlate for abuse. They also found that these victims were more likely to have mental health diagnoses including depression, bipolar disorder, and any psychiatric/emotional disorder, which were not examined in Pantalone et al.'s (2012) study. In relation to perpetrators' mental health problems, McKenry et al. (2006) found that male perpetrators of physical SSIPV had higher levels of symptomology and lower self-esteem.

Regarding physical health problems, Houston and McKirnan (2007) found that victims were significantly more likely to have a least one health problem or diagnosis, including high blood pressure, heart disease, obesity, and smoking related illness, than those reporting no IPV. No studies addressed physical health difficulties in perpetrators.

FACTORS OF DISEMPOWERMENT

Only one study examined factors of disempowerment as a risk factor ofSSIPV, and just in relation to perpetrators. McKenry et al. (2006) found that male perpetrators ofSSIPV were more likely to have certain ‘individual characteristics’ including higher psychological symptomology, lower self-esteem, and higher alcohol use than non-perpetrators. The authors argue that these factors create feelings of disempowerment. They also found that a lower family of origin social economic status was higher in perpetrators, but found no differences in terms of other ‘intimate relationship factors’ between gay male perpetrators and non-perpetrators. There were no differences between maleSSIPV perpetrators and non-perpetrators regarding the other factors they believed to be related to disempowerment. This included factors within ‘individual characteristics’ (gender orientation, insecure attachment, internalised homophobia), ‘family of origin factors’ (domestic violence, child abuse, family homophobia, support from family and friends) and ‘intimate relationship factors’ (relationship satisfaction, relationship stress, perceived power differential, outing, interpersonal dependency). They did not examine how disempowerment affected victims ofSSIPV.

DEMOGRAPHIC CHARACTERISTICS

Two studies found differences in terms of demographics for risk factors ofSSIPV. McKenry et al. (2006) found that maleSSIPV perpetrators were less educated and had a lower social economic status (SES) in their family of origin. Pantalone et al. (2012) found that victims ofSSIPV were significantly younger, and had higher levels of

unemployment, less income and were educated to a lower level (but the latter three were not significant). Both studies found no differences in perpetrators or victims of SSIPV in terms of race.

Discussion

Key Findings of the Review

The aim of this review was to systematically ascertain specific risk factors that are present in perpetration and victimisation of male SSIPV, compared to male non-SSIPV controls. Six studies met the inclusion criteria and the key findings from this review highlight:

- There is a lack of empirical literature investigating male SSIPV, particularly with a control comparison group of gay males not involved with SSIPV.
- There is a dearth of longitudinal research to ascertain direction of causality for risk factors involved in SSIPV making it difficult to establish whether they are causal or consequences.
- The research shows indications of some risk factors present in male SSIPV. There is an indication that these factors will likely be reinforced and become more pertinent risk factors when present in combination.
- There are many methodological and sampling problems in much of the literature, including the exclusion of mutual partner violence. A consistent definition of IPV is lacking, and with measures and timescales to investigate it.

Interpretation of the Findings

RISK FACTORS OF SSIPV

Substance Use

There were four studies addressing substance use as a risk factor of SSIPV, which may strengthen the conclusions with regards to this. The study by Kelly et al. (2011) scored the highest quality of all the studies and, due to the inclusion of a mutual partner violence (MPV) group, their findings appear to be the most reliable and accurate. This study implies it is likely that substance use is a risk factor for participants involved in same-sex MPV, highlighting that each member in the mutually abusive relationship is likely to use substances. However no other studies addressed MPV to either confirm or dispute these findings. Additionally, although purely perpetrators appear to have an increased tendency to use substances and alcohol (also evident in McKenry et al., 2006), it seems that purely victims of SSIPV are not at an increased risk to engage in substances. This is supported by Pantalone et al. (2011). The different findings in victims from Houston and McKirnan's (2007) study may be explained by their lower quality score and lack of a standardised measure, which Pantalone et al. (2011) ensured. Subsequently, there may have been a higher overlap in groups, and Houston and McKirnan (2007) potentially had more MPV participants rather than just purely victims, but Pantalone et al.'s (2011) participants may have been victims only. This would explain why Pantalone's findings are consistent with Kelly et al.'s (2011).

The lack of firm conclusions and consistency of findings regarding substance use as a risk factor of SSIPV is due to the limited number of studies, definitional variations, and differing substances and timescales investigated. It may also be possible that substance

use is not a risk factor directly for SSIPV, but becomes one at an ontogenic level when present in combination with other microsystem, exosystem and macrosystem factors to exacerbate the effects, as discussed below. This could, again, explain the variation in results where these other factors may not have been controlled for. Regardless of these indications, it is not possible to determine whether substance use as a risk factor is causal or a consequence of SSIPV, as direction of causality was not established. It therefore remains unclear whether individuals are using substances to cope with SSIPV, or as a causal factor creating an environment to enable SSIPV, or both. However, it is not unexpected that substance use may contribute to male SSIPV as this is an effect found in longitudinal research for heterosexual IPV whereby substance use is a predictor of both IPV perpetration and victimisation (Magdol, Moffitt, Caspi, Fagan, & Silva, 1997; Raiford, Wingood, & DiClemente, 2007; Testa, Livingston, & Leonard, 2003).

Unprotected Sex, HIV Risk Behaviours, and Substance Use

Both studies addressing these aspects obtained similar findings, suggesting that victims and perpetrators of SSIPV are engaging in some sexual risk behaviours. Additionally, there appears to be some kind of synergistic relationship with substance use elevating this sexual risk. Victims are engaging in unprotected sex, and serodiscordant unprotected sex. However, not all sexual risk behaviours appear to be associated with SSIPV victimisation (e.g., high numbers of sexual partners) and the findings regarding the synergistic relationship with substances varied slightly between studies on only victims. Therefore, although it was found that victims appear to use more substances

associated with sex and they engage in sexual risk behaviours, it is possible that substance use itself may not impact upon the protection used.

Perpetrators were shown to engage in more unprotected sex than non-SSIPV controls and there is evidence of the synergistic relationship with substances, where their engagement in unprotected sex may be increased due to substance use. It is likely that substances decrease their motivation to use protective measures (Strunin & Hingson, 1992). The stronger evidence for this synergistic relationship in perpetrators is possibly due to a higher use of substances, or because they may have obtained more power and control in the relationship to decide whether protection will be used.

The relationship of these factors with HIV is particularly relevant, due to the high prevalence of HIV and type of sexual behaviour in this population, which increases the risk of HIV transmission (Island & Letellier, 1991). Although it was not found that victims were more likely to be HIV positive than non-SSIPV victims, these sexual risk behaviours used by both perpetrators and victims of SSIPV are heightening their risk of HIV. This means male SSIPV perpetrators and victims are potentially facing another serious health problem of HIV, with potentially a third problematic behaviour of substance use, either as a maladaptive coping strategy or a causal factor in creating these difficulties. Therefore, these factors could be involved in male SSIPV at an ontogenic, microsystem and exosystem level.

The findings are still somewhat unclear as to whether these aspects are risk factors of SSIPV, due to problems in the methodology and a low number of studies. This means that findings for perpetrators could not be compared and MPV was ignored. The direction of causality of the findings is also unknown, i.e., if they are causal or a

consequence of maleSSIPV perpetration and victimisation. For example, due to the differing timescales examined, it is unclear whether the unprotected sex was occurring during the same period as theSSIPV perpetration/victimisation, or if this unprotected sex was with their own monogamous partner, or if these behaviours lead to a vulnerability forSSIPV, or instead are a causal factor and an outlet to cope with the abuse. Additionally, Bogart et al.'s (2005) study only included HIV positive participants so any sexual risk behaviour may be based on their HIV status, or the finding may only have been observed specifically in these individuals, potentially because they are more risky in their sexual behaviour. Furthermore, it was not examined whether their HIV status was used as a weapon/form of IPV, as the other partner's serostatus was not obtained.

Psychosocial Factors and Minority Stress

The findings regarding psychosocial factors and minority stress as risk factors of maleSSIPV were minimal, and the main study investigating it (Carvalho et al., 2011) had some methodological problems with a poor measure of IPV, reflected in the lowest quality score. MPV was ignored, and there may be possible overlap between groups (also evident in Houston & McKirnan's, 2007, study), and some analyses for the male only group were ignored. Therefore, aspects of minority stress cannot be concluded with certainty to be a risk factor ofSSIPV victimisation or perpetration. However, there is a slight indication that stigma consciousness may be a risk factor ofSSIPV perpetrators and victims. This suggests that gay males who have elevated perceptions of discrimination are possibly more at risk ofSSIPV, due to macrosystem level influences,

and would likely remain in the abusive relationship due to perceived lack of support and avoidance of possible discrimination (e.g., McClennen et al., 2002; St Pierre & Senn 2010). However, it is again unclear whether these risk factors are causal or a consequence of SSIPV.

It could also be possible that substance use is a factor that mediates these tentative indications of stigma consciousness as a risk factor for SSIPV. Minority stress has been found to increase substance use, due to anger or coping from a heterosexist society and lack of support (Island and Letellier, 1991), which in turn has been tentatively linked with SSIPV (as above). Individuals then may perpetrate IPV due to influences from substances as well as increased anger from minority stress. However, the studies obtained in the review did not investigate this synergistic interaction.

Mental and Physical Health Problems

The results suggest that victims of SSIPV are more susceptible to physical and mental health difficulties, and specifically that it is the more severe mental health problems that are associated. This is to be expected if someone is experiencing SSIPV, however direction of causality was not established, so it may actually be that these difficulties create vulnerability in the victim and as a result they engage in abusive relationships. Perpetrators appear to have some symptomology as well, but investigation into this was limited (McKenry et al., 2006).

The strength of conclusions is again affected, particularly for perpetrators, by the limited number of studies and by MPV being ignored, meaning a possible overlap of groups. These factors could therefore be attributable to individuals involved in MPV,

rather than just being purely victims. Additionally, Pantalone et al.'s (2011) study only included HIV positive participants, suggesting HIV diagnosis may impact on mental health, especially as the whole sample's average depression score was at clinical level. However, there was still a significant difference between victims and non-IPV groups and Houston and McKirnan (2007) found this same difference in non-HIV positive victims.

Although there are limitations, the findings are similar to those obtained in regards to heterosexual male IPV longitudinal research whereby various mental health and personality difficulties are risk factors for IPV (Ehrensaft, Moffitt, & Caspi, 2004; Magdol, et al., 1997). However, the findings highlight a need to consider dual screening individuals involved in SSIPV for other health problems, some which may be consistent with those problems heterosexuals will experience (e.g., substance use) but also some specific difficulties (e.g., sexual minority stressors). Sexual minority stressors may also increase depressive symptoms (Lewis, Derlega, Griffin, & Krowinski, 2003) and substance use may synergistically interact in a similar way, whereby substances are used to cope with the health problems or, indeed, create them. These may further exacerbate the problems for victims, particularly if mental health difficulties are a cause of SSIPV. Similarly, sexual risk behaviours may increase SSIPV for both victims and perpetrators, either from substance use or mental health problems which could decrease motivation for safe sexual practices. Furthermore, the findings highlight the potential that depression is more prevalent in HIV positive gay males (perhaps caused by their HIV status, prejudice about this, or their sexual minority status) and when taken in combination with SSIPV victimisation, depression is further increased. Therefore, these individuals have a complicated interaction of serious health concerns to contend with.

Factors of Disempowerment

The lack of studies investigating disempowerment and the slightly lower quality score weakens the conclusions. The findings suggest minimal support for disempowerment leading to male perpetration of SSIPV. The authors argue certain factors contribute to perpetration through feeling disempowered, in accordance with the disempowerment theory. However, only a few of these factors were actually found to be significant in gay males, and their findings were somewhat unclear, often combining findings with gay females.

Factors believed to be associated with disempowerment were not significant and the very few significant findings were mainly in ‘individual characteristics’, which have generally been discussed above as separate risk factors of SSIPV (e.g., substance use). Therefore, it seems likely that these ‘individual characteristics’ are potentially linked to male SSIPV in their own right, and do not argue for a disempowerment perspective causing SSIPV. This refutes the gendered perspective that when a male feels disempowered he will attempt to assert dominance through violence (e.g., Hamberger et al., 1997). The study also had many methodological flaws, including a very small sample, examining only physical IPV, and ignoring effects upon victims and hence not incorporating MPV. This means the findings obtained may not relate specifically to risk factors of perpetrators of SSIPV.

Demographic Characteristics

These findings suggest that certain demographic characteristics may be a risk factor of SSIPV, though again direction of causality cannot be established, i.e., whether these

factors create an environment for violence or are results of the SSIPV occurring over time. With regards to victim demographic characteristics, it seems plausible that individuals who are younger, have higher levels of unemployment and a lesser income, possibly a consequence of their poorer education, will depend on another for financial support. This may prevent them from leaving an abusive relationship or perhaps cause them to engage in one, as the only way to obtain support. Regarding perpetrators, it is possible that having a lower SES will create additional stressors for them (e.g., lower income, resources, and lesser education) and they may lack the knowledge and coping skills to deal with these appropriately, resulting in violence and aggression. These findings for SSIPV are consistent with the demographic risk factors established for heterosexual male IPV through longitudinal research (Magdol, et al., 1997; Moffitt & Caspi, 1999).

These demographic stressors present in male perpetrators and victims of SSIPV will likely be combined with the other risk factors present in SSIPV discussed above (e.g., mental health difficulties, substance use, sexual risk behaviours). This reinforces the likely lack of appropriate coping mechanisms in these individuals, and a perpetrator's likelihood to resort to violence, or a victim's engagement in an abusive relationship, or use other maladaptive coping strategies (e.g., substance use), which consequently results in SSIPV. However, these findings do have methodological problems and the studies only addressed either perpetrators or victims, meaning that these individuals could be involved in MPV.

DEFINITIONAL & METHODOLOGICAL PROBLEMS

Although limited studies were obtained in the review, there were some clear findings made regarding definitional and methodological problems within the literature for this specific population. There are varying definitions of IPV used (e.g., some address only physical IPV, whereas others include sexual or psychological as well) and different forms, frequency, severity, and timescales of IPV investigated. This was exacerbated by the varied measures used in the studies, likely causing discrepancies in acts endorsed by participants, influencing the findings and making comparisons problematic. Many also used authors own devised, unstandardized measures, without obtaining the context of the IPV, further reducing the quality of their findings.

Other definitional problems include the differences in what comprised an ‘intimate partner’, what types of relationships were included in the study, and the length of relationship needed to qualify as an intimate partner. This could change the type of violence and risk factors being investigated because of differences between ‘casual’ or long-term partners, for example. Direction of causality was also unable to be established in any of the findings, i.e., whether the factors are causal or a consequence of SSIPV. This was due to a lack of longitudinal research, variations in timescales for endorsement of IPV or factors investigated, and also partly due to lower level methods of statistical analysis used. The methods varied, with none utilising high level methods (e.g., ROC curve analysis quantified by the Area Under the ROC Curve; AUC), which could increase the sensitivity/specificity and assess more into the causality, improving the quality of conclusions.

Regardless of the efforts implemented in the exclusion criteria (i.e., gay male control group comparison) to identify with certainty, the risk factors specific to male SSIPV, it became apparent that some limitations of the included studies will have challenged this. There is the possibility of an overlap between groups in some studies, and possible tarnishing of the control group. This becomes evident when only the perpetration or victimisation of participants is examined, or only certain types of IPV are explored. If participants do not endorse items for the aspect investigated, then it is assumed that they will be classified in the control group. However, it was unclear in some cases if this was correct and so there was a possibility that the participant may engage in the IPV behaviours that were not examined, which would change the baseline control group level. Similarly, a significant problem in all but one study was the exclusion of an MPV group. Two of the studies that included both perpetrators and victims tended to place participants in both groups, if both types of acts were endorsed, rather than in an MPV group. This is problematic as risk factors could be different in those individuals who are mutually violent, compared to purely perpetrators or victims, again influencing the accuracy of the conclusions. This would be necessary to include for this population, due to the occurrence of MPV, which is also apparent in heterosexual couples (Langhinrichsen-Rohling et al., 2012), and due to equality in terms of gender norms and physicality for gay couples.

Sampling methods had much variation between studies, with different sizes, diversity, demographics, locations, and recruitment methods which may limit access to certain volunteers who do not wish to attend gay venues or want to be associated with gay research. Hence, this may influence the quality and representativeness of the studies. The majority of data was obtained from the USA, which limits generalizability to other

countries due to specific exosystem and macrosystem differences, for example Britain has legalised same-sex civil partnerships. Furthermore, there were different populations and terminologies of included participants, for example, bisexuals or only HIV positive participants may have different risk factors for SSIPV and so these results may not be specific to gay males. This was also exacerbated when some studies included other populations in the sample (e.g., heterosexuals or gay females) and occasionally combined these groups for some analyses, without separation by population and gender, thereby losing potential findings. This is important to avoid due to both the likely differences between populations and the importance of ascertaining specific male SSIPV risk factors. Additionally, some studies did not examine the possibility of, or did not exclude, heterosexual relationship violence from the participants' reports, particularly if bisexuals were included. This means there is a chance that the IPV reported may not have been exclusively SSIPV, so the risk factors obtained are less specific.

These problems resulted in no studies achieving a 100% quality rating, although all studies were still deemed to have a high enough quality to be included in the review. These discrepancies and criticisms of the included studies need to be taken into account when producing and identifying the strength of conclusions regarding male SSIPV risk factors. There needs to be consistency among definitions, terminology, and measures used for IPV, and an all-inclusive IPV definition, which incorporates various forms, particularly due to the high prevalence of psychological abuse in same-sex couples (Craft & Serovich, 2005). Irrespective of this, there still may be variations in participants' interpretations of questions, and also all the measures used were self-report. Furthermore, measures were not always completed in private venues, increasing

the likelihood of socially desirable responding and possible underreporting, which is evident in this population (e.g., St Pierre & Senn, 2010).

Strengths and Limitations of the Review

The current review had some limitations, affecting the strength of conclusions made. Effect sizes, such as Cohen's d , can help to distinguish how large significant differences are, regardless of variations in sample size. In this review, the inclusion of effect sizes could have helped to compare differences between studies and so contributed in determining how significant risk factors may be in the aetiology of SSIPV. This is because there are different sample sizes and methodologies so any discrepancies in findings may be resolved by obtaining the effect sizes of each, to understand which has the strongest effect. However, in this review there are a minimal number of studies, and a limited amount investigating each of the many risk factors addressed, with only minor discrepancies between results. Therefore, effect size calculations were not undertaken as the findings were already inconclusive. In future literature reviews, particularly when more research is completed and reviews yield a larger numbers of hits, then effect sizes would contribute greatly to the understanding of the true risk factors for male SSIPV.

Time constraints prevented the review being as comprehensive as it could have been. Therefore, only three databases of literature were searched, and studies were included or excluded based purely upon the titles and abstracts in the initial search. Abstracts are often inaccurate, with research finding that 13% of abstracts in psychology journals contained information that is inconsistent with or missing from the main article (Harris

et al., 2002). Additionally, unpublished material ('grey' literature) was excluded, thus the review may suffer from publication bias where only certain studies, showing significance, may have been published. However, this may also be regarded as a strength of the review, because these studies may actually be of higher quality and better controlled, as they were rigorously reviewed by peers.

Other exclusion criteria meant that only case control studies were included in the review, thus limiting the number of studies. Descriptive cross-sectional surveys were excluded which may have provided more evidence, however this evidence would have been statistically weaker and less certain. This is why only case control studies were included, with a control group of male non-SSIPV. This strength of the review ensured that risk factors of SSIPV relevant specifically to this population could be obtained. The exclusion criteria also eliminated any qualitative or non-empirical studies, again excluding potentially relevant important information. However, this did ensure that the evidence retrieved was all quantitative, empirical and objective, increasing the quality with less subjectivity bias from the researchers.

The studies included in the review were quality assessed and required to obtain the 60% minimum threshold. This suggests that although there were some flaws to their methodology, their overall standard was reasonable. This review extends well, and is consistent with previous literature reviews that have highlighted characteristics of SSIPV (e.g., Burke & Follingstad, 1999; Finneran & Stephenson, 2012; Relf, 2001; Rohrbaugh, 2006). It updates and extends upon others' findings by being able to establish with more certainty whether particular risk factors are related to male SSIPV, rather than the gay male population as a whole. However, as discussed, the lack of studies limited the conclusiveness of the findings. Continual updating of reviews is

important and necessary in this field, as societal attitudes towards same-sex relationships are rapidly changing. Research undertaken ten years ago will have been completed in a society where attitudes regarding the topic area are different, and would likely impact upon factors like internalised homophobia.

Conclusions and Implications for Practice

The main findings of this review highlight a distinct lack of empirical research, confounded by definitional and methodological problems. Furthermore, it demonstrates the sparse literature relating to risk factors of male SSIPV, specifically longitudinal research, and with a case control group of non-SSIPV males. These are both necessary in order to ascertain the specific risk factors that are evident in this population. These observations have helped to guide the empirical research undertaken in Chapter Three, which explores SSIPV and how beliefs regarding SSIPV and heterosexual IPV may contribute as risk factors for perpetration.

Risk factors highlighted in this review for perpetrators include substance use, unprotected sex, stigma consciousness, possible mental health difficulties, low social economic status in family of origin, and less education. Risk factors highlighted for victims include substance use, unprotected sex, stigma consciousness, mental/physical health difficulties, and young age. However, firm conclusions cannot be made, due to a limited number of available studies, and direction of causality is unknown. Nevertheless, it provides a framework of the environment in which SSIPV occurs and indications for future research and literature reviews. It is possible that, due to MPV and gender equality evident in this population, the risk factors may overlap between perpetrator and

victim groups, which was observed in this review. From this, it is not possible to highlight any firm differences between perpetrators and victims, particularly due to the limited number of studies.

The findings are also generally paralleled to factors identified through heterosexual IPV research (although not all heterosexual factors were investigated), but with stigma consciousness being highlighted as a possible risk factor specific for gay males. This refutes the gendered perspective that SSIPV is qualitatively different to heterosexual IPV (Respect, 2004). SSIPV, like heterosexual IPV, also consists of various factors interacting (consistent with the nested ecological theory; Dutton, 1995; 2006), so is not merely a result of feeling disempowered, where IPV is used in an attempt to assert dominance. However, there do appear to be some exosystem and macrosystem factors relevant to the gay male community that may exacerbate and worsen IPV for them, for example HIV/AIDS and high levels of unprotected sex involved in SSIPV.

Due to the nature of some of these factors and their associations with established health difficulties, together with the high prevalence of HIV/AIDS in this population (e.g., Island & Letellier, 1991), research needs to drastically increase and develop definitional and methodological consistency. Additionally, it highlights the importance to screen these minority status individuals for multiple health problems. This is due to the high likelihood of many of these risk factors synergistically interacting at an ontogenic, microsystem, exosystem, and macrosystem level, and potentially worsening the consequences, particularly when substance use is involved. The findings indicate a profile for individuals involved in SSIPV, which could help in its prevention, as well as the development of risk assessment tools, resources and services for male SSIPV perpetrators and victims. These would need to ensure an emphasis on substance use,

mental health, stigma consciousness, HIV awareness and sexual risk reduction strategies, due to the interaction of all these risk factors within this population. Furthermore, resources need to improve in their ability to respond and help individuals involved in SSIPV, which is currently limited and ill-equipped (Merrill & Wolfe, 2000). The support needs to be advertised as being applicable and readily available to the gay community, particularly to include those individuals with high levels of stigma consciousness, in order for services to effectively start reducing SSIPV.

Chapter Three

INVESTIGATING THE RATES AND BELIEFS ABOUT HETEROSEXUAL AND SAME-SEX INTIMATE PARTNER VIOLENCE IN A WESTERN FEMALE POPULATION

Abstract

This study addresses the dearth of understanding about same-sex values. It aimed to explore the rates, beliefs and approval of heterosexual intimate partner violence (IPV) and same-sex IPV (SSIPV) and the relationship of this approval to perpetration by heterosexual and same-sex couples. 278 heterosexual and 49 gay females self-reported their rates of perpetration and victimisation of IPV and controlling behaviours, and their approval of various heterosexual IPV and SSIPV vignettes, via an online questionnaire. Results demonstrated similar rates of IPV perpetration and victimisation in heterosexual females and gay females, with the exception of heterosexual females perpetrating significantly more minor physical IPV and threatening controlling behaviours, and receiving significantly more minor sexual violence from their male partners. Participants believed that female heterosexual IPV was the most acceptable and least severe form of IPV, and male heterosexual IPV the least acceptable and most severe form. However, for severe aggression female SSIPV was not significantly approved of any more than heterosexual male IPV. Gay females were also perceived as being more likely to be emotionally distressed from minor IPV and less able to defend themselves than gay males. Finally, participants who perpetrated minor IPV and SSIPV had higher approval scores than their non-perpetrating counterparts. Heterosexual female perpetrators reported the highest approval of all types of IPV, which was significantly higher than gay female non-perpetrators for minor IPV, who had the lowest approval. This indicated a tentative link for increased approval of IPV in those who actually perpetrate IPV. These findings suggest the need for education to improve public perception and awareness of IPV in all relationships.

Introduction

It has been shown that intimate partner violence (IPV) can occur in all types of relationships, regardless of marital status and sex of the couple (Dixon & Graham-Kevan, 2011). The majority of IPV research has focused on heterosexual relationships, so the literature investigating same-sex intimate partner violence (SSIPV) is minimal in comparison. This is despite investigation showing that SSIPV occurs at an equal or higher rate to heterosexual IPV (Fountain, Mitchell-Brody, Jones, & Nichols, 2009; Messinger, 2011; Rohrbaugh, 2006; Waldner-Haugrud, Gratch, & Magruder, 1997). Research needs to ensure that same-sex couples are included. This paper aims to address the above issues by providing a focus on the under researched forms of female and same-sex perpetrated IPV.

Theories of IPV

Initial research into IPV was driven by a gendered perspective asserting that IPV is solely caused by the norms and beliefs promoted by patriarchal societies, with gender being *the* strongest risk factor for IPV (Respect, 2008). However, various criticisms of the methodology of the gendered perspective exist. One major problem is that it does not provide an explanation for SSIPV due to gender equality in the relationship. From this perspective, it is argued that SSIPV is qualitatively different to heterosexual IPV as these relationships do not reflect conventional power relations (Respect, 2004).

However, there is much research highlighting similarities between heterosexual and SSIPV (e.g., Burke & Follinstad, 1999; Nowinski & Bowen, 2012). Unfortunately, most

likely a result of this gendered perspective, much of the literature in this field has focused on only male to female IPV, but all types of IPV need attention to improve understanding and ensure resources are utilised appropriately.

A more well-rounded approach that provides a guide to the significant theories that collectively explain the aetiology of IPV is Dutton's (1995; 2006) nested ecological theory. This is gender inclusive and argues that IPV is likely caused by many interacting factors. This has been demonstrated to be useful in explaining both heterosexual and SSIPV and is consistent with the literature demonstrating similarities in prevalence rates between heterosexual and SSIPV.

Beliefs about IPV

Cross cultural research has shown that patriarchy is not the sole risk factor for IPV, with similar IPV rates in countries that have varying levels of gender equality (Santoveña, Dixon, Peña, Nava, & Salgado, submitted; Straus, 2007b). Indeed it is argued that chivalrous, rather than patriarchal, beliefs exist in Western cultures, whereby males actually protect females and disapprove of 'wife beating' (Felson, 2002). This is suggested to increase the likelihood of heterosexual female perpetration due to a belief that there will be no retaliatory violence from their male partner (Archer, 2000; Fiebert & Gonzalez, 1997) and that female to male violence is trivialised, resulting in no consequences (Miller & Simpson, 1991). Heterosexual male perpetrated IPV is taken more seriously and has higher levels of disapproval (e.g., Koski & Mangold, 1998; Santoveña et al., submitted), with male perpetrators being held more responsible, more deserving of punishment (e.g., Feather, 1996), and viewed as causing more injury and

being more criminal (Bethke & Dejoy, 1993) than heterosexual female perpetrators. Further, heterosexual female perpetration is regarded as less harsh, requiring less intervention and punishment (Sorenson & Taylor, 2005). Heterosexual male victims are also blamed more and believed to need less support (Lehmann & Santilli, 1996; Sorenson & Taylor, 2005). Specifically females will rate male perpetrators more responsible and female victims less responsible than males would rate (Pierce & Harris, 1993), demonstrating the increased likelihood of females perpetrating IPV, through a belief that their violence is more acceptable.

Females initiating violence may increase the likelihood of their own victimisation and research has found that the biggest risk factor for female victimisation is her perpetration (Stith et al., 2004). It can therefore be argued that the beliefs about the triviality and acceptance of female violence are actually indirectly increasing the risk of harm to a woman and needs to be addressed to protect the safety of women, in addition to men.

There is much less research examining attitudes and beliefs aboutSSIPV. These results are more inconsistent and ambiguous with many not including or comparing relationship types. Therefore, it is uncertain as to whetherSSIPV is tolerated more or less in society and hence whether it is viewed as IPV or as 'normal occurrence'.

Heterosexual male perpetrators appear to be regarded as the least favourable, the most serious, more criminally reprehensible, and seen as committing a more violent crime than heterosexual females, and gay male and female perpetrators (Cormier & Woodworth, 2008; Hamby & Jackson, 2010; Harris & Cook, 1994; Poorman, Seelau, & Seelau, 2003; Seelau & Seelau, 2005; Wise & Bowman, 1997). Heterosexual female perpetrated IPV is viewed as the least illegal, requiring less police intervention

(Sorenson & Thomas, 2009), the least serious and least harmful of the other three types of perpetrators, with heterosexual female victims being held least responsible (Taylor & Sorenson, 2005). In scenarios of situational couple violence, a sample of therapists were more likely to perceive females as the victim and males the perpetrator with more power, in heterosexual scenarios. For male and female same-sex couples, both partners were more likely to be perceived as the victim and perpetrator (Blasko, Winek, & Bieschke, 2007), with mutual fault being attributed (Taylor & Sorenson, 2005).

These findings suggest that beliefs/attitudes towards SSIPV may be different to those held for heterosexual IPV, and SSIPV has been found to be viewed as less serious and less likely to escalate than heterosexual IPV (Brown & Groscup, 2009; Wise & Bowman; 1997). Female same-sex couples are less likely to be viewed as a victim in scenarios of non-physical abuse, in comparison to heterosexual females (Basow & Thompson, 2012). Some research has highlighted differences whereby perpetrators against female victims are perceived as the most serious (i.e., male to female violence, or female to female violence), demonstrating that there may also be dissimilarities between female and male SSIPV. For example, Seelau, Seelau, and Poorman (2003) and Seelau and Seelau (2005) found that IPV perpetrated generally against female victims was regarded as more serious than against males, with male SSIPV being viewed as the least serious. They also found female victims were regarded as most likely to require support and to receive worse injuries, with male perpetrators being more injurious. Furthermore, verdicts regarding guilt from IPV were deemed as more likely when victims were female. Similarly, Hamby and Jackson (2010) found that IPV against females was rated as more severe than against males, but they also found that male perpetrated IPV was regarded as more severe than female. Taylor and Sorenson

(2005) found that when the victim was male, they were more likely to be held primarily at fault for the IPV, although they also found that male same-sex couple perpetrators were regarded as the most injurious type of perpetrator.

The findings highlight some discrepancies and lack of clarity in this field of literature, although, the beliefs and perceptions appear to follow a similar theme that they are perhaps based upon size and strength of both the perpetrator and victim. It suggests there are differences in individuals' beliefs regarding SSIPV and its comparison to heterosexual IPV, possibly as a result of the heavily researched gendered perspective which argues this. There are also indications of differences in beliefs towards SSIPV and IPV, based upon sample type (Cormier & Woodworth, 2008; Pattavina, Hirschel, Buzawa, Faggiani, & Bentley, 2007) and gender of participants (Poorman et al., 2003; Seelau & Seelau, 2005). Therefore it is unclear whether SSIPV is tolerated more or less in society than IPV, and whether it is actually viewed as a form of IPV. It is important to establish whether individuals view the various forms of IPV differently, so that support and education can be improved and people understand that all types of violence are unacceptable.

Few research studies have explored the impact of beliefs towards heterosexual IPV perpetration and, to the author's knowledge, no studies have addressed the impact of beliefs upon SSIPV perpetration. As Chapter Two of the thesis shows, there is the suggestion that some factors may uniquely contribute to the aetiology of SSIPV, so it is important that all types of IPV are investigated when exploring the effects of beliefs upon actual perpetration. There is an indication that attitudes supportive of violence contribute to actual perpetration in heterosexuals. For example, heterosexual English women that participated in mutual partner violence approved significantly more of

heterosexual physical IPV perpetrated by both males and females (Santoveña et al., submitted). Sugarman and Frankel (1996) found that male perpetrators of heterosexual IPV displayed more positive attitudes to IPV. Additionally, instrumental beliefs about aggression predicted levels of IPV perpetrated, but this was stronger for males than females (Archer & Graham-Kevan, 2003). Along a similar theme, friends or peer group attitudes/beliefs towards IPV can have an influence upon perpetration, and increase perpetration when approval is higher (Witte & Mulla 2012; Smith, 1991). However, there is minimal evidence relating to approval of IPV being associated with perpetration of IPV, particularly in same-sex relationships. This needs to be fully understood, because if attitude is indeed a risk factor for perpetration, work could be done to change those attitudes and beliefs to prevent further perpetration.

Aim

This study addresses the dearth of understanding about heterosexual and same-sex values, by exploring the rates, beliefs and approval of heterosexual IPV andSSIPV and the relationship of this approval to perpetration by heterosexual and same-sex couples.

Three research questions will be examined:

- 1) To investigate the rates of conflict tactics and controlling behaviours used by heterosexual and same-sex couples towards their intimate partners.
- 2) To investigate the beliefs and approval scores of a variety of vignettes that depict heterosexual and gay, male and female, perpetrated physical IPV, in a variety of provocation situations.

- 3) To investigate the differences in the beliefs and approval of IPV of participants who self-report perpetrating physical IPV compared to those who do not.

Method

Subjects

The sample was collected in two waves. The initial sample consisted of 413 psychology students from the University of Birmingham. In the second wave, 88 gay participants were recruited from specific advertising for gay individuals. There was a low response rate of male participants in the sample (72, 14.37%) with one participant declining to give their gender, so these were excluded. Of the remaining 428 females, 332 (77.57%) described themselves as heterosexual and 95 (22.20%) as gay, lesbian or bisexual, with one participant declining to give their sexual orientation, who was excluded.

Participants who described themselves as bisexual in the first wave of data collection (12) were excluded as it was unclear if they were reporting IPV with females or males.

However, bisexuals in the second wave of data collection were included, as all participants were only required to answer in relation to same-sex relationships.

Furthermore, 88 participants were excluded due to large amounts of missing data.

Therefore, the resultant sample total was 327, with 278 heterosexuals and 49 gay participants.

Participants in the heterosexual female group were all students, had a mean age of 19.31 years old ($SD = 1.36$), and were mainly of white ethnic origin (230, 82.7%). The majority of participants were currently single (134, 48.2%) or in a stable relationship but not living together (107, 38.5%), and 266 (95.7%) stated the UK as their permanent residence.

Participants in the gay female group had a mean age of 22.69 years old (SD= 5.18), with the majority being students (30, 61.2%), and were mainly of white ethnic origin (46, 93.9%). The majority of participants were either in a stable relationship but not living together (25, 51.0%) or single (14, 28.6%), and 48 (98.0%) stated the UK as their permanent residence.

Procedure

Participants were recruited in the first wave via an online participation scheme. They had to be at least 18 years old and have been in a relationship in adult/adolescent life, lasting for at least one month. Participants accessed the scheme through the School of Psychology, completing studies to obtain credits required by their course. Participants had an ID number to ensure anonymity throughout the study, which was unknown to the researcher. One credit was awarded for their completion of the study. Appendix 7 includes the original advertising and information/consent form.

The second wave of recruitment was undertaken to gain more gay participants. They were recruited via an online survey website, where advertisements for the study were placed on social networking sites and emailed to lesbian, gay, bisexual, and transgender (LGBT) groups/societies. Participants had to click on the link provided to access the study on an external survey website, with answers being submitted anonymously, and data was downloaded from the system. Appendix 8 contains the advertisements used for social networking sites, the letter sent to appropriate group/society chairs, the email distributed to group/society members, and the information/consent form.

In both waves of recruitment, participants provided their consent by clicking on the appropriate button on the webpage, to allow continuation to the study questions. At the end of the study, participants were all provided with the same debrief form (Appendix 9), which thanked them for their participation and offered any relevant service providers/helpline details for those experiencing IPV.

Ethical approval was obtained from the University of Birmingham for the first wave of recruitment (see Appendix 10) and this was amended to allow for the second wave of recruitment, and approval was again obtained (see Appendix 11) with the University Ethical Code of Conduct guidelines being adhered to (see Appendix 12). Individuals were able to withdraw during the study or withdraw their data up to one month after completion, and were required to supply a code word in order to identify their data to remove it, ensuring anonymity was preserved.

Measures

The questionnaires comprised of a demographic section to ascertain basic information about participants, and three other measures as described below.

REVISED CONFLICTS TACTICS SCALES (CTS2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996)

The CTS2 is a 78-item self-report measure that assesses the type and frequency of conflict tactics used in the context of an intimate relationship. Participants use a 5-point Likert scale (0=never to 4=very frequently) to rate how frequently they have perpetrated

or been victimised by the acts described. The scales used in this study were the physical assault (minor and severe), sexual aggression (minor and severe), and injury to victim (minor and severe) scales, in order to simplify responses. The tool has been used in a variety of samples (e.g., Straus, 2007c). In this sample, the Cronbach's alphas calculated were: physical assault .79 (self) and .81 (partner); sexual aggression .58 (self) and .67 (partner); and injury to victim .61 (self) and .74 (partner).

CONTROLLING BEHAVIOURS SCALE REVISED (CBS-R; Graham-Kevan & Archer, 2005)

The CBS-R is a 24-item self-report questionnaire investigating the type and frequency of controlling behaviours an individual uses towards an intimate partner. Participants again use a 5-point Likert scale (0=never to 4=very frequently) to rate how frequently they have perpetrated or experienced the acts described. It examines items on five types of controlling behaviours; economic, threatening, intimidating, emotional, and isolating. The Cronbach's alphas for each scale were as follows: economic .46 (self) and .56 (partner); threatening .49 (self) and .59 (partner); intimidation .54 (self) and .61 (partner); emotional .71 (self) and .77 (partner); and isolating .76 (self) and .78 (partner).

BELIEFS ABOUT RELATIONSHIP AGGRESSION SCALE (BaRAS; Dixon, unpublished)

The BaRAS is a questionnaire investigating participant's beliefs about physical violence towards an intimate partner, from different provocations, in the form of brief vignettes.

The BaRAS manipulates the variables of sex of aggressor (male or female), provocation from victim (no provocation, infidelity, minor physical violence, severe physical violence, psychological aggression, and disobedience), and severity of perpetrator's physical violence (minor 'a slap' or severe 'repeatedly punched in face and body'). This creates a 2x6x2 factorial design, with 24 vignettes. For the purposes of this study, the same three factors were manipulated within the BaRAS, but some were adapted: gender of perpetrator (heterosexual male, heterosexual female, gay male, and gay female), and provocation from victim (no provocation, physical violence, sexual infidelity, and psychological aggression), but severity of perpetrator's physical violence remained the same (minor and severe). This produced a 4x2x4 factorial design, hence 32 vignettes.

Vignettes are introduced for each section, detailing an average size man or woman in each particular type of monogamous intimate relationship for over 12 months. From these vignettes, participants' beliefs are examined regarding five aspects: approval of aggressor's actions, injury to victim, emotional distress to victim, extent victim can defend themselves, and legal sanction/punishment deemed suitable. An example vignette and the five accompanying questions are below, depicting a male aggressor and female victim, with no provocation from the victim, and a low severity of physical violence perpetrated:

John had a stressful day at work. That evening when Carol was sat on the sofa watching television he approached her and slapped her across the face.

- a) To what extent do you approve of John's actions?
- b) How likely is it that Carol (the victim) will be physically injured requiring medical treatment?
- c) How likely is it that Carol will be greatly emotionally distressed?

- d) How likely is it that Carol can defend herself against John?
- e) Which of the following legal sanctions do you deem suitable punishment for John in this instance?

A 5-point Likert scale is used for participants to express their beliefs (1= Not at all and 5= Definitely), but a 6-Point Likert scale is used for the punishment question (1= No Punishment, 2= Police Caution, 3= Community Service, 4= Up to 6 months in prison, 5= Up to three years in prison, and 6= More than three years in prison). This reduces the likelihood of socially desirable responding, as answers are not merely a dichotomous yes/no answer (Sorenson & Taylor, 2005). Cronbach's alphas were calculated for the five scales, displaying excellent internal consistency: approval .92; injury .93; emotional distress .96; defend .91; punishment .96.

Results

Research Question 1

To investigate the rates of conflict tactics and controlling behaviours used by heterosexual and same-sex couples towards their intimate partners.

A series of 4x2 chi squared tests were used to analyse the data from the CTS2 and CBS-R, for perpetration and victimisation rates over the last 12 months only. *Post hoc* tests were completed where significant findings emerged, using the Bonferonni correction procedure to correct for the inflated chance of a type I error occurring due to undertaking multiple comparisons. Therefore, a new alpha value of $p < 0.008$ was applied.

Table 3 depicts the chi squared results from the CTS2. There was a significant difference for minor physical aggression between the four groups ($\chi^2_{1} = 10.98, p = 0.01$). *Post hoc* tests indicated that heterosexual females perpetrated significantly more minor physical aggression than victimisation ($\chi^2_{1} = 9.990, p < 0.002$). There was a significant difference of rates of minor sexual aggression between the groups ($\chi^2_{1} = 16.90, p < 0.01$). *Post hoc* tests revealed that heterosexual females reported more victimisation than perpetration ($\chi^2_{1} = 13.606, p < 0.001$). There were no other significant differences between the groups.

Table 3. The frequency of conflict tactics reported by heterosexual and gay female perpetrators and victims during times of conflict with their intimate partner (N=327).

	Physical Aggression		Sexual Aggression		Injury to Victim	
	Minor N (%)	Severe N (%)	Minor N (%)	Severe N (%)	Minor N (%)	Severe N (%)
Heterosexual Female Perpetrator						
Never	137 (49)	234 (84)	239 (86)	276 (99.3)	251 (90)	276 (99)
Once or More	141 (51)	44 (16)	39 (14)	2 (0.7)	27 (10)	2 (1)
Heterosexual Female Victim						
Never	174 (63)	249 (90)	204 (73)	266 (95.7)	253 (91)	276 (99)
Once or More	104 (37)	29 (10)	74 (27)	12 (4.3)	25 (9)	2 (1)
Gay Female Perpetrator						
Never	30 (61)	40 (82)	42 (86)	47 (96)	46 (94)	48 (98)
Once or More	19 (39)	9 (18)	7 (14)	2 (4)	3 (6)	1 (2)
Gay Female Victim						
Never	30 (61)	39 (80)	43 (88)	47 (96)	46 (94)	49 (100)
Once or More	19 (39)	10 (20)	6 (12)	2 (4)	3 (6)	0 (0)
Chi Squared Statistic	10.98, p=0.01*	6.13, p=0.11	16.90, p<0.01**	7.48, p=0.06	1.17, p=0.76	1.44, p=0.70

** p<0.01, *p<0.05

Table 4 shows the chi squared results from the CBS-R. There was a significant difference between groups for using threatening behaviours ($\chi^2_1=9.42$, p=0.02). *Post hoc* tests revealed that heterosexual female perpetrators used significantly more threatening behaviours than heterosexual female victims received ($\chi^2_1=8.562$, p=0.003).

There was also a significant difference in the use of emotional controlling behaviours between groups ($\chi^2_1=9.14$, p=0.03). However, using a more stringent significance level

for *post hoc* tests did not show any differences as being significant at the 0.008 level.

Heterosexual females did though report a trend for being victimised the least (by heterosexual male perpetrators) in comparison to heterosexual female perpetrators ($\chi^2_1=5.427, p=0.020$), gay female perpetrators ($\chi^2_1=3.851, p=0.050$), and to the rate gay females are victimised ($\chi^2_1=3.851, p=0.050$).

Table 4. The frequency of perpetration and victimisation of controlling behaviours reported by heterosexual and gay female participants during times of conflict with their intimate partner (N=327).

	Economic N (%)	Threatening N (%)	Intimidating N (%)	Emotional N (%)	Isolating N (%)
Heterosexual Female Perpetrator					
Never	139 (50)	153 (55)	153 (55)	100 (36)	91 (33)
Once or More	139 (50)	125 (45)	125 (45)	178 (64)	187 (67)
Heterosexual Female Victim					
Never	127 (46)	186 (67)	143 (51)	127 (46)	97 (35)
Once or More	150 (54)	91 (33)	135 (49)	151 (54)	181 (65)
Gay Female Perpetrator					
Never	18 (37)	33 (67)	23 (47)	15 (31)	9 (18)
Once or More	31 (63)	16 (33)	26 (53)	34 (69)	40 (82)
Gay Female Victim					
Never	17 (35)	31 (63)	21 (43)	15 (31)	14 (29)
Once or More	32 (65)	18 (37)	28 (57)	34 (69)	35 (71)
Chi Squared Statistic	6.00, p=0.11	9.42, p=0.02*	3.21, p=0.36	9.14, p=0.03*	5.54, p=0.14

** p<0.01, *p<0.05

Research Question 2

To investigate the beliefs and approval scores of a variety of vignettes that depict heterosexual and gay, male and female, perpetrated physical IPV, in a variety of provocation situations.

Table 5 shows the mean scores and independent samples t-test comparison between the two population groups (heterosexual females and gay females), for each scale of the BaRAS, regarding minor physical violence. Table 6 depicts the same for severe physical violence. There were no significant differences between population groups on any scale, when using the new alpha value of 0.0025, derived using the Bonferonni correction procedure. Therefore, this provided justification for analysing the data for this question by combining the heterosexual and gay participant responses together.

Table 5. Mean responses and t-test results of comparisons between population groups; heterosexual females and gay females, of beliefs about minor physical violence (N=327).

	Population Group		T-test Value
	Heterosexual Female Mean (SD)	Gay Female Mean (SD)	
Approval of Aggressor in Vignette			
Heterosexual Male Aggressor	6.40 (2.43)	6.00 (1.89)	1.103
Heterosexual Female Aggressor	9.68 (3.00)	8.73 (2.55)	2.067
Gay Male Aggressor	7.34 (2.83)	6.43 (2.59)	2.114
Gay Female Aggressor	7.37 (3.00)	6.43 (2.76)	2.053
Injury to Victim in Vignette			
Heterosexual Male Aggressor	9.04 (2.81)	8.16 (2.68)	2.037
Heterosexual Female Aggressor	7.17 (2.28)	6.76 (1.89)	1.188
Gay Male Aggressor	7.80 (2.68)	7.04 (2.63)	1.837
Gay Female Aggressor	7.77 (2.84)	7.02 (2.36)	1.744
Emotional Distress of Victim in Vignette			
Heterosexual Male Aggressor	14.22 (3.05)	15.00 (3.08)	-1.650
Heterosexual Female Aggressor	9.68 (3.00)	8.73 (2.55)	2.067
Gay Male Aggressor	7.80 (2.68)	7.04 (2.63)	1.837
Gay Female Aggressor	13.30 (3.54)	13.82 (3.97)	-0.927
Victim Ability to Defend in Vignette			
Heterosexual Male Aggressor	10.14 (2.49)	9.69 (2.11)	1.193
Heterosexual Female Aggressor	15.64 (2.90)	15.63 (2.99)	0.017
Gay Male Aggressor	13.50 (2.76)	13.65 (2.85)	-0.360
Gay Female Aggressor	12.81 (2.55)	13.12 (2.65)	-0.787
Punishment for Aggressor in Vignette			
Heterosexual Male Aggressor	7.82 (3.03)	8.31 (2.79)	-1.047
Heterosexual Female Aggressor	6.28 (2.60)	6.57 (2.51)	-0.726
Gay Male Aggressor	6.81 (3.13)	6.71 (2.89)	0.204
Gay Female Aggressor	6.81 (3.07)	6.82 (2.63)	-0.007

*p<0.0025

Table 6. Mean responses and t-test results of comparisons between population groups; heterosexual females and gay females, of beliefs about severe physical violence (N=327).

	Population Group		T-test Value
	Heterosexual Female	Gay Female	
	Mean (SD)	Mean (SD)	
Approval of Aggressor in Vignette			
Heterosexual Male Aggressor	4.67 (1.46)	4.45 (0.98)	1.000
Heterosexual Female Aggressor	6.10 (2.16)	5.45 (1.73)	1.993
Gay Male Aggressor	4.99 (1.90)	4.63 (1.22)	1.269
Gay Female Aggressor	4.82 (1.91)	4.39 (1.06)	2.284
Injury to Victim in Vignette			
Heterosexual Male Aggressor	16.92 (2.70)	17.04 (2.91)	-0.292
Heterosexual Female Aggressor	13.20 (2.97)	13.69 (3.41)	-1.054
Gay Male Aggressor	15.44 (3.11)	15.84 (3.53)	-0.807
Gay Female Aggressor	15.56 (3.19)	15.84 (3.62)	-0.539
Emotional Distress of Victim in Vignette			
Heterosexual Male Aggressor	17.53 (2.66)	18.00 (1.93)	-1.493
Heterosexual Female Aggressor	14.59 (3.48)	15.39 (3.32)	-1.484
Gay Male Aggressor	16.22 (3.17)	16.94 (2.64)	-1.504
Gay Female Aggressor	16.53 (3.27)	16.90 (3.00)	-0.731
Victim Ability to Defend in Vignette			
Heterosexual Male Aggressor	8.09 (2.34)	7.67 (1.97)	1.163
Heterosexual Female Aggressor	13.65 (2.85)	13.41 (3.00)	0.537
Gay Male Aggressor	11.94 (2.73)	12.16 (2.46)	-0.539
Gay Female Aggressor	11.27 (2.63)	11.65 (2.47)	-0.959
Punishment for Aggressor in Vignette			
Heterosexual Male Aggressor	15.45 (4.08)	16.27 (3.53)	-1.306
Heterosexual Female Aggressor	12.40 (4.19)	13.59 (4.17)	-1.829
Gay Male Aggressor	13.97 (4.35)	15.12 (4.26)	-1.715
Gay Female Aggressor	13.89 (4.19)	14.71 (4.10)	-1.277

*p<0.0025

Aggregate responses were analysed using a 4x4 repeated measures ANOVA to examine whether factors of aggressor type and provocation level interacted to affect participants' approval and beliefs about minor and severe physical aggression scenarios. *Post hoc* tests were undertaken using Tukey's HSD, from a one-way ANOVA, to assess for significant differences of beliefs between aggressor types.

a) MINOR PHYSICAL AGGRESSION

Table 7 depicts the ANOVA results, revealing a significant main effect of aggressor type in vignette, provocation type, and interaction between these two factors for most domains investigated. This excluded the main effect of aggressor type for approval of aggressor, main effect of provocation type and interaction for the likelihood that the victim will be injured, and the interaction of likelihood that victim can defend themselves. Figures 2a-e illustrate the effects found in the ANOVA results. These provide a graphical representation of the findings. Consistently the line depicting heterosexual male aggressors is regarded as the least approved, most likely to cause injury and emotional distress to victim, the most worthy of punishment, and the victim is least able to defend herself, with the heterosexual female aggressor being the opposite. The gay male and female aggressors were generally positioned between the other two.

Table 8 shows the results of the *post hoc* tests using Tukey's HSD, from a one-way ANOVA, to investigate significant differences between beliefs of different aggressor types in the vignettes, combining all provocations of minor physical aggression. There was a significant difference between all aggressor types, except gay males and females

who were rated almost the same in relation to approval, likelihood of victim injury, and punishment.

Table 7. The significant main effects and interactions of a 4x4 repeated measures ANOVA from responses on the BaRAS of minor physical aggression (N=327).

	Main effect of Aggressor Type in Vignette	Main effect of Provocation in Vignette	Interaction between Gender and Provocation
Approval of Aggressor	F(1,1285)=1.064, p=0.303	F(3,1285)=204.297, p<0.001**	F(3,1285)=13.107, p<0.001**
Likelihood that Victim will be Injured	F(1,1288)=106.222, p<0.001**	F(3,1288)=1.110, p=0.344	F(3,1288)=3.225, p=0.022*
Likelihood that Victim will be Emotionally Distressed	F(1,1289)=19.716, p<0.001**	F(3,1289)=89.996, p<0.001**	F(3,1289)=15.293, p<0.001**
Likelihood that Victim can Defend	F(1,1286)=354.136, p<0.001**	F(3,1286)=10.955, p<0.001**	F(3,1286)=0.466, p=0.706
Suitable level of Punishment for Aggressor	F(1,1282)=73.495, p<0.001**	F(3,1282)=14.827, p<0.001**	F(3,1282)=20.387, p<0.001**

** p<0.01, *p<0.05

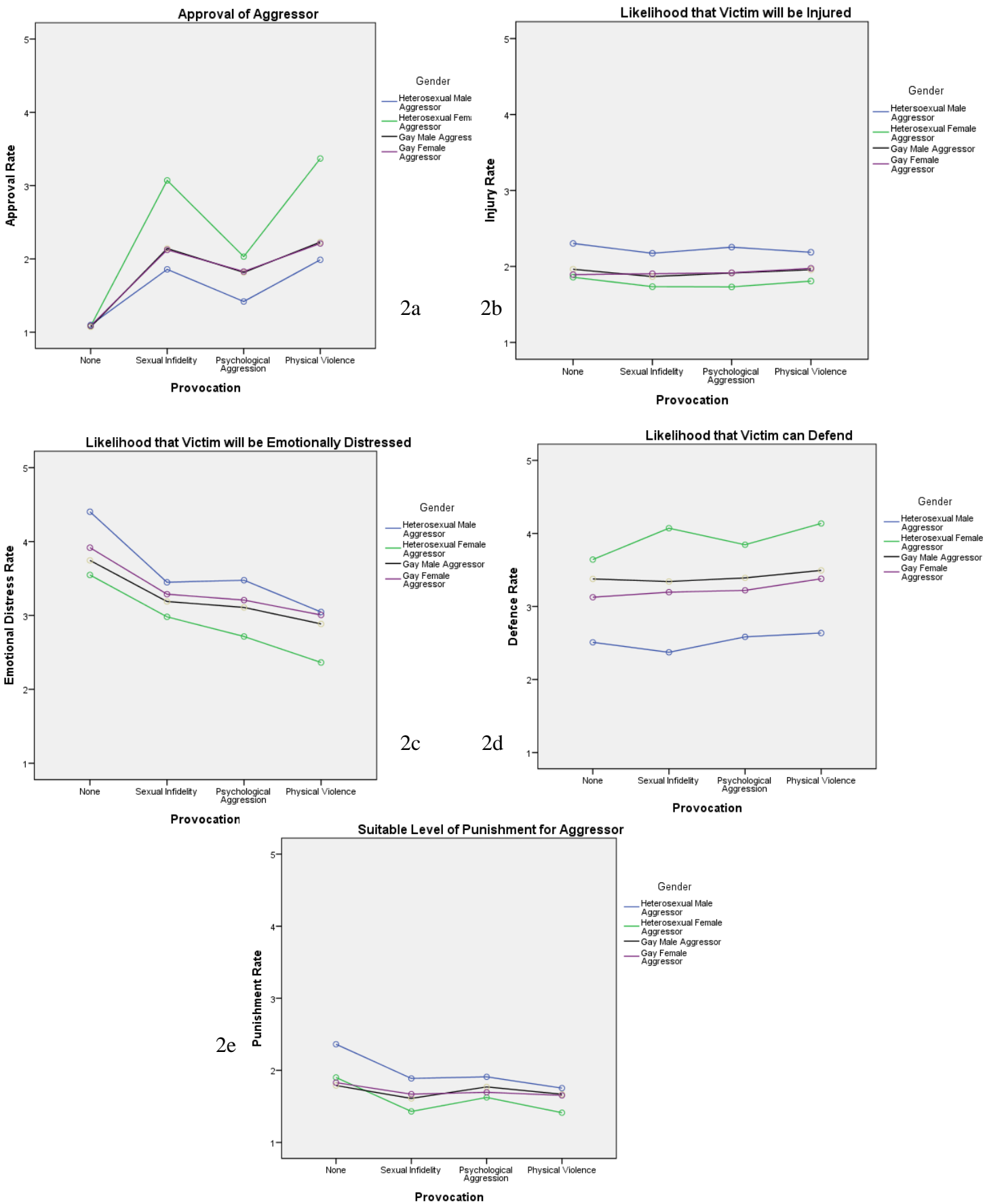


Figure 2. The graphs depicting the 4x4 repeated measures ANOVA results for a minor act of violence (a slap) in different provocation situations. The questions use a Likert Scale; 1= Not at all, 2= A little, 3= Somewhat, 4= Mostly, and 5= Definitely. For the suitable punishment question; 1= None, 2= Police caution, 3= Community service, 4= Up to 6 months in Prison, 5= Up to 3 years in prison, and 6= More than 3 years in prison.

Table 8. Tukey's HSD *post hoc* tests, using a one-way ANOVA, showing results of participants' views about 4 different aggressors types in the vignettes of minor physical aggression on 5 measures (N=327).

Aggressor Type in Vignette	Aggressor Comparison	Mean Difference	Tukey's HSD
Approval of Aggressor			
ANOVA: F(3,5204)=121.775, p<0.001**			
Heterosexual Male	Heterosexual Female	-0.801	<0.001**
	Gay Male	-0.221	<0.001**
	Gay Female	-0.224	<0.001**
Heterosexual Female	Gay Male	0.580	<0.001**
	Gay Female	0.577	<0.001**
Gay Male	Gay Female	-0.003	1.000
Likelihood that Victim will be Injured			
ANOVA: F(3,5207)=74.952, p<0.001**			
Heterosexual Male	Heterosexual Female	0.453	<0.001**
	Gay Male	0.302	<0.001**
	Gay Female	0.311	<0.001**
Heterosexual Female	Gay Male	-0.151	<0.001**
	Gay Female	-0.142	<0.001**
Gay Male	Gay Female	0.009	0.992
Likelihood that Victim will be Emotionally Distressed			
ANOVA: F(3,5208)=87.920, p<0.001**			
Heterosexual Male	Heterosexual Female	0.692	<0.001**
	Gay Male	0.360	<0.001**
	Gay Female	0.238	<0.001**
Heterosexual Female	Gay Male	-0.332	<0.001**
	Gay Female	-0.454	<0.001**
Gay Male	Gay Female	-0.122	0.025*
Likelihood that Victim can Defend			
ANOVA: F(3,5205)=637.617, p<0.001**			
Heterosexual Male	Heterosexual Female	-1.395	<0.001**
	Gay Male	-0.869	<0.001**
	Gay Female	-0.700	<0.001**
Heterosexual Female	Gay Male	0.526	<0.001**
	Gay Female	0.695	<0.001**

Gay Male	Gay Female	0.170	<0.001**
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Suitable level of Punishment for Aggressor

ANOVA: $F(3,5195)=44.375, p<0.001^{**}$

Heterosexual Male	Heterosexual Female	0.394	<0.001**
	Gay Male	0.271	<0.001**
Heterosexual Female	Gay Female	0.268	<0.001**
	Gay Male	-0.123	0.003**
Gay Male	Gay Female	-0.125	0.002**
	Gay Female	-0.003	1.000

** $p<0.01$, * $p<0.05$

b) SEVERE PHYSICAL AGGRESSION

Table 9 depicts the ANOVA results, revealing a significant main effect of aggressor type in vignette, provocation type, and interaction between these two factors for most domains investigated. This excluded the interaction for approval of aggressor and punishment for aggressor. Figures 3a-e illustrate the effects found in the ANOVA results. These provide a graphical representation of the findings. Again the line depicting heterosexual male aggressors is consistently regarded as the most likely to cause injury and emotional distress to victim, the most worthy of punishment, and the victim is least able to defend herself, with the heterosexual female aggressor being the opposite. The gay male and female aggressors were generally being positioned between these two. The graph for approval is somewhat less clear, but the heterosexual female aggressor is distinctly separate from the other lines.

Table 10 shows the results of the *post hoc* tests using Tukey's HSD, from a one-way ANOVA, to investigate significant differences between beliefs of different aggressor types in the vignettes, combining all provocations for severe aggression. There was a significant difference between all aggressor types, except between gay males and gay females in relation to approval, likelihood of victim injury, likelihood that victim will be emotionally distressed, and punishment. Additionally, there was no significant difference between approval of heterosexual male and gay female aggressors.

Table 9. The significant main effects and interactions from a 4x4 repeated measures ANOVA from responses on the BaRAS of severe physical aggression (N=327).

	Main effect of Aggressor Type in Vignette	Main effect of Provocation Type in Vignette	Interaction between Gender and Provocation
Approval of Aggressor	F(1,1288)=9.229, p=0.002**	F(3,1288)=38.470, p<0.001**	F(3,1288)=0.812, p=0.487
Likelihood that Victim will be Injured	F(1,1289)=26.355, p<0.001**	F(3,1289)=5.642, p=0.001**	F(3,1289)=2.957, p=0.031*
Likelihood that Victim will be Emotionally Distressed	F(1,1286)=14.553, p<0.001**	F(3,1286)=41.797, p<0.001**	F(3,1286)=10.682, p<0.001**
Likelihood that Victim can Defend	F(1,1289)=612.669, p<0.001**	F(3,1289)=25.274, p<0.001**	F(3,1289)=2.776, p=0.040*
Suitable level of Punishment for Aggressor	F(1,1282)=69.317, p<0.001**	F(3,1282)=24.528, p<0.001**	F(3,1282)=2.222, p=0.084

** p<0.01, *p<0.05

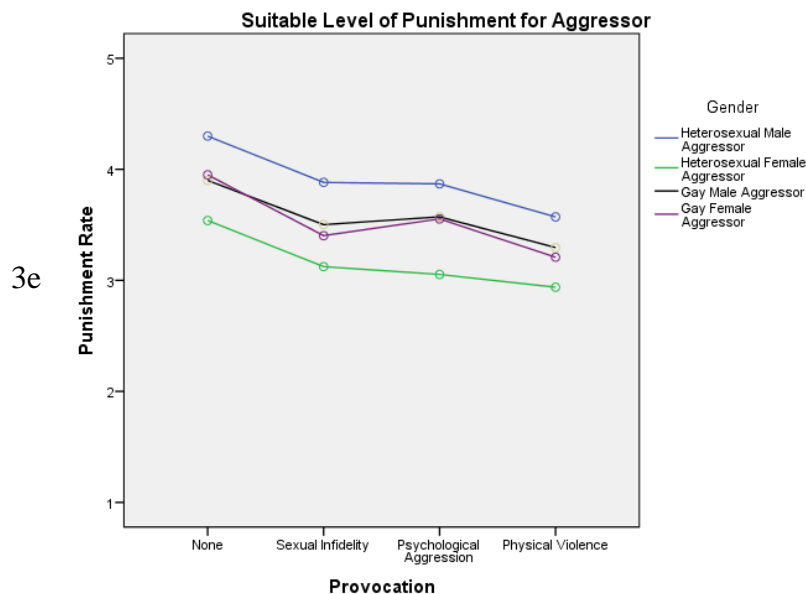
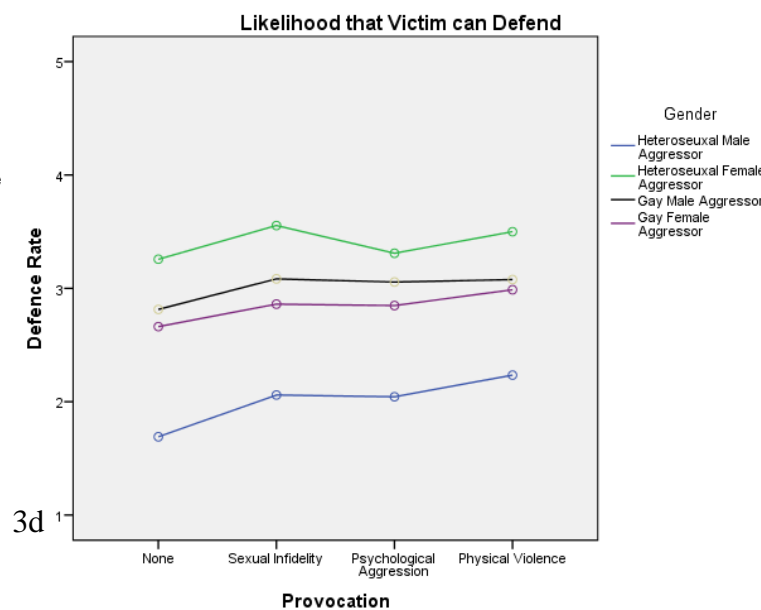
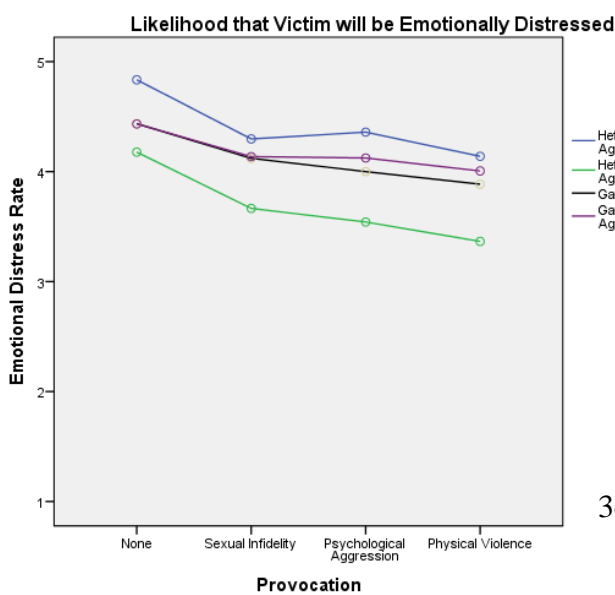
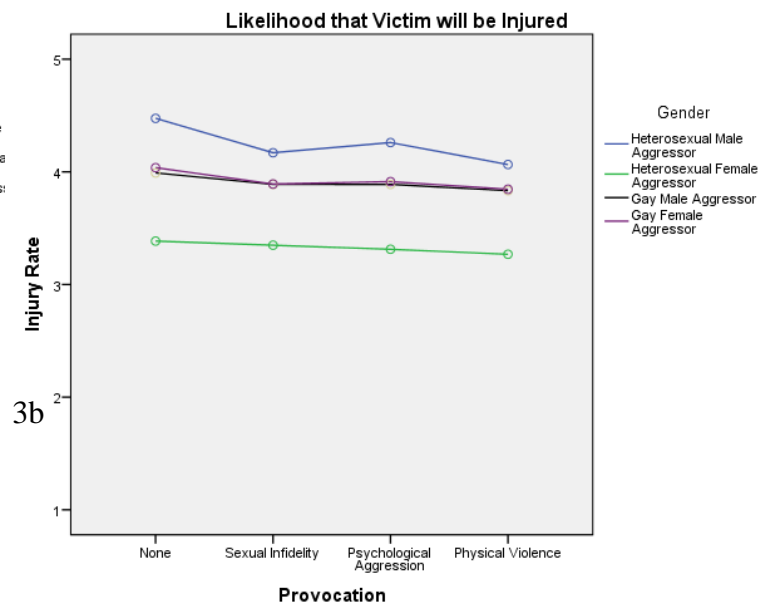
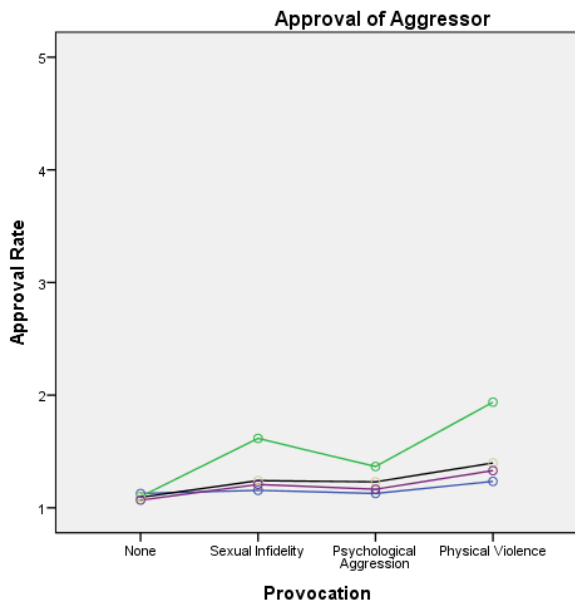


Figure 3. The graphs depicting the 4x4 repeated measures ANOVA results for a severe act of violence (punching repeatedly in face & body) in different provocation situations. The questions use a Likert Scale; 1= Not at all, 2= A little, 3= Somewhat, 4= Mostly, and 5= Definitely. For the suitable punishment question; 1= None, 2= Police caution, 3= Community service, 4= Up to 6 months in Prison, 5= Up to 3 years in prison, and 6= More than 3 years in prison.

Table 10. Tukey's HSD *post hoc* tests, using a one-way ANOVA, showing results of participants' views about 4 different aggressor types in the vignettes of severe physical aggression on 5 measures (N=327).

Aggressor Type in Vignette	Aggressor Comparison	Mean Difference	Tukey's HSD
Approval of Aggressor			
ANOVA: $F(3,5208)=76.854, p<0.001^{**}$			
Heterosexual Male	Heterosexual Female	-0.344	<0.001**
	Gay Male	-0.081	0.007**
	Gay Female	-0.034	0.527
Heterosexual Female	Gay Male	0.263	<0.001**
	Gay Female	0.310	<0.001**
Gay Male	Gay Female	0.047	0.244
Likelihood that Victim will be Injured			
ANOVA: $F(3,5209)=237.958, p<0.001^{**}$			
Heterosexual Male	Heterosexual Female	0.912	<0.001**
	Gay Male	0.344	<0.001**
	Gay Female	0.321	<0.001**
Heterosexual Female	Gay Male	-0.567	<0.001**
	Gay Female	-0.591	<0.001**
Gay Male	Gay Female	-0.023	0.907
Likelihood that Victim will be Emotionally Distressed			
ANOVA: $F(3,5206)=133.614, p<0.001^{**}$			
Heterosexual Male	Heterosexual Female	0.719	<0.001**
	Gay Male	0.306	<0.001**
	Gay Female	0.237	<0.001**
Heterosexual Female	Gay Male	-0.414	<0.001**
	Gay Female	-0.483	<0.001**
Gay Male	Gay Female	-0.069	0.237
Likelihood that Victim can Defend			
ANOVA: $F(3,5209)=685.162, p<0.001^{**}$			
Heterosexual Male	Heterosexual Female	-1.403	<0.001**
	Gay Male	-0.999	<0.001**
	Gay Female	-0.834	<0.001**
Heterosexual Female	Gay Male	0.404	<0.001**
	Gay Female	0.569	<0.001**

Gay Male	Gay Female	0.165	<0.001**
Suitable level of Punishment for Aggressor			
ANOVA: F(3,5187)= 81.959, p<0.001**			
Heterosexual Male	Heterosexual Female	0.739	<0.001**
	Gay Male	0.336	<0.001**
	Gay Female	0.378	<0.001**
Heterosexual Female	Gay Male	-0.403	<0.001**
	Gay Female	-0.361	<0.001**
Gay Male	Gay Female	0.042	0.817

** p<0.01, *p<0.05

Research Question 3

To investigate the differences in the beliefs and approval of IPV of participants who self-report perpetrating physical IPV compared to those who do not.

The results from the physical violence scales (minor and severe) on the CTS2 and approval scales (minor and severe aggression) on the BaRAS were analysed using a one-way ANOVA. Participants were divided into four participant groups based on individuals who never use physical violence and those who have used it once or more (in the last 12 months only); i.e., heterosexual female perpetrators and non-perpetrators, and gay female perpetrators and non-perpetrators. Approval scores of each aggressor type in the vignettes and provocation type were combined and the ANOVA examined whether factors of the participant group affected their approval of physical aggression scenarios. *Post hoc* tests were completed using Tukey's HSD to highlight significant differences between participant groups.

a) *MINOR PHYSICAL AGGRESSION*

Table 11 shows the mean approval scores of minor aggression for each participant group. The mean approval score for both types of perpetrator is higher than the two non-perpetrator groups. Table 12 shows the one-way ANOVA and Tukey's HSD *post hoc* results. This demonstrates a significant difference between participant groups, with *post hoc* tests revealing that heterosexual female perpetrators have significantly higher approval scores of minor aggression than gay female non-perpetrators. Figure 4 shows a graphical representation of each participant groups' approval scores.

Table 11. The mean approval scores of perpetrating and non-perpetrating heterosexual and gay female participants for minor physical aggression perpetrated by different aggressors (N=327).

Participant Group	Mean Approval Scores
Heterosexual Female Perpetrators	8.025
Heterosexual Female Non-Perpetrators	7.361
Gay Female Perpetrators	7.447
Gay Female Non-Perpetrators	6.550

Table 12. One-way ANOVA and Tukey’s HSD *post hoc* tests comparing approval scores of perpetrating and non-perpetrating, heterosexual and gay female participants with different aggressors of minor physical aggression (N=327).

Participant Group	Participant Group Comparison	Mean Difference	Tukey’s HSD
ANOVA: F(3,323)=3.819, p=0.010**			
Heterosexual Female Perpetrators	Heterosexual Female Non-Perpetrators	2.604	0.105
	Gay Female Perpetrators	2.260	0.766
	Gay Female Non-Perpetrators	5.850	0.013*
Heterosexual Female Non-Perpetrators	Gay Female Perpetrators	-0.344	0.999
	Gay Female Non-Perpetrators	3.245	0.331
Gay Female Perpetrators	Gay Female Non-Perpetrators	3.589	0.574

**p<0.01; *p<0.05

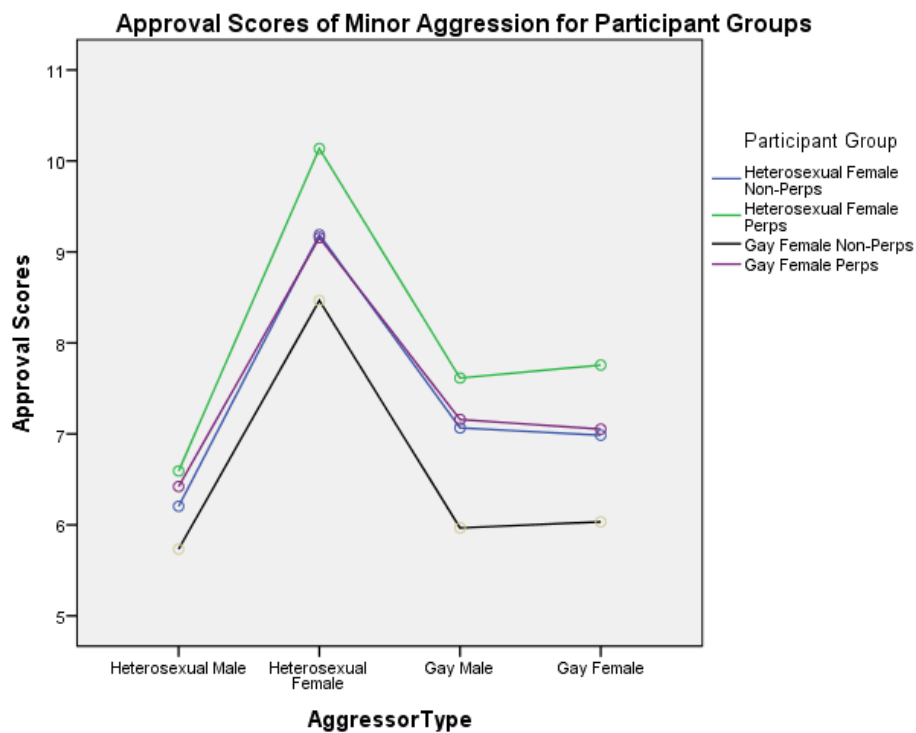


Figure 4. Graph depicting summed approval scores of perpetrating and non-perpetrating heterosexual and gay female participants’ regarding minor physical aggression perpetrated by different aggressors. Approval uses a Likert Scale; 1= Not at all, 2= A little, 3= Somewhat, 4= Mostly, and 5= Definitely

b) SEVERE PHYSICAL AGGRESSION

Table 13 shows the mean approval scores of severe aggression for each participant group. Within the heterosexual female population, the perpetrators had higher approval scores than their non-violent counterparts. However, for the gay population the approval scores were similar between perpetrators and non-perpetrators, and they were both lower than the heterosexual perpetrators and non-perpetrators. The one-way ANOVA [$F(3,323) = 1.563, p = 0.198$] highlighted that there were no significant differences between participant groups. Figure 5 depicts a graphical representation of each participant groups' approval scores.

Table 13. The mean approval scores of perpetrating and non-perpetrating heterosexual and gay female participants for severe physical aggression perpetrated by different aggressors (N=327).

Participant Group	Mean Approval Scores
Heterosexual Female Perpetrators	5.424
Heterosexual Female Non-Perpetrators	5.091
Gay Female Perpetrators	4.639
Gay Female Non-Perpetrators	4.750

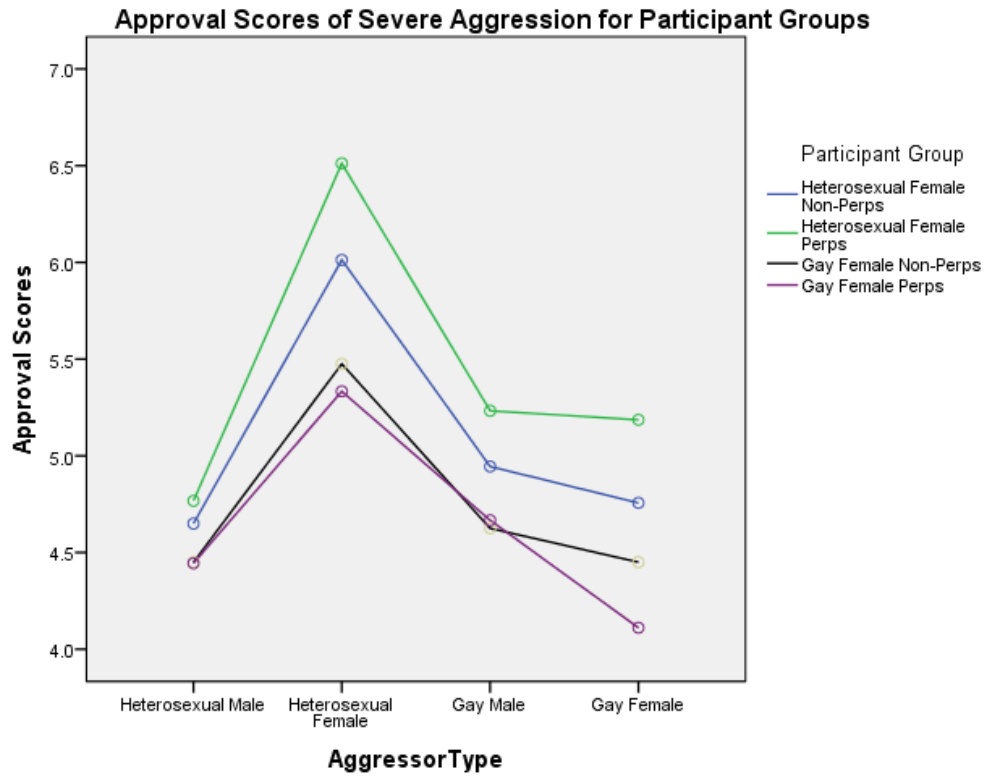


Figure 5. Graph depicting summed approval scores of perpetrating and non-perpetrating heterosexual and gay female participants' regarding minor physical aggression perpetrated by different aggressors. Approval uses a Likert Scale; 1= Not at all, 2= A little, 3= Somewhat, 4= Mostly, and 5= Definitely.

Discussion

The aim of this study was to address the dearth of understanding about heterosexual and same-sex values, by exploring the rates, beliefs and approval of heterosexual IPV and SSIPV and the relationship of this approval to perpetration by heterosexual and same-sex couples.

Summary of Results

RESEARCH QUESTION 1

To investigate the rates of conflict tactics and controlling behaviours used by heterosexual and same-sex couples towards their intimate partners.

The results for research question one were obtained from the CTS2 and CBS-R, and the findings demonstrate a consistency with previous research, supporting the gender inclusive perspective (Dutton & Nicholls, 2005). Conflict tactics and controlling behaviours were found to be similar among both heterosexual female perpetrators and victims, and also with gay female perpetrators and victims. However, there were some differences. Heterosexual females were found to exhibit significantly more minor physical aggression, and used significantly more threatening controlling behaviours than they received in victimisation (i.e., from heterosexual males). This is consistent with literature demonstrating the female partner is more commonly the perpetrator (e.g., Archer, 2000; Santoveña et al., submitted; Straus, 2007b). Heterosexual females also perpetrated increased levels of severe physical aggression, and emotional and isolating controlling behaviours than they were victimised, but this was not significant.

Regarding gay females, the findings show their perpetration and victimisation was at a very similar level for physical aggression, sexual aggression, injuries, and controlling behaviours, supporting research that gay females experience mutual partner violence and are equally violent (e.g., Lie, Schilit, Bush, Montagne, & Reyes, 1991). They reported similar or indications of higher rates of perpetration and victimisation of all types of aggression and controlling behaviours. These results coincide with previous research suggesting that similar rates of IPV exist between heterosexual and same-sex couples, with potentially higher rates in same-sex couples (Messinger, 2011).

Heterosexual female victims (i.e., from heterosexual male perpetrators), were significantly more likely to receive acts of minor sexual aggression than they perpetrated. This higher sexual aggression in males may be a result of an increased sexual drive and the need to reproduce, consistent with certain evolutionary approaches (e.g., Thornhill & Palmer, 2000). Alternatively, this specific type of IPV may have more influence from traditional gender roles (or patriarchy), where a male asserts his dominance through sexual aggression, as it has been established that masculine gender roles are associated with increased sexual risk and IPV perpetration (Santana, Raj, Decker, La Marche, & Silverman, 2006). However, patriarchal values cannot be the sole cause of sexual IPV due to the occurrence of heterosexual female perpetrated sexual aggression, and it is unable to account for the males who did not perpetrate sexual aggression. Furthermore, the incidence of sexual aggression in gay females highlights that other aspects are involved, rather than solely patriarchal values (e.g., the nested ecological theory; Dutton, 1995; 2006). Although perpetration and victimisation of minor sexual aggression in gay females occurred at a similar rate to heterosexual female perpetration, gay females' severe sexual perpetration occurred at a similar rate to

heterosexual females victimisation (i.e., from heterosexual males), and higher than that of heterosexual female perpetration. These findings further support literature where sexual and verbal abuse has been shown to be higher in gay female relationships compared to heterosexual female perpetrators (Blosnich & Bossarte, 2009).

An inconsistency with the literature (e.g., Archer, 2000; Tjaden & Thoennes, 1998) was in relation to victim injury. Reports of minor and severe injuries sustained were similar among all groups, implying both sexes in heterosexual couples and same-sex female couples were all equally likely to cause and receive an injury. However, this may be due to the type of sample used and low reporting of injuries, particularly with gay females, as discussed below.

RESEARCH QUESTION 2

To investigate the beliefs and approval scores of a variety of vignettes that depict heterosexual and gay, male and female, perpetrated physical IPV, in a variety of provocation situations.

The BaRAS results portray how females view and approve of different forms of IPV, varying by the gender and sexuality of the perpetrator (i.e., aggressor type in the vignettes). The majority of the findings showed a significant difference, for both minor and severe aggression, between different aggressor types and between different provocations, or an interactional effect when these factors were in combination. The results showed that heterosexual male IPV was significantly viewed as the least acceptable and most severe form of IPV, consistent with previous research comparing to

heterosexual female aggressors (e.g., Bethke & Dejoy, 1993; Feather, 1996; Koski & Mangold, 1998; Miller & Simpson, 1991; Santoveña et al., submitted; Sorenson & Taylor, 2005; Stewart-Williams, 2002;) and literature relating to comparisons to SSIPV aggressors (e.g., Cormier & Woodworth, 2008; Hamby & Jackson, 2010; Harris & Cook, 1994; Poorman et al., 2003; Seelau et al., 2003; Seelau & Seelau, 2005; Wise & Bowman, 1997). Heterosexual female aggression was significantly perceived as the most acceptable form, with the lowest legal sanctions being deemed necessary in comparison to all other groups, again consistent with previous research (e.g., Sorenson & Thomas 2009; Taylor & Sorenson, 2005). These findings support Archer's (2000) theory that the disapproval of heterosexual male IPV and acceptance of female aggression may lead to an increase in female perpetrated IPV.

Research in relation to attitudes involving both heterosexual IPV and SSIPV does have some inconsistencies, but these findings generally support the majority of this literature, as discussed below. Beliefs regarding gay males and females were similar to each other, and were perceived as being between the other two aggressor types. There were some variations in that gay males were seen as significantly more able to defend themselves compared to gay females, and that gay females are more likely to be emotionally distressed than gay males from minor aggression. This suggests that women, of both orientations, are viewed as physically weaker or less well equipped to defend themselves from violence and are more susceptible to emotional difficulties, or perhaps more able to express their emotional symptomology. This supports some literature whereby IPV against females is perceived as more serious and that they are more likely to develop injuries (e.g., Hamby & Jackson, 2010; Seelau et al., 2003; Seelau & Seelau, 2005).

There were some differences observed in the beliefs the female participants held about minor and severe aggression. There was no significant difference between approval of heterosexual male IPV and gay female IPV for severe aggression, with gay female IPV being the second least approved of. This is again consistent with some research that IPV against female victims is considered the most serious, as above, although this was not evident for minor violence. These differences between minor and severe aggression may be due to people having more liberal beliefs about minor violence (e.g., a 'slap') and see it as more trivial and acceptable, particularly from females where it can be seen as harmless, entertaining, or funny (Hassouneh & Glass, 2008). However, they have much stronger opinions that punching is unacceptable, and again particularly from females where it may be against more traditional gender roles and stereotypes. These two aggressors with female victims having the lowest approval could be explained by the belief in Western cultures that women should be protected from harm (Archer, 2006; Felson, 2006) and so when severe aggression is perpetrated, it is not appropriate for females to be victimised.

The increased physical injury rate for heterosexual females was consistent with past literature (e.g., Archer, 2000; Tjaden & Thoennes, 1998), but gay females were perceived to receive significantly fewer physical injuries than heterosexual females. This conflicts with the realities shown in the results on the CTS2 whereby gay females are actually injured at an equal or higher rate to heterosexual females. However, this difference between the two types of female victims has been observed previously, whereby heterosexual females were more likely to be seen as a victim than gay females (Basow & Thompson, 2012). Additionally, these findings may be a result that individuals' believe same-sex couples are equal in size and strength, and so the injuries

are perceived as less severe with neither partner being particularly more at fault. It would also seem likely that the differences in beliefs between heterosexual males and females are due to the size difference, which was also found in Hamby and Jackson's (2010) study.

RESEARCH QUESTION 3

To investigate the differences in the beliefs and approval of IPV of participants who self-report perpetrating physical IPV compared to those who do not.

The interaction of the results from the CTS2 and BaRAS demonstrated a tentative link that approval of IPV leads to actual perpetration. This was demonstrated for minor physical aggression whereby perpetrators had higher approval levels than non-perpetrators, which was observed in both heterosexual and gay females. Heterosexual female perpetrators' approval scores were significantly higher than gay female non-perpetrators, who had the lowest scores, but this was the only significant difference. These findings support previous literature (e.g., Archer & Graham-Kevan, 2003; Santoveña et al., submitted; Sugarman & Frankel, 1996) whereby individuals who perpetrate IPV have higher approval levels of IPV or aggression. However, Sugarman and Frankel only addressed males, thus the findings of this research demonstrates that the association of increased approval with IPV perpetration could also be applied to females. However, direction of causality is unable to be established.

For severe physical aggression the findings were somewhat less clear and there were no significant results. For gay females, the approval scores were actually similar between non-perpetrators and perpetrators. This may be a result of gay female perpetrators

having stereotypical anti-male opinions and associate violence as a male biological trait and so they approve of IPV less, through a feeling that this male violence is infiltrating their all-female culture (Hassouneh & Glass, 2008). Alternatively, they have higher levels of internalised homophobia (which itself could lead to their increased perpetration; Meyer, 1995) that may lead to a generalised disliking of themselves and their perpetration of IPV.

As the sample sizes for the two populations were different, the inclusion of power analysis would be beneficial for future research to determine how significant the results between each group were. This could distinguish whether the effect is based more upon the actual variations of approval or just the sample size. Power analysis could also indicate the appropriate sample size required to give the specified, desired power for more effective analysis. Furthermore, it would be useful to investigate any non-significant results which may have approached significance, thus indicating where future research is required, particularly when larger samples are obtained.

Limitations of the Research

It is important when undertaking research that sampling and methodological procedures are stringently reviewed, as these can impact upon results (Archer, 2000). The following chapter provides a detailed critique of the CTS2 which will highlight the strengths and limitations of using this measure and how it may impact on the results obtained.

Although chapter four focuses purely on the CTS2, many of the critiques will be applicable to the other psychometric measures used (CBS-R and BaRAS). This includes all measures being self-report, quantitative methods, which limits reasoning and

contextual understanding and cannot control for under/over-reporting, demand characteristics, and socially desirable responding. However, these measures use a 5-point scale to respond, as opposed to a simple yes/no, which can minimise socially desirable responding (Sorenson & Taylor, 2005).

Archer (2000) highlighted the importance of a good, representative sample being required to obtain accurate and useful results. In this study, the sample comprised only of females, although they were of both heterosexual and gay orientation, with the majority being students of a young age. This young age and large proportion of university students in the sample limits the generalisability of the findings to the population at large. For example, the effect of being independent from their family for the first time, the disinhibiting effect of alcohol, and peer, social, and academic stressors, common among students, could change the rates found specifically in this population. Furthermore, younger populations will be more influenced by the recent shift in societal views among Western countries (Archer, 2006; Felson, 2006), emphasising the disapproval of heterosexual male perpetrated IPV. Therefore, this may increase perpetration from heterosexual females through a decreased belief of likelihood of retaliation, specifically in younger females (e.g., Fiebert & Gonzalez, 1997). These sampling biases may account for any discrepancies in the findings compared with previous literature, and explain the similar rate of sustaining injuries and the low level of severe IPV reported.

Age is an important factor in relation to aggression and it has indeed been shown that IPV is elevated in younger populations (Bachman & Saltzman, 1995), particularly in students (Archer 2000). Age was not controlled for in this study, thus may have influenced the results due to the slight mean age difference in the two population groups.

Therefore, any findings made in relation to differences in approval may actually be more attributable to age differences between groups. It is important that age is controlled for in future research so that potential differences can be established between populations without age confounding the results.

In this study, participants were required to have a relationship lasting at least a month, at any point in the past 12 months, therefore the time of relationship may have occurred at any point in those 12 months. However, as discussed in chapter two it is important to control for length of relationship. This is relevant when investigating risk factors for IPV so that direction of causality can be established and whether risk factors are actually present during the violent relationship, or before/after. Although this was not able to be established in this study, it is hoped that attitudes will not have substantially changed in the past 12 months, but it is important for future research to attempt to control this length of relationship. Furthermore, due to the occurrence of MPV among gay and heterosexual couples, as recommended in chapter two, it would have been useful to include an MPV group as well as perpetrator/non-perpetrator groups. However due to small cell sizes in the groups with this division, this was not possible.

Conclusions and Implications for Practice Recommendations

Whilst it is important to account for the limitations in methodology, the findings obtained from the study highlight important implications for the improvement of IPV prevention, risk assessment, and treatment. Gender symmetry was apparent, with similar levels of IPV across different relationship types, including similar levels of injuries sustained from all groups. However, there was a general indication that females,

both heterosexual and gay, perpetrated more than heterosexual males perpetrated. The results suggest that gay females are perpetrating and experiencing the highest levels of severe aggression (both physical and sexual) and controlling behaviours. Therefore, these women will potentially require most support for behavioural change to reduce this high level of mutual partner violence. This provides evidence that patriarchal attitudes in society are not sufficient on their own to explain IPV, but that many different factors contribute (Dutton, 1995; 2006).

Regardless of the above findings, the results demonstrate that certain types of IPV are deemed more acceptable and less worthy of punishment. Also, individuals have inaccurate beliefs about injury occurrence, which appeared to be based upon size and strength of partners in the dyad, and the victim's perceived ability to defend themselves. This demonstrates the importance of improving the public perception and raising awareness about the nature of IPV. Therefore, whilst not undermining the previous efforts to prevent heterosexual female victimisation, IPV should be redefined, and attempts to create a societal shift in this understanding, to ensure the population is aware of the unacceptability and occurrence of IPV in all relationships. Individuals need to be educated about what constitutes an aggressive, unacceptable act, thus including 'a slap' or controlling behaviours, and that violence towards others, regardless of the differences or similarities in size and strength of their partner, is unacceptable. This is because of the potential escalation of violence, other less observable consequences (e.g., mental health difficulties), and perpetration in front of others, like children (e.g., the intergenerational cycle of abuse; Dixon, Browne, & Hamilton-Giachritsis, 2005). It is of the utmost importance to address these attitudes and approval of IPV because the

results demonstrate an indication that elevated approval levels are higher in perpetrators of IPV and SSIPV, suggesting it may be a risk factor for perpetration.

It is vital that all services and resources are developed so that they are able to respond equally and understand gay victims and heterosexual male victims. These services and resources need to be readily available and accessible within all communities to encourage victims to seek help. Similarly, law enforcement agencies need to recognise the perpetration of IPV in all relationship types and respond with legal sanctions equally, regardless of gender or sexuality. Research needs to develop to ascertain further risk factors for SSIPV and heterosexual female perpetrated IPV, enabling the development of risk assessment tools and treatment programmes for all aggressor types. Approval and inaccurate beliefs about IPV/SSIPV should be addressed in treatment.

Future research should attempt to overcome some of the sampling difficulties encountered in this study by increasing the sample size of gay females, and include male participants as differences have been highlighted between different participant genders (e.g., Hamby & Jackson, 2010; Locke & Richman, 1999; Pierce & Harris, 1993; Seelau et al., 2003). Additionally, including an older or a clinical sample could provide differences in beliefs and perpetration rates, and also investigating non-Western cultures.

Chapter Four

CRITIQUE AND USE OF A PSYCHOMETRIC MEASURE: THE REVISED CONFLICT TACTICS SCALES

Introduction

Conflicts of interest are always present between individuals. Conflicts are believed to be necessary to produce change and improvements within a couple or social network (Sprey, 1969). These conflicts of interest can be dealt with in different ways, i.e., using various conflict tactics. They can be resolved assertively; strengthening the relationship of the people involved, but also through aggression or suppression, which could result in hostility and frustration.

In the context of an intimate relationship, when conflicts arise and these are dealt with through abuse, aggression and violence, this is often termed intimate partner violence (IPV). Research has demonstrated that any form of aggression and/or controlling behaviours, causing actual or intended harm, to a current or former spouse or cohabiting/dating partner constitutes IPV (Dixon & Graham-Kevan, 2011). IPV can be very damaging to victims, causing physical and mental health problems (e.g., Anderson, 2002; Campbell, 2002).

A very current and debated issue within psychology is the ability to measure the internal workings of a person's mind, such as attitudes and beliefs, and also a person's actual behaviour, and motives for this behaviour. Psychometric measures are generally designed to serve this purpose from an objective and quantitative perspective, to measure the processes of the mind. IPV perpetration has been researched and demonstrated to be apparent and harmful in society through more qualitative methods, but with a focus on heterosexual males as perpetrators and heterosexual females as victims (e.g., Dobash & Dobash, 1977-1978). The purpose of the Conflict Tactics Scales (CTS; Straus, 1979), later developed as the Revised Conflict Tactics Scales

(CTS2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996), was devised to be an objective, quantitative, psychometric measure to provide statistical data on the epidemiology of the overt tactics used in resolving the conflict between intimate partners, or IPV.

The authors of the CTS2 handbook (Straus, Hamby, & Warren, 2003) believe it is important to ascertain the prevalence and perpetration of harmful conflict tactics used between partners from this quantitative, objective viewpoint. This is so that information can be gathered about these criminal acts quickly and easily, and also reduces the opportunity of participants minimising or not recognising acts as IPV. Additionally, it can be used by both members of a couple to highlight discrepancies in reporting IPV. Using these results, efforts to prevent IPV can be guided appropriately using empirically supported practice initiatives (Dixon & Graham-Kevan, 2011). The CTS2 is also used to reveal rates of IPV in and during family therapy (Aldorando & Straus, 1994) to serve the purpose of: improving disclosure when clients feel unable or unwilling to report perpetration/victimisation, unable to recognise the incident as IPV (O'Leary & Murphy, 1992), or when the therapist does not directly ask about IPV (Douglas, 1991). The CTS2 is also used in correctional research (Straus, 1993), such as monitoring during probation periods, contributing to the prediction of intimate partner homicide, and in pre and post treatment measures (e.g., DeLucia, Owens, Will, & McCoin, 1999).

Therefore, the CTS2 has been selected for this critique. This is due to the important purpose it attempts to serve by measuring epidemiology of conflict tactics used or IPV quantitatively, from a scientific viewpoint, and its frequent use in research regarding IPV. Additionally, it was a psychometric measure used in the research project and so it

is important to establish the potential strengths and limitations, as they may impact upon any results and conclusions.

Overview

The CTS2 is a 78-item, self-report questionnaire designed to investigate the type and frequency of conflict tactics used in the context of an intimate relationship, developed from the CTS. It can be administered in many ways (e.g., phone, computer), and completed in fifteen minutes. Increasing the measure's versatility a short-form version was created (CTS2 short-form; Straus & Douglas, 2004). This takes approximately three minutes to complete, although this drastically reduces the information obtained. Participants are required to rate, using a Likert scale, how frequently they have used or received the acts described, in the past year. The response options are 1=once, 2= twice, 3=3-5 times, 4=6-10 times, 5=11-20, 6=more than 20 times, 7=not in past year but it happened before, 0=never. Participants are asked various questions about their tactics used to resolve conflict, which are categorised under five scales; negotiation (emotional and cognitive), physical assault (minor and severe), psychological aggression (minor and severe), injury (minor and severe), and sexual coercion (minor and severe). In relation to same-sex intimate partner violence (SSIPV), the CTS2 is able to be used with gay populations due to the gender neutrality of the CTS2. Therefore, either gender is able to complete this measure regarding any gender of partner.

A comprehensive CTS2 technical handbook has been published (Straus et al., 2003), containing information about the development, research base and guidance using the tool. The research base and development of the CTS to form the CTS2 is discussed later. Although several adaptations for scoring are possible, the handbook advises a particular method to score the results. However, if this is not followed, difficulties would arise in comparison of study results. Participants are asked about both their own and their

partner's conflict tactics used. This is because of the occurrence of mutual partner violence and where one partner's violence could be dependent upon whether the other partner continues to be violent (Feld & Straus, 1989). It also highlights any discrepancies between partners, and if one participant is being inaccurate in their reporting, if partners' responses are matched. The CTS2 has also been shown to be applicable to other cultures and can be translated effectively into a number of different languages (e.g., Straus, 2004a).

Negotiation Scale

This scale replaced the CTS 'Reasoning' scale and examines the frequency of discussion tactics participants use to resolve conflict and the level of emotional concern they show their partner, through cognitive and emotional methods.

Psychological Aggression

This scale replaced the CTS 'Verbal Aggression' scale and asks participants about the frequency of tactics used that cause psychological distress to their partner, without using physical or sexual aggression. This includes verbal and nonverbal aggressive acts. Alterations to the items in the CTS2 ensured various types of psychological aggression are assessed.

Physical Assault

This scale asks participants about the types, frequency and extent of physical aggression and physical tactics perpetrated or received in their intimate relationship.

Physical Injury

This scale questions participants regarding the frequency of various injuries received from, or inflicted upon, an intimate partner due to physical conflict. It addresses severity of injuries by asking whether the injury warranted medical attention, and whether this was sought.

Sexual Coercion

This scale enquires about the frequency that unwanted sexual activity occurred or was threatened in their intimate relationship. This includes verbal and physical force utilised to participate in any kind of sexual activity.

Development of the CTS2

The CTS2 authors (Straus et al., 1996) believe improvements to the CTS were necessary, and potential benefits and difficulties associated with this change are discussed below. Developments included: adding a sexual coercion and physical injury scale, improved distinction between minor and severe levels, additional items to

improve content validity and reliability, amendments to item wording to improve clarity and specificity, an altered format to simplify administration, and interspersed order of questions to reduce response sets (Dahlstrom, Brooks, & Peterson, 1990). The authors attempt to distinguish between minor and severe acts within each scale by using five criteria (Straus et al., 1996): potential for attack to produce injury requiring medical treatment, level of physical injury actually inflicted, motivation for attack being instrumental or expressive, desired level of pain to be inflicted or to cause death, and normative and legal classifications.

There is much controversy in defining whether the conflict tactics used between intimate partners constitute abuse, i.e., whether the act is serious enough or whether the victim is injured. The CTS2 authors included items they deemed to be “inappropriate” (Straus et al., 2003, p. 8) for intimate partner interactions, regarding any harmful conflict tactic as IPV or abuse. They also use norms relating to the frequency that these inappropriate acts are committed, rather than norms relating to what are considered acceptable or unacceptable acts (e.g., someone who subjects their partner to small, minor acts, continually over time, could cause the same impact on a victim as one severe act).

The authors of the CTS2 tested the measure with a pilot study (Straus et al., 1996) using an amended CTS (based on critiques and feedback). 317 heterosexual college students completed the 60-item questionnaire. Scales were amended depending upon their internal consistency, relevance and clarity, which led to the final CTS2 comprising of 39 items, being asked twice to measure perpetration and victimisation.

Characteristics of the Psychometric Measure

Levels of Measurement

The level of measurement used in the CTS2 is interval level data. Participants are asked to rate, using a Likert scale with numerical categories, exactly how many times they have perpetrated or been victimised by various conflict tactics. Therefore, numerical differences between participants are able to be established, making it more useful for analysis (Field, 2009).

Self-Report

Self-report measures are completed by the participant themselves, simplifying administration. It is assumed that having information directly from the participant about their behaviour will improve accuracy of results. Specifically regarding IPV, self-report measures have found higher rates of disclosure than with therapists during family therapy (O'Leary & Murphy, 1992). However, as with any self-report measure, there are problems relating to honesty, i.e., whether the participant is able or wants to respond honestly, thus influencing the results.

Response bias refers to when participants strive to produce positive or negative impressions creating a 'response set'. The participant may 'fake good', answering questions in a socially desirable way (e.g., reducing the impact of their perpetration of IPV), or perhaps 'fake bad' (e.g., making problems appear more evident, assuming they will gain more access to support, or create problems for their partner who may be the

victim). This issue is particularly evident for the CTS2 as participants are asked to report their own behaviour along with their partners.

Research has been shown that convicted offenders are likely to provide accurate self-report information (Craig, Thornton, Beech, & Browne, 2007), potentially because they are already incarcerated. Therefore, when the CTS2 is used in community settings, not with incarcerated offenders, participants could be less willing to disclose acts of abuse perpetrated due to fear of conviction. This could be increased depending on the way the study is advertised. For example, the context of the survey could differ if it is advertised as a crime survey or a family survey, which can impact on the level of disclosure from participants (Hamby & Finkelhor, 2000). The type of sample used may also impact upon self-disclosure, due to age and cultural background. For example, younger generations may be more affected by research from a gendered perspective and more recent changes of societal views in Western cultures (Archer, 2006; Felson, 2006). Furthermore, gender differences may influence reporting, where males may feel emasculated reporting their victimisation, and women who are continually victimised become normalised to violence and underestimate victimisation (Kimmel, 2002). Additionally, demand characteristics may play a role whereby participants attempt to concur with or sabotage the study's aims, responding in ways that agree or disagree with predicted outcomes, or merely suffer from fatigue and loss of focus. Consequently, it is important that caution is taken when making inferences from the results.

A possible method to reduce bias, could be to utilise structured judgments about the epidemiology of IPV, however this may be subjective. Alternatively, if the study allows for CTS2 responses to be completed anonymously, but paired in couples, the structure of the CTS2 could give some indication of inaccuracy of partners' responses and

potential self-reporting bias. Additionally, socially desirable responses have been found to be minimised when using a Likert scale for responses, rather than dichotomous 'yes/no' options (Sorenson & Taylor, 2005).

Psychometric Properties of the CTS2

The CTS is well-established and has been used in many published articles in different countries (e.g., Hasselmann & Reichenheim, 2003; Straus, 1979), demonstrating its reliability and validity (Archer, 1999). It is regarded as the ‘gold standard’ in screening tools for IPV (e.g., Jones, Ji, Beck, & Beck, 2002). However, although superior in principle, the CTS2 was created to counteract difficulties of the CTS and make improvements. Due to their similarities, Straus (2007c) has argued that the findings of reliability and validity regarding the CTS can be applied to the CTS2. However, as discussed, there were many alterations made to the CTS, making the CTS2 quite different to the original. Additionally, the research done in the formation of the CTS may not be applicable to the CTS2, due to societal shift in Western cultures regarding IPV as wrong (e.g., Archer, 2006) and so responding rates and perpetration rates may be significantly different, thus influencing the validity and reliability. Therefore, the psychometric properties will be examined in relation to the CTS2.

Reliability

Internal Reliability

Internal reliability examines internal consistency, i.e., the extent to which items are measuring the same thing. The CTS2 pilot study (Straus et al., 1996) calculated alpha coefficients to see how well items loaded onto each scale. Results demonstrated that all the scales had acceptable to excellent (ratings according to George & Mallery, 2003) internal consistency reliability, ranging from 0.79-0.95, which was much higher than the original CTS. The scales were then amended depending upon their internal consistency, i.e., low alpha item scores were removed.

Since this pilot study, some studies have tested for internal reliability with the finalised CTS2, using different female samples. Lucente, Fals-Stewart, Richards, and Goscha (2001) investigated incarcerated drug abusers, where the internal consistency for perpetration items on each subscale was acceptable (0.75-0.87), except sexual coercion which was unacceptable (0.34). Regarding the victimisation items, all the subscales were acceptable (0.74-0.94). Duggan et al. (1999), investigated postpartum mothers at high risk of IPV, finding acceptable levels of internal consistency for physical assault (0.86) and injury (0.75), but did not use the other scales. Newton, Connelly, and Landsverk (2001) also examined postpartum mothers at high risk of IPV, finding all scales were acceptable (0.74-0.86), except severe psychological aggression (0.63) and severe physical assault (0.57) which were questionable, though they did not use the injury or sexual coercion scales. Jones et al. (2002) found coefficient alphas showing questionable to excellent reliability for all subscales with self-victimisation (sexual coercion at 0.62, and negotiation at 0.91), whilst investigating incarcerated females.

Yun (2011) again found very poor internal reliability for the sexual coercion scale for perpetration (0.44) and victimisation (0.55), but the other scales were acceptable for perpetration (0.75-0.87) and victimisation (0.73-0.88).

Some studies have used the CTS2 as a measure ofSSIPV and reported alpha coefficients to demonstrate the internal reliability for use with gay populations.

Pantalone, Schneider, Valentine, and Simoni (2011) used the CTS2 with gay males, who were HIV positive, and found good to excellent internal reliability for victimisation on the physical assault (0.94), sexual coercion (0.89), and psychological aggression (0.90) scales. McKenry, Serovich, Mason, and Moasck (2006) investigated both female and maleSSIPV physical assault perpetration obtaining a Cronbach's alpha score of 0.92, showing excellent reliability. In the research project (chapter three of this thesis), the alpha coefficients were also calculated. This included both gay and heterosexual female perpetration and victimisation of the physical assault, sexual coercion, and injury to victim scales, which ranged from questionable to good (0.61-0.81). The sexual coercion perpetration scale again showed slightly lower levels of internal reliability compared to the other scales, consistent with heterosexual populations. This achieved a poor level of reliability for perpetration (0.58).

Straus (2004b) highlighted minimal research investigating reliability and validity of the CTS2 outside North America. His findings showed the CTS2 had cross-cultural reliability, with acceptable levels of internal consistency, ranging from 0.74 to 0.89. Additionally, although reliability may be acceptable, it may be dependent upon their accuracy of reporting of IPV and how consistent they are. Consequently, the study investigated this issue and assessed for levels of social desirability in reporting, which was found to be low and did not impact upon internal reliability.

Test-Retest Reliability

This examines the extent to which results from a study are able to be replicated and are consistent over time, with the same subjects. Difficulties testing this may arise in measures where aspects under investigation are dynamic. If the time frame is too short, then memory of the test may influence results, or if it is too long answers may become distorted. The CTS2 measures actual behaviour, which may change significantly, thus posing difficulties as test-retest reliability is assessing stability of self-report rather than stability of actual behaviour. However, the CTS2 asks about IPV 'ever' perpetrated in participants' lives, which should remain constant between testing periods.

In relation to the CTS2, there has been minimal research for test-retest reliability (Straus, 2007c), with no direct comparison groups studied. The authors of the CTS2 recommend comparing an individual's scores to that of an average score of a similar focused sample group (Straus et al., 2003). Goodman et al. (1999) undertook a test-retest reliability during a two week period, with seriously mentally ill adults, finding reasonably high agreement rates for physical assault, sexual coercion and injury scales; 79-90% for women and 62-81% for men. Vega and O'Leary (2007) found moderate to high Pearson's 'r' values representing stability of self-report: psychological (0.69), physical (0.76), injury (0.70), and negotiation (0.60), but low for sexual coercion (0.30).

Validity

Face Validity

Face validity assesses the extent to which a test appears to be measuring what it is supposed to be measuring. It is the more obvious understanding of validity, but a test with good face validity may not actually achieve this. Face validity also relates to how the scale items are worded (i.e., clear, confusing, or too complex), which may bias answers. Participants may become discouraged if the items do not appear to be asking questions they expect. However, this can create demand characteristics and response bias whereby participants guess the intended outcome of the study if face validity is high.

To improve face validity, the authors of the CTS2 (Straus et al., 1996) amended and simplified the wording of items, to improve understanding, and the format was adapted from the CTS matrix format, to avoid confusion in answering (Neidig, 1990, as cited in Straus et al, 2003). Furthermore, it ensured that items are applicable to all cases, so participants can recognise these items as acts of IPV. In order to balance face validity with potential demand characteristics, the authors of the CTS2 interspersed the order of questions to reduce response sets (Dahlstrom et al., 1990), and avoid socially desirable answers (Straus, Hamby, Finkelhor, Moore, & Runyan, 1998), as items were not in a hierarchical order of severity, like the CTS.

Concurrent validity

Concurrent validity refers to how much a measure correlates with other tests aimed at assessing the same construct. New tests are able to be validated against an established measure, but this is only useful if the original test is truly valid (Kline, 1986). The CTS was regarded as the 'gold standard', consequently the CTS2 is also due to their similarities. However, there has been no research to support the assumption that the CTS2 has equal concurrent validity as the CTS. It has instead since been used to validate other new tests. For example, Jones et al. (2002) compared the ABC (Abusive Behaviours Checklist; Beck & Beck, 1998- assesses rates and length of abuse upon partners prior to the perpetrator's incarceration) to the CTS2, and found significant, positive associations between them. Zink, Klesges, Levin, and Putnam (2007) found a correlation (0.76) between the ABI (Abusive Behaviour Inventory; Shepard & Campbell, 1992- measuring physical and psychological abuse of women) and the CTS2. The correlation between the CTS2 and ABI psychological scales was 0.74, and between the ABI physical and the CTS2 physical, sexual and injury scales was 0.71. These findings could provide support for concurrent validity of the CTS2, but this assumes that the new tests are valid also.

Predictive validity

Predictive validity assesses the extent the results of the test can predict future behaviour. It is important to note that the authors of CTS2 (Straus et al., 2003) did not develop it as a predictive measure. However, previous behaviour can be a good indicator of future

behaviour (e.g., Monahan, 1981), therefore using the CTS2 to show current and previous rates of IPV could indicate potential future IPV.

The Spousal Assault Risk Assessment (SARA; Kropp, Hart, Webster, & Eaves, 1995) was designed to predict future risk of IPV, incorporating past physical assault (Fagan, Stewart, & Hansen, 1983), past sexual assault/sexual jealousy (Goldsmith, 1990), and past use of weapons (Sonkin, Martin, & Walker, 1985) as risk factors. Furthermore, verbal aggression has been shown to predict IPV (Murphy & O'Leary, 1989). All these factors can be measured using the CTS2, suggesting it has some predictive validity. However, the SARA incorporates many other risk factors (e.g., recent substance abuse/dependence, recent employment problems), as previous perpetration of IPV is not enough to predict future risk on its own, highlighting the limited predictive validity of the CTS2. However, if used in conjunction with other measures it may form part of a thorough predictive risk assessment.

The CTS2 is used in family therapy (Aldorando & Straus, 1994) and correctional settings (Straus, 1993) to assess IPV. The CTS2 authors (Straus et al, 2003) state that it contributes to prediction of intimate partner homicide (e.g., the Danger Assessment; Campbell, 1995, incorporates past physical and sexual assault as risk factors; Campbell et al., 2003; Stuart & Campbell, 1989), but again when used in conjunction with other risk factors. In correctional research, the CTS2 could help identify individuals in greatest need for treatment and/or incarceration, classifying them as high-risk offenders due to their current high IPV perpetration. Although the CTS2 could contribute in some ways to prediction of future behaviour, the problems relating to self-report alone could mean that participants may not be honest, thus any prediction based on these will also be incorrect.

Content validity

Content validity refers to whether a measure includes all possible aspects related to the construct under investigation. If this is lacking, the tool will not give a full portrayal of the concept being assessed. For example, the CTS2 needs to include all possible aspects relating to IPV so an accurate assessment of current perpetration or victimisation can be made.

IPV consists of any form of aggression and/or controlling behaviours, causing actual or intended harm (Dixon & Graham-Kevan, 2011). The authors of the CTS2 attempted to improve content validity from the CTS, by including sexual coercion and injury scales and more question items. This ensured additional aspects that could constitute IPV were included, and coinciding with the changing definitions of IPV over time (Straus et al., 1996). However, there could be limitless definitions of IPV, and aggressive conflict tactics used between partners, which are not included (e.g., scratching a partner). The authors of the CTS2 attempted to ensure content validity, by including items relating to conflict tactics which they deemed were “inappropriate” for partner interaction (Straus et al., 2003, p. 8). This raises the issue of subjectivity and what exactly constitutes the word “inappropriate” and whether the items included in the CTS2 are effective for measuring IPV.

In relation to SSIPV, there may be acts of IPV that are specific to gay individuals which heterosexuals would not experience and are not included on the CTS2. For example, threats to ‘out’ my partner to family, friends, work etc. Future research is required for the CTS2 to ensure that it can be fully understood and adapted appropriately, if

necessary, to include acts specific for same-sex couples and improve the effectiveness of the CTS2 for use with gay populations.

Construct validity

Construct validity, considered as the essential form of validity, ensures that the test works well as a construct and measures what it is intended to measure, and that the items are clearly defined. It can be examined by correlating the construct being investigated with variables that are known to be linked (Campbell & Fiske, 1959).

The pilot study (Straus et al., 1996) for the CTS2 found evidence for construct validity through: higher male sexual coercion correlating with higher male aggression, higher correlation of physical assault and injury among men, higher psychological aggression correlating with high physical assault, and mild correlation between lower social integration and increased physical assault. Furthermore, they found low correlations of negotiation with sexual coercion and injury showing discriminant validity. Straus (2004b) found evidence for construct validity of the finalised CTS2 by correlating results of 33 different samples with university students. Evidence showed that high perpetration rates correlate with high injury rates; higher corporal punishment in childhood positively correlates with perpetration; and dominance in dating relationships positively correlates with perpetration. However, this is the only study addressing construct validity for the CTS2, thus further research should be undertaken to fully understand the construct validity.

The construct of the CTS2 is aiming to measure the conflict tactics used, or IPV (defined as above). As an objective, quantitative questionnaire, it attempts to improve

construct validity by improving memory recall through listing all possible items relating to IPV, which may be forgotten in a qualitative interview (Smith, 1987). However, although acts are listed for the participant, they may forget the frequency, particularly of minor acts. Furthermore, the CTS2 only obtains the frequency of acts in the past 12 months, with no way to investigate if there is any systematic pattern of abuse, or if acts are sporadic (Kimmel, 2002). The CTS2 also only obtains information regarding their current partner, ignoring historical information of IPV with previous partners (Straus, 2007c).

A common concern raised about the construct validity of the CTS2 is that it does not provide information relating to the context in which the perpetration occurred. The CTS2 investigates aggression during conflict between couples only, ignoring other instances when IPV is perpetrated. For example, it has been argued that an offender may perpetrate acts outside of conflicts, to control the victim. In addition, perpetration may occur in response to their partner's physical aggression or control, which, if the victim responds, could arguably be in self-defence (Kimmel, 2002). The authors claim that the main aim of the CTS2 is to merely determine the perpetration rates, not context, as this would create too many variables and they state that it can be used in conjunction with other measures to ascertain context (Straus et al., 2003). As the CTS2 can easily be used alongside other measures it is possible to record who initiated violence, and whether it was in the context of self-defence or not. Furthermore, as the CTS2 is gender neutral and easily adapted it is effective for use with a variety of populations, regardless of sexuality or gender of either partner. The inclusion of other demographic tools alongside the CTS2 can also determine sexuality of participants, enabling distinction between heterosexual IPV and SSIPV.

The CTS2 was created with five scales to improve construct validity from the CTS, forming a five-factor model which is supported for use with incarcerated female substance abusers (Lucente et al., 2001). The additional items and scales ensure a more equal weighting of each scale, so all aspects are measured representatively. In addition, including the injury scale means that acts that cause injury are highlighted in the prevalence rates (as it is the common perception that IPV is only apparent when an injury occurs). Furthermore, including this with the aggression scales (physical, psychological, and sexual) also obtains information about the intention of the perpetrator (e.g., to hit their partner). For example, rates of aggression between partners are reported regardless of injury, ensuring the results are not based purely on the victim's characteristics or injuries. This means that acts which may not cause actual injuries, and require medical treatment, are still accounted for. However, the injury scale only measures physical, not psychological injuries which could result from physical or psychological abuse. Furthermore, other researchers (Jones et al., 2002) have suggested that the CTS2 could be better constructed in a four-factor model (i.e., not having separate psychological and physical scales). These criticisms highlight potential problems in the factor structure of the CTS2 which will impact upon its ability to measure IPV accurately.

The CTS2 incorporated distinction between minor and severe types of IPV and Newton et al. (2001), found that having a five-factor model (with minor and severe physical, minor and severe psychological and negotiation), rather than three (without minor and severe categories), yields better fit statistics, although injury and sexual scales were excluded. By including both severities, the scores do not become biased on minor acts. However, items in each category cover a range of severity. Furthermore, gender

differences in size and strength could influence the effect of the assault, underemphasising the severity of male perpetrated acts and overemphasising female perpetrated acts, which may not cause the same level of injury. Therefore, the rates of IPV obtained could be biased against women, thus affecting construct validity. Also the assumption that minor acts perpetrated are automatically less injurious may be inaccurate, as the frequency of minor acts may be exceptionally greater than severe acts (DeKeseredy & Schwartz, 1998). Yun (2011) found problems with the ten-factor model (all scales divided into minor and severe). He found that all the factors were closely related with minimal exclusivity of factor loading onto the minor and severe constructs, showing that this CTS2 design is inappropriate and not effective.

Another factor that may influence construct validity is the way the tool is presented or advertised. The authors of the CTS2 believe that differing IPV rates obtained in research could be due to different samples and the advertisement of the study (Straus et al., 2003). For example, advertising it as a crime survey rather than a family survey, influences rates of conflict tactics and IPV reported (Hamby & Finkelhor, 2000). To legitimise IPV somewhat, the CTS2 is supposed to be presented as relating to conflict and disagreement, ensuring that individuals are more willing to complete it accurately. Additionally, although an advantage of the CTS2 is its flexibility, many adapted forms of the tool can cause confusion and prevent comparison of results between studies. In an attempt to reduce this, the authors produced a handbook (Straus et al., 2003).

Efforts were made to reduce issues relating to misunderstanding and response bias, to improve construct validity. This included improvements to ease understanding and reordering of questions so avoiding grouped or difficult, severe questions as the first questions (Ramirez & Straus, 2006). However, although these improvements were made,

they also attempted to include as many aspects as possible relating to IPV without adding unnecessary length. This may have resulted in some items being written quite generally or ambiguously, and so various readers may interpret the items in a different way. Individuals may not classify their act as the word stated (e.g., they perceive their action as a ‘tap’ rather than a ‘hit’) and hence do not report this, reducing construct validity and questioning the accuracy of the results obtained by the use of the CTS2. Nevertheless, the words chosen for items are well accepted and so the measure is used by many researchers, as demonstrated by the vast amount of literature reported above. Furthermore, the manner in which certain items are asked on the CTS2 (particularly for the sexual coercion scale) may make it difficult for some people to answer, again challenging the accuracy of results from the CTS2. Response bias also may be highlighted through inter-rater reliability, i.e., disparities in partners’ responses, and O’Leary and Williams (2006) found low agreement rates between couples when using the CTS2. However, many studies have found low confounding of the CTS2 with social desirability (Sugarman & Hotaling, 1995), showing this had minimal impact on the construct validity.

Normative Samples

Normative samples give a reference of scores for a ‘normal’ population. This means scores from the sample under investigation can be compared to their ‘normed’ peer group sample, to assess how expected the participant’s behaviour is. Without such ‘normal’ levels, the score may be less meaningful.

The authors of the CTS2 claim it is not intended or recommended for diagnostic interpretation and does not provide broad based standardised scores (Straus et al., 2003). It is advised that remedial steps should be undertaken for a score of one or more for the physical scale (Straus, 2007c), implying that norms are not necessary. There is extensive literature regarding the CTS, for clinical cases and general populations, however the authors of the CTS2 highlight that these ‘norms’ are unable to be used for the CTS2, due to the differences between the two assessments.

In CTS2 handbook, a “reference sample” (Straus et al., 2003, p. 72) is described, for college students, based on incidence rates from the CTS2 pilot study (Straus et al., 1996), to be used to assess how ‘normal’ other college students’ scores are. They also recommend comparing an individual’s scores to that of an average score of a similar focused sample group. However, the college student sample is the “most complete reference sample” (Straus et al., 2003, p. 72) available with minimal information included in the handbook regarding other populations from studies using the CTS2. Therefore, the CTS2 requires more ‘reference samples’ or normative samples for various different populations, as it is important to compare the participant’s CTS2 scores with a similar sample group (Straus, 1993). For example, college students are more aggressive than older couples (Stets & Straus, 1990; Sugarman & Hotaling, 1989),

incarcerated women had higher perpetration and victimisation rates than college women (Jones et al., 2002), and Saunders (2002) highlights the differences in perpetration and victimisation rates between women in shelters compared to community based females, suggesting further samples should be made available as a reference. Obtaining this information, relevant to each population's needs, ensures that appropriate assessments and interventions can be developed. However, there may be some difficulties obtaining norms in this field due to varying definitions and legal restraints in different countries and cultures.

Conclusion

The strengths and limitations highlighted in this chapter provide some indication of how the results of the research project may be impacted by using the CTS2. Arguably, the CTS2 was a valuable tool in the undertaking of the research project and the gender neutrality of the CTS2 made it ideal for use with the gay population included. However, as discussed there are some problems with the CTS2 and due to the lack of specific use and understanding with gay individuals, it raises questions of its effectiveness. There may be specific acts only relevant to gay individuals, which will be ignored and so rates of SSIPV may be underestimated. However, after critiquing the CTS2 and comparisons to other tools, it was deemed the most effective tool available for use in the research.

The CTS2 has a large research base, being used in many studies to investigate the epidemiology of conflict tactics between partners and rates of IPV in the general population, obtaining information about both perpetration and victimisation showing its effectiveness for IPV investigation. This wide use of the CTS2 has been illuminating in creating another theory of IPV, contrary to the gendered perspective which has dominated the understanding of IPV aetiology to date. The CTS2 is quick, easy and flexible to use with large samples. This created a vast amount of quantitative data which gave rise to the theory of gender symmetry in IPV (e.g., Archer, 2000). The measure has been used in a variety of applications, including family and correctional settings, and can contribute to predictions about risk.

The developments of the CTS2, from the CTS, were regarded as improvements to enhance construct validity and the scales have generated generally acceptable levels of internal reliability, although less so for the sexual coercion scale. However, the

amended factor structure of scales has conflicting results regarding its effectiveness, impeding upon construct validity and there has been limited research undertaken assessing the reliability and validity specifically for the CTS2. This raises concerns about how effective the CTS2 may be in obtaining accurate rates of IPV. Similarly, there is very limited sampling from normative samples rendering it difficult to ascertain whether participant's scores are regarded as 'normal' in comparison to their peer group. However, it is important to remember that any one act of physical perpetration is a criminal act.

Although used in many studies, gendered theorists argue the CTS2 has limited data of female victims from domestic violence shelters, and that its common use in national surveys makes victims less likely to participate due to fear or shame. This means alternative, possibly inaccurate, perpetration rates are received (e.g., Loseke & Kurz, 2005). Moreover, the CTS2 does not obtain information relating to context of the IPV, which is able to be obtained through more qualitative methods. However, the authors of the CTS2 claim it can be used with other measures to investigate context making it an effective measure to understand IPV aetiology (Straus et al., 2003). As a self-report survey, the CTS2 also creates problems relating to response bias and social desirability, affecting the results obtained. Nevertheless, it has been found to have limited influence from social desirability, yet the authors of the CTS2 recommend the inclusion of a social desirability scale regardless.

The CTS2 is effective for use in large populations and as a quantitative tool for pre and post-measures from treatment. It is likely to be more effective when used in conjunction with other measures, especially when undertaking individual, clinical work to obtain richer, more detailed information (e.g., context) to aid treatment. It is also necessary for

more research regarding reliability, validity and various samples for normative data to be undertaken on the CTS2.

Chapter Five

GENERAL DISCUSSION

General Discussion

Whilst aggression in heterosexual relationships is a well-researched phenomenon, aggression in same-sex relationships is less well studied. It is necessary to improve understanding about this field, due to the high prevalence of same-sex intimate partner violence (SSIPV) (e.g., Messinger, 2011) and lack of resources available to them (e.g., Merrill & Wolfe, 2000).

This thesis aimed to advance academic understanding of same-sex intimate partner violence (SSIPV). This was achieved via three pieces of work, each of which was presented in its own chapter within this thesis. Collectively, the results of the research undertaken in this thesis show the importance of understanding all forms of IPV, including SSIPV, in addition to the well understood form of male aggression to female partners.

Summary of Chapter Two (Literature Review)

The aim of the literature review was to systematically ascertain specific risk factors that are present for perpetrators and victims of male SSIPV, compared to non-SSIPV controls. Only male SSIPV, rather than female SSIPV, was addressed in this literature review as they are understudied and there is less understanding than other populations. Although SSIPV is less researched in comparison to heterosexual IPV, due to the historic interest and female agenda of the gendered theorists (Burke & Follingstad, 1999) it appears that gay females have received more attention than gay males, particularly to provide aggregate findings. Therefore, gay males were the only focus in this review.

Whilst there have been some literature reviews to obtain correlates or associations of the factors involved in male SSIPV, there was a lack of a case control comparison review whereby risk factors were compared to a control group of male non-SSIPV individuals. This differentiates between factors that are elevated specifically in perpetrators and victims of male SSIPV to the gay male population as a whole, therefore enabling firmer conclusions. It is necessary to understand this aetiology and the risk factors that contribute towards male SSIPV perpetration, so professionals can provide early intervention and guide appropriate support for victims and treatment for perpetrators.

The systematic searching of appropriate electronic databases and quality assessing of relevant hits, yielded only six articles for the review. This demonstrated a lack of research which included risk factors of male SSIPV compared to a control group of male non-SSIPV individuals. Due to the lack of research articles available, and an array of risk factors investigated, firm conclusions of the risk factors that contribute to male SSIPV and the consequences that occur as a result could not be obtained. The literature review also revealed significant definitional and methodological problems in the literature, for example definitions of IPV, the omission of mutual partner violence, sampling methods, and a lack of distinction between population groups. Furthermore, due to the significant lack of longitudinal research, it is impossible to establish whether the factors discussed are risk factors that cause SSIPV perpetration/victimisation or are a consequence of the abuse.

Nevertheless, the results of the review do provide a framework and indication of the risk factors of male SSIPV for future research. Risk factors highlighted for perpetrators included substance use, unprotected sex, stigma consciousness, possible mental health difficulties, low social economic status in family of origin, and less education. For

victims, the factors were similar, and included substance use, unprotected sex, stigma consciousness, mental/physical health difficulties, and young age. There was also a synergistic interaction observed between the factors to exacerbate the effects for both victims and perpetrators. These risk factors are similar to those risk factors identified for heterosexual IPV. However, results indicate that certain risk factors (stigma consciousness and unprotected sex with HIV status) are specific to SSIPV.

Summary of Chapter Three (Research Project)

The literature review contributed in forming the focus of the research, as it highlighted the deficits in SSIPV literature and the necessity to investigate risk factors involved with SSIPV. This is particularly important due to the indication that some factors may uniquely contribute to the aetiology of SSIPV. It was also apparent that there is a lack of understanding relating to attitudes and beliefs regarding IPV and SSIPV, and how they act as a risk factor for perpetration. Therefore, the aim of the research project was to address the dearth of understanding about heterosexual and same-sex values, by exploring the rates, beliefs and approval of heterosexual IPV and SSIPV and the relationship of this approval to perpetration by heterosexual and gay individuals. Due to a low response rate from male participants, only females were analysed in the study. As discussed in chapter two, males are understudied particularly in the field of SSIPV, therefore it is unfortunate that gay males were not able to improve our understanding of all types of SSIPV. It would be important that future work endeavours to encourage male participation and perhaps attempts to advertise for study recruitment in densely populated gay male areas. It was found that similar rates of perpetration and

victimisation, of both heterosexual and gay females, exist regarding physical and sexual violence, injury rate, and controlling behaviours. These findings demonstrate evidence against the gendered perspective of IPV, as females are perpetrating similar, or potentially higher, levels of IPV to males, so gender cannot be *the* strongest risk factor for perpetration.

Participants believed that heterosexual female perpetrated IPV was the most acceptable and least severe form of IPV, and heterosexual male perpetrated IPV the least acceptable and most severe. Gay male and female perpetrators were generally viewed moderately in comparison to the male and female heterosexual perpetrators, in terms of beliefs and approval of aggression. However for severe aggression, femaleSSIPV was not significantly approved of any more than heterosexual male IPV. This suggests that for severe aggression, individuals are more disapproving of violence against women, and highlights this cultural attitude to protect women from harm (i.e., chivalry as opposed to patriarchy; Archer, 2006; Felson, 2006) and perhaps regard minor aggression more trivially. Finally, the results suggest an indication of approval of IPV being a risk factor for perpetration, but the finding was more conclusive for minor aggression. Both heterosexual and gay female perpetrators had higher approval of IPV than non-perpetrators for minor aggression, with heterosexual female perpetrators being significantly higher than gay female non-perpetrators. However, for severe aggression gay female perpetrators and non-perpetrators had similar levels of approval. However, although this suggests a potential risk factor for perpetration, it is unclear about the direction of causality.

Summary of Chapter Four (Critique of a Psychometric Measure)

The aim of this chapter was to critically evaluate a psychometric measure used in the research project. This was to improve understanding about the strengths and limitations of the measure and hence the implications this may have upon the findings and conclusions drawn in the research project. The chosen measure was the Revised Conflict Tactics Scales (CTS2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996), as this is also well used in this field of IPV research.

The CTS2 is an objective, quantitative, psychometric measure used to provide statistical data or epidemiology of the overt tactics used in resolving the conflict between intimate partners, or IPV. The CTS2 has many strengths being quick, easy and popular in its use, accumulating a large research base. This provides evidence for its effectiveness and ability to obtain accurate results of the prevalence of IPV with large, nationwide surveys, which has created evidence against the gendered perspectives of IPV. The CTS2 is also gender neutral so is able to be used with gay individuals and hence was effective for use in the research project alongside demographic information. However, there are certain acts that are excluded from the CTS2 which are specific to gay individuals (e.g., threats to 'out' partner) and may uniquely contribute to the aetiology of SSIPV.

The CTS2 has undergone revisions and developments in order to incorporate many aspects that could constitute IPV. It ensures that participants report the frequency of any kind of violent act on the CTS2, even if individuals are unaware that those acts are inclusive of IPV. As the CTS2 is an objective, quantitative measure, it ensures that there is no subjectivity from researchers influencing the results. However, this means the context for perpetration and victimisation of acts is unable to be established and so

potentially the participant groups in the research project were inaccurate, as participants were allocated groups based on their reported perpetration on the CTS2. Furthermore, this information may have been inaccurate due to self-reporting bias. Demand characteristics or socially desirable responding are potential limitations involved with the CTS2, although the use of a 5-point scale reduces these effects (Sorenson & Taylor, 2005). Additionally, participants may not actually classify their acts as the word stated (e.g., perceive their own act as a 'tap' rather than a 'hit') and participants may perhaps trivialise their own perpetration and overstate their partner's perpetration. Similarly, victims may be ashamed and so report fewer acts than reality would support. This information regarding the validity and reliability of the CTS2 suggests that there may be some limitations with the results and conclusions in the research project.

Conclusions and Recommendations

There are limitations within each chapter as discussed, which will impact upon the results, conclusions and recommendations made. However, the findings from each chapter do contribute and have implications to the field of SSIPV research and to the wider literature. This is particularly important for services and resources for those currently involved in heterosexual IPV or SSIPV, and also to the general public.

IMPLICATIONS FOR VICTIM SERVICES

In relation to services for victims of IPV and SSIPV, the resources are currently lacking and tend to favour heterosexual female victims. This has been demonstrated in research,

whereby heterosexual males are less likely to report their victimisation (Pierce & Harris, 1993) and less likely to identify it as a crime (Dutton & Nicholls, 2005). A lack of services for heterosexual males may discourage reporting. Similarly, gay victims have many barriers preventing help-seeking behaviours such as family, societal views and homophobia, and concealment of sexuality (St Pierre & Senn, 2010). These victims, particularly gay males, may also hold attitudes that they should not be a victim as the public perception regards heterosexual females as the most victimised. Merrill and Wolfe (2000) showed that help-seeking behaviours are reduced in same-sex couples due to limited services specifically forSSIPV and battered women's services being unhelpful for them. Brown and Groscup (2009) also found that crisis centre staff were less confident in dealing with same-sex couples.

It is important that services for victims (e.g., shelters, counselling, GP surgeries etc.) are all-inclusive and readily available for all victim types. Services must not regard certain forms of IPV as more acceptable, or view minor IPV as trivial, due to the potential escalation. This is because, as highlighted in the research project, heterosexual females and gay females perpetrate and are victimised at similar rates, receiving similar levels of injuries. Therefore, it is a serious problem that services appear to have a preference for heterosexual female victims and are not as well equipped to deal/cope with other victim types. This lack of equality of resources and support will further victimise certain individuals and it is necessary that they are developed and improved. As the literature review highlighted, the risk factors for maleSSIPV victimisation encompasses a multitude of problematic behaviours which appear to synergistically interact. Hence, it is important that services ensure multiple screening for these individuals for a variety of health problems that may accompany IPV.

IMPLICATIONS FOR PERPETRATOR SERVICES

It is important that services and resources for perpetrators are all-inclusive for every relationship type. The findings from the research project demonstrate that individuals have inaccurate beliefs, where certain types of IPV are approved and accepted more than other types. These biases in attitudes towards types of IPV will likely be observed in law enforcement agencies, which has been demonstrated previously (e.g., Cormier & Woodworth, 2008). This will cause inequality and potentially allow female perpetrators to avoid prosecution if they ‘play the feminine victim’ (Hassouneh & Glass, 2008). It is particularly important in law enforcement agencies for biased attitudes to be addressed, as it may affect other agencies (e.g., courts, witnesses), which could be further exacerbated by homophobic attitudes, resulting in certain perpetrators seeming less worthy of intervention. In reality, punishment should not be driven by gender or sexual orientation and should be applied equally regardless, particularly as injuries inflicted were found to occur at a similar rates and severities from all perpetrators. Otherwise, unequal punishment could exacerbate the prejudiced view that heterosexual female perpetration is more acceptable. Equal sanctions may then decrease the risk of heterosexual females committing IPV, and so potentially reduce the likelihood of a male partner retaliating.

The findings have implications in relation to risk assessment tools and treatment, to reduce heterosexual IPV orSSIPV perpetration. The Spousal Assault Risk Assessment (SARA; Kropp, Hart, Webster, & Eaves, 1995) and Danger Assessment (Campbell, 1995) are well-established risk assessment tools for heterosexual male perpetrators, however there are limited tools available for other populations. Glass et al. (2008) did

revise the Danger Assessment to predict reassault in gay females, which was effective. However, as the findings in the research project suggest, females are less often perceived as requiring treatment, due to a perception that their violence is more acceptable. It would be beneficial to improve and develop tools and treatment programmes for all types of perpetrators which would help to reduce reassault and to guide resources and support to those most in need (Reed, Raj, Miller, & Silverman, 2010). In order to ensure treatment is most effective, theory should guide the structure and be based on the risk, need and responsivity principles (Andrews & Bonta, 2007). Perpetrators need to be educated that all types of IPV are unacceptable and that minor acts should not be regarded as trivial. The many established factors that contribute to IPV should be addressed (e.g., nested ecological theory; Dutton, 1995; 2006), rather than attributing it to patriarchy alone. The results from this study indicate that approval of IPV is a risk factor for perpetration, so this should be investigated further and, if applicable, addressed during treatment for all populations. Furthermore, the findings from the literature review demonstrate that there are a multitude of risk factors involved for male SSIPV perpetration. These would need to be considered, as well as ensuring dual screening for other health problems. Additionally, the findings highlight that there are some specific risk factors involved for male SSIPV perpetration, so treatment should be tailored to each population to improve treatment effectiveness. As discussed however, more research is required and should continue to explore risk factors for each population.

IMPLICATIONS FOR THE GENERAL PUBLIC

The findings of this thesis have implications for the general public. It is vital that, based on these inaccurate beliefs evident in society, attitudes are addressed in all public services and the population as a whole. Education and awareness is required to improve understanding that all forms of IPV are unacceptable in any relationship. It is particularly important that individuals understand this because there is the indication that those who approve more of IPV may engage in perpetration. Similarly, the general public need to be educated that all forms of violence, including minor violence (e.g., a ‘slap’), constitute IPV and must not be ignored due to potential escalation and the implications for others in the family home. This awareness of varying forms of aggression and violence needs to improve so individuals are able to recognise and appropriately seek help and support. Ideally, it would also seem plausible to expand this to include any form of psychological aggression as constituting IPV. However, this could create many problems in everyday relationships, as it would likely include most people in a relationship. This would be impossible to treat and resolve. Hence, there needs to be the distinction between a ‘normal occurrence’ of such psychological aggression, regarded as a normal argument between couples, and such psychological aggression which is on-going and continuous or very severe in nature, causing a noticeable impact upon the victim. From a clinical perspective, therefore, there should be some awareness of this latter type this can lead to perpetration of physical aggression (Frye & Karney, 2006).

National campaigns, such as media advertisements, would be effective to inform large numbers of people (Wakefield, Loken, & Hornik, 2010), which will include the general

public, services, victims, and perpetrators. For gay females particularly, the most appropriate way to educate and support them needs to be considered carefully. The results suggest that gay female perpetrators have similar, or slightly lower, approval of IPV compared to non-perpetrating gay females. Therefore, if gay females already understand that IPV is unacceptable in any form, but are still perpetrating IPV at high rates, community interventions may not be effective, thus support needs to be tailored appropriately. Furthermore, the gay male community need to be educated to recognise the likelihood of the co-occurrence of multiple health problems that may accompany maleSSIPV (e.g., HIV, substance use). These factors could place them at an increased risk of IPV and so multiple health campaigns are required.

This thesis demonstrates the importance of improving awareness and education of all forms of IPV in order to promote the prevention, risk assessment, treatment, and service provision for individuals, couples and families in need. Future research should attempt to develop the findings to establish firmer conclusions in the field, ensuring that early identification and resources can be further improved.

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APPENDICES

Appendix 1 - Search Syntax

PsycINFO and EMBASE

1. gay*.ti,ab.
2. homosexual*.ti,ab.
3. bisexual*.ti,ab.
4. same-sex*.ti,ab.
5. queer*.ti,ab.
6. camp*.ti,ab.
7. men who have sex with men.ti,ab.
8. 1 or 2 or 3 or 4 or 5 or 6 or 7
9. domestic violen*.ti,ab.
10. domestic abus*.ti,ab.
11. batter*.ti,ab.
12. inter partner violen*.ti,ab.
13. inter partner abus*.ti,ab.
14. intimate partner violen*.ti,ab.
15. intimate partner abus*.ti,ab.
16. partner violen*.ti,ab.
17. partner abus*.ti,ab.
18. marital violence.ti,ab.
19. marital abuse.ti,ab.
20. marital conflict.ti,ab.
21. spous* violen*.ti,ab.
22. spous* abus*.ti,ab.
23. spous* assault*.ti,ab.
24. 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or
23
25. 8 and 24

Hits with PsycINFO = 432 (10/04/13) (from 1988 to April Week 1 2013)

Hits with EMBASE = 248 (10/04/13) (from 1988 to 2013 Week 14)

Web of Science

(gay*) OR (homosexual*) OR (bisexual*) OR (same-sex) OR (queer*) OR (camp*) OR
(men who have sex with men)

AND

(domestic violen*) OR (domestic abus*) OR (batter*) OR (inter partner violen*) OR
(inter partner abus*) OR (intimate partner violen*) OR (intimate partner abus*) OR
(partner violen*) OR (partner abus*) OR (marital violence) OR (marital abuse) OR
(marital conflict) OR (spous* violen*) OR (spous* abus*) OR (spous* assault*)

Hits with Web of Science = 1238 (10/04/13) (from 10.04.1988 to 10.04.2013)

Appendix 2 - Inclusion and Exclusion Criteria

	<i>INCLUSION</i>	<i>EXCLUSION</i>	<i>CRITERION MET?</i> <i>COMMENTS</i>
<i>POPULATION</i>	Gay or bisexual men aged 18 or above who are currently, or have previously been, in a same-sex relationship and perpetrated or been a victim of SSIPV	Studies with gay females or heterosexuals only.	
<i>INTERVENTION</i>	Empirical, quantitative studies investigating the risk factors of male perpetrators or victims of IPV within their same-sex relationship	Studies where the violence was not relating to an IPV; or not looking at the risk factors of perpetrators or victims	
<i>COMPARATOR</i>	Comparison to gay males who are not perpetrators or victims of IPV	No control group or comparisons to gay females or heterosexual samples	
<i>OUTCOMES</i>	Ontogenic, microsystem, exosystem or macrosystem risk factors of perpetrators or victims of SSIPV in	Risk factors of perpetrators or victims where the violence was not IPV; studies not looking specifically at risk	

	gay male relationships	factors of perpetrators or victims.	
<i>STUDY DESIGN</i>	Case control studies of gay males who are perpetrators or victims ofSSIPV, to gay males who are not perpetrators or victims ofSSIPV	Grey literature, narrative reviews, editorials, commentaries or other opinion papers	

If criteria are all met then include study.

Appendix 3 - Data Extraction Form

GENERAL INFORMATION

Title of article	
Author(s)	
Source (e.g., Journal, Conference) Year/Volume/Pages/Country of Origin	
Quality score	

RE-VERIFICATION OF STUDY ELIGIBILITY

Study characteristics correct? <ul style="list-style-type: none">- Population- Intervention- Comparator- Outcome	Y / N
Inclusion criteria	
Exclusion criteria	
Participant characteristics	

QUALITY OF METHODOLOGY

Study aims	
Study design and recruitment procedures	
Target Population (Describe; number of participants, demographic information)	
Control population (Describe; type and number of participants, demographic information)	

OUTCOME MEASUREMENT AND ANALYSIS

Validity and reliability of statistical tests used	
Dropout rates and reasons for drop out	
Results (Magnitude and direction of results)	
Limitations / other notes (Analysis adjusted for confounding variables)	

Appendix 4 - Quality Assessment Form (Case Control Studies)

QUESTIONS	Y (2)	P (1)	N (0)	U	COMMENTS
<i>STUDY DESIGN</i>					
Were the aims clearly stated?					
Was it an appropriate method to address their aims?					
<i>SELECTION & SAMPLING BIAS</i>					
Is the sample representative of this population?					
Was an adequate sample size used?					
Were the participants appropriate for the analysis that was conducted?					
Were groups sizes equal across all groups?					
Was there a clear control group description?					
<i>MEASUREMENT BIAS</i>					
Was IPV and clearly defined and descriptive of what violence is included?					
Were the measurements for outcome objective?					
Were the assessments used clearly defined and validated for use with this population?					
Were the outcome measures standardised and the level of internal consistency adequate?					
Were the assessments carried out the same for all participants?					
Were risk factors for perpetrating or being a					

victim fully explained?					
<i>ATTRITION BIAS</i>					
Were reasons explained for those refusing to participate in the study?					
Were dropout rates clearly defined?					
Was appropriate statistical analysis used and used correctly?					
Have results been clearly reported and in sufficient detail?					
Have limitations been discussed?					
<i>APPLICABILITY OF FINDINGS</i>					
Can results be applied to others in this population?					
Do the results of this study fit with other available evidence?					

Appendix 5 - Detailed Information relating to Study Quality

<i>STUDY</i>	<i>SELECTION & SAMPLING BIAS</i>	<i>MEASUREMENT BIAS</i>	<i>ATTRITION BIAS</i>	<i>APPLICABILITY OF FINDINGS</i>
Pantalone et al. (2012)	<p>Medium size sample-but only HIV positive MSM from 2 outpatient settings.</p> <p>Cash incentive given- could bias sample.</p> <p>Clear description of victim and control group, but unequal groups. Possible cross-over between IPV groups and MPV ignored.</p> <p>Clear description of the demographics of sample, but mainly white.</p>	<p>All forms of IPV included and assessed at 3 time points.</p> <p>Possible reporting of heterosexual IPV.</p> <p>Some mental health difficulties not assessed (e.g., PTSD).</p> <p>Same computer-assisted self-interview for all- improves analysis & confidentiality; decreases socially desirable responding.</p> <p>Clearly defined, and comprehensive, standardised tools used and high Cronbach's alphas reported.</p> <p>Terminology modified to be applicable to same-sex relationships.</p> <p>But no mention of validation of use with MSM.</p>	<p>No drop-outs reported; some excluded if did not meet criteria as MSM (i.e., transgender).</p> <p>No discussion about refusal rate.</p> <p>Appropriate statistical testing.</p> <p>Results clearly reported and limitations discussed.</p>	<p>Generally consistent with previously literature.</p> <p>Cross-sectional data- unable to make inferences about causality direction- i.e., CTS2 no context of IPV.</p> <p>Sample is only HIV MSM who are engaging in their treatment & at the clinics.</p>

<p>Carvalho et al. (2011)</p>	<p>Medium sample size from multiple US and foreign cities.</p> <p>Range of methods used to recruit, but snowball sampling and self-volunteered to advertisements - possibly unrepresentative.</p> <p>IPV groups and figures unclear and possible cross-over between IPV groups. MPV ignored.</p> <p>Clear description of the demographics of sample, but mainly white and educated.</p>	<p>Authors mention including physical and psychological IPV, but measure only asks 2 questions- ignores frequency, specific tactics & likely interpretation differences.</p> <p>IPV from heterosexual relationships not excluded.</p> <p>Other measures standardised and alphas reported.</p> <p>Ignore other possible contributors to minority stress & IPV (e.g., social support).</p> <p>Online survey improves privacy.</p> <p>Randomised order of questionnaires.</p> <p>Same procedure and analysis for all participants.</p>	<p>Mentions possible missing data but no figures or explanation provided and overall final sample size not stated for men.</p> <p>Refusal rate not discussed.</p> <p>Report accurate statistics.</p>	<p>Direction of causality unable to be established as lifetime IPV.</p> <p>Context unknown.</p> <p>Sample from various cities, but self-volunteered could affect representativeness.</p> <p>Generally consistent with prior literature, which is limited.</p>
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<p>Kelly et al. (2011)</p>	<p>Large, diverse, cross-sectional urban sample.</p> <p>Located at four gay community events, from two cities, through a street-intercept method.</p> <p>Free movie pass as incentive- could bias sample.</p> <p>Possible limited privacy on completing of measure; may increase social desirability.</p> <p>Include perpetrators, victims, and MPV.</p> <p>Detailed table of the demographics of sample.</p>	<p>Vague description of IPV, but include physical & psychological IPV, not sexual.</p> <p>Possible reporting of heterosexual IPV.</p> <p>Clear descriptions of control and each group. But for mutual group-perpetration and victimisation may not be in the same relationship (5 year timescale)</p> <p>No standardisation of measures declared or internal consistency given for the measures.</p> <p>Same procedure and analysis for all participants.</p>	<p>4% missing data, however not mentioned if it was similar across groups. 82.9% acceptance rate, but no reasons given.</p> <p>Remaining data was reviewed and analysed successfully.</p>	<p>Cross-sectional - unable to make inferences about direction of causality - Different time scales for reporting IPV and substance use.</p> <p>Context unknown of MPV (e.g., self-defence).</p> <p>Large, representative sample, improves applicability.</p> <p>Discusses that intercept method with gays is comparable to others methods and so representative.</p> <p>Supports research that gay men have higher substance usage and IPV.</p>
<p>Houston & McKirnan (2007)</p>	<p>Large sized, diverse, urban sample.</p> <p>Multi-framed, random sampling, at 11 different gay/bisexual venues.</p> <p>But in only one city and used intercept method to recruit.</p> <p>Cash incentive given- could bias sample.</p>	<p>Clear and all-incorporating definition of IPV (include physical, sexual and verbal).</p> <p>Possible reporting of heterosexual IPV.</p> <p>Very detailed description of measures, but own devised measures- limited questions, no standardisation, no discussion of use with MSM, or internal consistency discussed.</p>	<p>Intercept recruitment- unable to calculate refusal rate.</p> <p>Dropout rate not discussed.</p> <p>Results discussed in detail with good comparisons between groups.</p> <p>All records received were reviewed and analysed successfully.</p>	<p>Large, diverse, urban sample improves applicability.</p> <p>Cross-sectional - unable to make inferences about direction of causality and whether behaviours occurred in differing timescales.</p> <p>Context unknown.</p> <p>Shows similar findings to heterosexual samples.</p>

	<p>Clear description of the demographics of sample.</p> <p>Vague description for categorisation of victim and control group. Possible overlap of groups and MPV ignored.</p>	<p>However, depression scale is standardised and alphas given for social support & positive appraisal.</p> <p>All given out the same way by trained outreach workers and completed in private spaces.</p> <p>Same procedure and analysis for all participants.</p>		
<p>McKenry et al. (2006)</p>	<p>Small sample size from one city- possibly unrepresentative.</p> <p>Range of methods used to recruit- but 80% were through advertisements i.e., self-selected and remainder were already seeking some kind of support.</p> <p>Cash incentives given- could bias sample.</p> <p>Not clear regarding number in non-perpetrator group.</p> <p>Possible cross-over between IPV groups and MPV ignored.</p> <p>Clear description of the</p>	<p>Clear description of eligibility for perpetrator group, but only address physical IPV.</p> <p>Possible reporting of heterosexual IPV.</p> <p>Investigate many factors relating to disempowerment, but some omitted (e.g., jealousy).</p> <p>Same gender, trained interviewers administered measures in same way to all participants in private offices; improved rapport and understanding.</p> <p>Many standardised assessment tools with high Cronbach alphas reported.</p> <p>Some tools modified for same-sex relationships, but no mention of validation of use with MSM.</p>	<p>No details regarding refusal or dropout rate. Also, sample appears to lose 4 participants, but no reasons given.</p> <p>Appropriate statistical testing.</p> <p>Amended p value to account for small sample.</p> <p>No tables for results and somewhat unclear about where significant differences were.</p> <p>Limitations discussed in depth.</p>	<p>Small sample limits generalisability and findings often include gay females, but recruited representatively.</p> <p>Accept findings are preliminary but some evidence for the disempowerment perspective for SSIPV.</p> <p>Cross-sectional data- unable to make inferences about causality direction/prediction - i.e., CTS2 no context of IPV.</p> <p>Context unknown.</p>

	demographic of the sample.	Same procedure and analysis for all participants.		
Bogart et al. (2005)	<p>Medium, nationwide sample, but only HIV positive participants who have all sought medical aid.</p> <p>Participant data obtained from another study's database so may be unknown errors/biases.</p> <p>However this data was probability sampled and random, stratified methods used for geographical areas.</p> <p>Clear description of victim, perpetrator and no IPV groups, but no numbers given about size of groups. MPV ignored.</p> <p>Clear description given of the demographics of sample.</p>	<p>Brief description of IPV, but include physical and sexual.</p> <p>Possible reporting of heterosexual IPV.</p> <p>Include both perpetrators and victims.</p> <p>All face-to-face, computer assisted interviews.</p> <p>Unclear description of measures; authors devised measures- limited questions, no standardisation, no discussion of use with MSM, or level of internal consistency discussed.</p> <p>Investigating an aspect under researched- the synergistic effect of how 3 factors interact specifically at 1 time point- i.e., before & during sex.</p> <p>Same procedure and analysis for all participants.</p>	<p>Detailed information about data handling and about dropout and missing data removal.</p> <p>No details about refusal.</p> <p>All records received were reviewed and analysed successfully.</p> <p>Results unclear and not very specific about where significant differences were.</p>	<p>Cross-sectional - unable to make inferences about direction of causality and whether behaviours occurred in differing timescales.</p> <p>Stratified sampling improves generalisability.</p> <p>But not representative of all MSM as just HIV positive participants, seeking medical aid.</p> <p>Partners HIV status not obtained.</p> <p>Findings support previous literature that substances lower motivation to use condoms.</p>

Appendix 6 - Full Terms of Abbreviated Outcome Measures

CTS-2: Revised Conflict Tactics Scales

STPI: State-Trait Personal Inventory

CES-D: Center for Epidemiological Study-Depression Scale

MOS-SS: Medical Outcome Study-Social Support

HASS: Harkavy Asnis Suicide Survey

DDTQ: Daily Drug-Taking Questionnaire

MOS-HIV: Medical Outcomes Study- HIV Health Survey

OI: Outness Inventory

IHP: Internalised Homophobia Scale

SCQ: Stigma Consciousness Questionnaire

PAQ: Personal Attribute Questionnaire

RSQ: Relationship Style Questionnaire

BSI: Brief Symptom Inventory

SMAST: Short Michigan Alcoholism Screen Test

CTSPC: Parent-Child Conflict Tactics Scales

PSS-Fr: Perceived Social Support-Friends

PSS-Fa: Perceived Social Support-Family

KMSS: Kansas Marital Satisfaction Scale

FILE: Family Inventory of Life Events and Changes

IDI: Interpersonal Dependency Inventory

PMWI: Psychological Maltreatment of Women Index

Appendix 7 - First wave of recruitment (advertising & introductory text)

STUDY NAME:

1 CREDIT:ONLINE SURVEY about your experience &perceptions of aggression in intimate relationships

DESCRIPTION:

This study investigates how people manage conflict and view the use of aggression between intimate or dating partners. If you choose to take part in this study it will ask you questions about how you solve conflict and whether you have experienced aggression or control in your past and current relationships. In addition, it will ask you about you have felt in the last 12 months and require you to read short scenarios which describe partners aggressing against each other and comment on which behaviours you think are acceptable.

INFORMATION/CONSENT FORM:

This study consists of an online survey and investigates how people manage conflict and view aggression between intimate partners. If you choose to participate, it is important that you understand you may experience some discomfort due to the content of some questions. It will ask you about how you solve conflict and whether you have experienced aggression or control in your past and/or current relationships. In addition it will ask you about how you have felt in the last 12 months and require you to read short scenarios which describe partners aggressing against each other and comment on which behaviours you think are acceptable.

In order to participate in the study, you must be at least 18 and have been in a dating/intimate relationship that has lasted for at least 1 month at some point in your adolescent/adult life.

Completion of the questionnaire will take approximately 1 hour. You will receive 1 research credit for taking part in this study. You will receive credit immediately upon completion of the survey. You must complete all sections in one sitting, as you are not allowed to resume at another time from where you left off. While you are participating, your responses will be stored in a temporary holding area as you move through the sections, but they will not be permanently saved until you complete all sections and you are given a chance to review your responses.

It is important that any information received is accurate. You are therefore asked to complete this in private and consider the questions carefully and honestly. Your co-

operation in this research will be greatly appreciated and as this is an under researched area you will be contributing to knowledge in this field.

Your participation in this project is anonymous, and you will be among several hundred other participating students. To clarify, the online system will store your responses anonymously in an electronic file that can only be accessed by the researchers and the administrator of the online Research Participation Scheme (RPS). In addition, the RPS automatically stores your contact details in a separate electronic file which only the administrator of the RPS has access to in case they need to contact participants for any reason. However, they have no need to contact you in the case of this study and therefore, to ensure your responses are completely anonymous, the file containing contact information will be deleted immediately before responses are passed onto the researchers. The results from this study are therefore anonymous to the researchers and the administrator of the RPS and these are the only people that can view your responses at any point in time. Furthermore, results will only be presented or published in aggregate form; at no point will your individual responses be published. Aggregate results may be disseminated in a student research thesis, scientific journal and/or conference presentation.

The first question asks you to give a code name of your choice, please make sure you fill this in and make a note of it for yourself. This code name enables you, and only you, to identify your responses. At no point will the researchers be able to identify who you are. You are free to withdraw from the study, either during or up to one month after taking part in the study, by contacting Dr. Louise Dixon anonymously. Do not give your name in correspondence or use an identifiable e-mail account. You can withdraw by either writing to Dr. Louise Dixon at the School of Psychology, University of Birmingham, Edgbaston, Birmingham B15 2TT; telephone her on [REDACTED]; or leave an anonymous note in her pigeon hole in Level 2, Frankland building. Be sure to indicate your wish to withdraw from the study along with your code name. If you require further information please contact her. Remember to save or print off this web page so that you have a record of these details.

After this information window, there are five stages of the questionnaire, split in to 40 sections of varying length for user ease of viewing. The first stage asks for general demographic information. The second asks you to consider many ways in which you may have solved conflict in your relationships. For example, questions will ask if you have ever done any of the following to a partner or if a partner has done this to you: showed them care; showed respect; punched or kicked; used a knife or gun; used force to have sex. The third and fourth asks you about how you may have acted toward your partner in certain situations. The fifth asks you to consider and comment on a series of hypothetical scenarios where aggression arises within a couple. Aggressive acts are briefly described here, for example it may say 'Carol punched him repeatedly in the face'.

If you are/have been a victim or perpetrator of relationship violence, or indeed if you find the contents of this questionnaire upsetting for some other reason and wish to discuss issues around aggression in relationships with someone, there are many avenues of free support, such as The Samaritans (Tel: 08457 90 90 90), National Domestic Violence Helpline (0808 2000 247), NHS direct (Tel: 08457 46 47), University student counselling service (Tel: 0121 414 5130) or Niteline (Tel: 08000 274750). If you are upset and require further help or advice around any of the issues presented in this questionnaire please do take advantage of the available support.

If you would like to take part in this study it is important you understand that your participation in this survey is voluntary and you are free to withdraw from the study, either during or up to one month after taking part in the study. You can withdraw without giving a reason and without any cost to you. However, please remember to receive the credits the online system requires you to complete the questionnaire. If you want to receive credits but do not want to answer any/some of the questions you may simply check the 'No Response' option for each relevant question.

Please confirm that you have read and understood this information, and that you consent to participate in this study by checking one of the options below:

I confirm that I have read and understood this information and that I consent to participate in this study (if you consent check 'Yes' if you do not consent check 'no' and then choose to withdraw by checking the 'withdraw' option at the top of this web page).

Appendix 8 - Second wave of recruitment (advertising & introductory text)

ADVERT FOR SOCIAL NETWORKING SITES:

ATTENTION WILLING PARTICIPANTS: Invitation to complete innovative and necessary research about your experience and perceptions of aggression in intimate relationships. You must be at least 18 years old and have been in a homosexual dating/intimate relationship WITH SOMEONE OF THE SAME SEX AS YOU that has lasted for at least one month, in the past 12 months. Please click on this link to this online survey, where a more detailed description will be given- www.examplestudylink.com

LETTER TO SOCIETIES TO GAIN CONSENT TO ADVERTISE STUDY:

Dear Chairman/woman,

RE: Requesting your participation in a research project examining people's attitudes to relationship violence in heterosexual and homosexual couples

I am writing to invite you and your members to participate in a research study that I am completing as part fulfilment for my Doctorate in Psychology at the University of Birmingham.

The study is an online survey that aims to find out how people view violence in relationships by lesbian and gay populations. This is important because currently research in this field is limited and as a result resources and understanding is poor. This project will raise awareness about intimate partner violence in same sex relationships and improve education and resources for all types of intimate partner violence regardless of gender or sexual orientation.

Due to the study's focus, we are looking for homosexual individuals, which is why we have approached your society/organisation. Participants must be at least 18 years old and have been in a homosexual dating/intimate relationship with someone of the same sex that has lasted for at least one month, in the past 12 months. It is likely you will have many members who fit these criteria and would be valuable participants for the study.

People will be asked to fill out an online questionnaire on survey monkey (attached for you to view). They will be asked about their experience and management of conflict in homosexual relationships, along with their views and perceptions of aggression in

intimate relationships. Questions will be asked about how they solve conflict and whether they have experienced aggression or control in their past and current relationships (within the last 12 months), with partners of the same sex. In addition, it will ask about how individuals have felt in the last 12 months and require them to read some short scenarios, which describe partners aggressing against each other and comment on which behaviours they think are acceptable. On average it takes about 35 minutes to complete.

If you agree to take part all I will require from you is to distribute an email from myself to the members of your society/organisation (attached). This provides a brief description of the study and a link to the web page to complete it.

Your support in this matter would be greatly appreciated and would contribute to understanding in this field of research.

Please do not hesitate to contact the researchers below if you have any queries.

Many thanks,

Anna Griffiths
Doctorate Researcher

[REDACTED]

Dr. Louise Dixon
Principal Investigator
School of Psychology
University of Birmingham
Edgbaston
Birmingham
B15 2TT

[REDACTED]

EMAIL ADVERT DISTRIBUTED TO LGBT GROUPS/SOCIETIES:

Dear Members,

This is an advertisement for an online survey asking about your experience and perceptions of aggression in intimate relationships. Your participation would be gratefully appreciated and will really help to contribute to this under-researched field. The research will contribute to public awareness of intimate partner violence to improve education and resources for all types of intimate partner violence, regardless of gender or sexual orientation.

This study investigates how people manage conflict and view the use of aggression between intimate or dating partners. If you choose to take part in this study it will ask you questions about how you solve conflict and whether you have experienced aggression or control in your past and current relationships (within the last 12 months), with partners of the same sex. In addition, it will ask you about how you have felt in the last 12 months and require you to read short scenarios which describe partners aggressing against each other and comment on which behaviours you think are acceptable.

You must be at least 18 years old and have been in a homosexual dating/intimate relationship with someone of the same sex that has lasted for at least one month, in the past 12 months.

To complete this study, please click on the following link to the study, where more a more detailed description will be given and you will be asked for your consent before continuing to the study. It should only take about 35 minutes to complete.

www.examplestudylink.com

Thank you for your time and assistance with this necessary research and please do not hesitate to contact the researchers below if you have any queries.

Many thanks,

Anna Griffiths
Doctorate Researcher



Dr. Louise Dixon
Principal Investigator
School of Psychology
University of Birmingham
Edgbaston
Birmingham
B15 2TT



INFORMATION/CONSENT FORM ON SURVEY WEBSITE:

This study consists of an online survey and investigates how people manage conflict and view the use of aggression between intimate or dating partners. If you choose to

take part in this study, it is important that you understand you may experience some discomfort due to the content of some questions. It will ask you questions about how you solve conflict and whether you have experienced aggression or control in your past and/or current relationships (within the last 12 months), with partners of the same sex. In addition, it will ask you about how you have felt in the last 12 months and require you to read short scenarios which describe partners aggressing against each other and comment on which behaviours you think are acceptable.

In order to participate in the study, you must be at least 18 years old and have been in a homosexual dating/intimate relationship WITH SOMEONE OF THE SAME SEX AS YOU that has lasted for at least one month, in the past 12 months.

If you have been in relationships with people of different genders, in the last 12 months, then please only answer the questions in the questionnaires regarding the homosexual relationships you have had (i.e., with partners of the same sex as you).

Completion of the study will take approximately 35 minutes. You must complete all sections in one sitting, as you are not allowed to exit and resume at another time from where you left off. While you are participating, your responses will be stored in a temporary holding area when you click 'save' on each page and move through the sections, but they will not be permanently saved until you complete all sections, by clicking 'done'. Previous pages and responses can be reviewed, until the 'done' button is clicked on the final page.

It is important that any information received is accurate. You are therefore asked to complete this in private and consider the questions carefully and honestly. Your co-operation in this research will be greatly appreciated and as this is an under researched area you will be contributing to knowledge in this field.

Your participation in this project is anonymous, and you will be among several hundred other participants. To clarify, the online tool used for the survey is a secure system and will store your responses anonymously in an electronic file that can only be accessed by the researchers. No identifiable information will be stored (e.g., IP address or email). The results from this study are therefore anonymous to the researchers and these are the only people that can view your responses at any point in time. Furthermore, results will only be presented or published in aggregate form; at no point will your individual responses be published. Aggregate results may be disseminated in a student research thesis, scientific journal and/or conference presentation.

The first question asks you to give a code name of your choice, please make sure you fill this in and make a note of it for yourself. This code name enables you, and only you, to identify your responses. At no point will the researchers be able to identify who you are. You are free to withdraw from the study, either during or up to one month after

taking part in the study, by contacting Dr. Louise Dixon anonymously. Do not give your name in correspondence or use an identifiable e-mail account. You can withdraw by either writing to Dr. Louise Dixon at the School of Psychology, University of Birmingham, Edgbaston, Birmingham B15 2TT; telephone her on [REDACTED] Be sure to indicate your wish to withdraw from the study along with your code name. If you require further information please contact her. Remember to save or print off this web page so that you have a record of these details.

After this information window, there are five stages of the questionnaire, split into different sections for ease of completion. The first stage asks for general demographic information. The second asks you to consider many ways in which you may have solved conflict in your relationships. For example, questions will ask if you have ever done any of the following to a partner or if a partner has done this to you: showed them care; showed respect; punched or kicked; used a knife or gun; used force to have sex. The third and fourth asks you about how you may have acted toward your partner in certain situations. The fifth asks you to consider and comment on a series of hypothetical scenarios where aggression arises within a couple. Aggressive acts are briefly described here, for example it may say 'Carol punched her repeatedly in the face'

If you are/have been a victim or perpetrator of relationship violence, or indeed if you find the contents of this study upsetting for some other reason and wish to discuss issues around aggression in relationships with someone, there are many avenues of free support, such as The Samaritans (Tel: 08457 90 90 90), National Domestic Violence Helpline (0808 2000 247), NHS direct (Tel: 08457 46 47), or Niteline (Tel: 08000 274750). Additionally, there is Broken Rainbow as a National LGBT Domestic Violence Helpline (Tel: 0300 999 5428), providing specialist support for Lesbian, Gay, Bisexual and Trans communities. If you are upset and require further help or advice around any of the issues presented in this study please do take advantage of the available support.

If you would like to take part in this study, it is important you understand that your participation in this survey is voluntary and you are free to withdraw from the study, either during or up to one month after taking part in the study. You can withdraw without giving a reason and without any cost to you.

Please confirm that you have read and understood this information, and that you consent to participate in this study by checking one of the options below:

I confirm that I have read and understood this information and that I consent to participate in this study (if you consent check 'Next'; if you do not, then choose to withdraw by exiting this web page, using the 'X' in the top right corner).

Appendix 9 - Debrief Form

Thank you for participating in this research study.

May I take this opportunity to remind you that you can withdraw your data from the study at any point, either during or up to one month after taking part in the study. Do not give your name in correspondence or use an identifiable e-mail account. You can withdraw by either writing to Dr. Louise Dixon at the School of Psychology, University of Birmingham, Edgbaston, Birmingham B15 2TT; telephone her on [REDACTED]; or leave an anonymous note in her pigeon hole in Level 2, Frankland building. Be sure to indicate your wish to withdraw from the study along with your code name.

If you are/have been a victim or perpetrator of relationship violence, or indeed if you find the contents of this study upsetting for some other reason and wish to discuss issues around aggression in relationships with someone, there are many avenues of free support, such as The Samaritans (Tel: 08457 90 90 90), National Domestic Violence Helpline (0808 2000 247), NHS direct (Tel: 08457 46 47), or Niteline (Tel: 08000 274750). Additionally, there is Broken Rainbow as a National LGBT Domestic Violence Helpline (Tel: 0300 999 5428), providing specialist support for Lesbian, Gay, Bisexual and Trans communities. If you are upset and require further help or advice around any of the issues presented in this study please do take advantage of the available support.

Appendix 12 - University Ethical Code of Conduct

Policy

This document should be read in conjunction with the relevant Ordinances and Regulations, and any other policies, procedures or guidance as may be issued by the University from time to time. This document shall be kept under review by the Research and Knowledge Transfer Committee.

1. Principles and Application

1.1 The University of Birmingham expects all research carried out at the University or in its name to be conducted to the highest standards of integrity. This Code of Practice for Research (“Code”) provides a framework for the governance of all research throughout the University. It requires all those undertaking and/or contributing to research to adhere to the highest standards of performance and ethical conduct, and embed good practice in all aspects of their work. They must operate honestly and openly in respect of their own actions and in response to the actions of others involved in research.

1.2 The University of Birmingham requires all Staff, Emeritus Professors, Honorary Staff, Visiting Staff and all Registered Students (whether undergraduate or postgraduate) involved in research to abide by this Code. Where any other individual who collaborates in research with University of Birmingham Staff and Registered Students is not bound by an equivalent Code through their Employer or other organisation, the individual shall be expected to abide by this Code when working with the University unless otherwise agreed. References hereafter to ‘researcher workers’ include all Staff (including Emeritus Professors, Honorary Staff and Visiting Staff), Registered Students and external research collaborators who are involved with research in connection with or as part of the University.

1.3 This Code is linked to and operates in conjunction with conditions of employment for the relevant Staff groups and other related University policies and procedures. Failure to abide by this Code may lead to the matter being considered under the University’s disciplinary procedures.

1.4 This Code defines research misconduct in Clause 10. Any alleged breach of this Code shall be handled in accordance with the appropriate University disciplinary procedures.

1.5 The Code and its implementation will be reviewed by the University’s Research and Knowledge Transfer Committee on an annual basis in consultation as appropriate with relevant individuals or groups. The review will take into account changes and recommendations from external research funders, Acts of Parliament and other regulations. Where any proposed change to this Code would affect Staff Terms and Conditions of Service the University will follow the appropriate normal procedures of consultation and/or negotiation.

1.6 All research workers undertaking or involved in research must familiarise themselves with this Code. Heads of College have a responsibility to seek to ensure compliance with the Code in their Colleges. The University will draw attention to the Code in its induction processes for newly appointed Staff and Registered Students. Supervisors of Registered Students will seek to ensure compliance with the Code on the part of students. The University will draw attention to relevant training and

development modules to ensure that all research workers are aware of best practice requirements.

1.7 The University recognises and protects the principle of academic freedom in its Ordinances (<http://www.birmingham.ac.uk/Documents/university/legal/ordinances.pdf>, see Ordinance 3.18) and this Code is not intended to restrict the academic freedom of Staff. However, each member of Staff is expected to exercise their academic freedom in a manner consistent with this Code.

2 Integrity and Accountability

2.1 Everyone involved in research in the University owes a duty of accountability to the University, to all participants in their research, and to their research funders commensurate with their involvement in that research. Individuals must accept responsibility for their own conduct of their part in any research and for providing direction for the activities of any Staff or Registered Student under their supervision.

2.2 The Primary Researcher or Principal Investigator in any research should identify clear roles and accountabilities for all those involved in any research project, and should ensure that all involved are informed of their responsibilities. Areas of Accountability include:

- (i) the ethical basis of the research and the research design,
- (ii) the safety of all involved in the research,
- (iii) ensuring that research is conducted in a suitable working environment with appropriate equipment and facilities,
- (iv) the probity of financial management of all projects and for seeking to provide the optimum value for the public or private funders who have invested in them,
- (v) effective project management to agreed project plans and appropriate quality standards, including timely delivery of any scheduled, tangible outcomes,.
- (vi) management of research data in accordance with the Data Protection Act (“DPA”), 1998 and any other legal provisions, conditions and guidelines that may apply to the handling of personal information (see section 3 below),
- (vii) seeking to ensure timely and wide dissemination of research findings,
- (viii) as appropriate undertaking professional development relevant to the research and ensuring that all others involved in the research have received relevant training.
- (ix) maintaining personal records of research progress, including authorised laboratory books, to the recommended or required standards,
- (x) maintaining confidentiality in order to achieve protection of intellectual property rights where appropriate,
- (xi) ensuring research participants participate in a voluntary way, free from any coercion and are properly informed of any risks, the broad objectives and of the identity of any sponsors of the research,
- (xii) using all best endeavours to avoid unnecessary harm to participants, other people, animals and the natural environment, having taken due account of the foreseeable risks and potential benefits of the research,
- (xiii) being alert to the ways in which research derives from, and affects the work of others, and respecting the rights and reputation of others

2.3 When peer reviewing research proposals or results (including manuscripts submitted for publication), research workers must protect the confidentiality of information provided and disclose any conflicts of interest and any areas of limited competence, and must not misuse or misappropriate the content of the material being reviewed. Research

workers must be honest and lawful in respect of their actions relating to research and in response to the actions of other research workers. This applies to the whole range of research activity, outputs and deliverables, including applying for funding, experimental design, generating and analysing data, publishing results and acknowledging the direct and indirect contribution of colleagues, collaborators and others.

2.5 Where a research worker has concerns about whether the obligations of accountability as set out in clause 2.2 can be met or is in doubt about the applicability of provisions of the Code to their part in any research, or about the appropriate course of action to be adopted in relation to it, advice should be sought from a member of the relevant Ethical Review Committee or the Research Governance and Ethics Group of the Research and Knowledge Transfer Committee. All responses from the Committee or Group will be in writing and will be retained for future access as appropriate. A Registered Student who has any questions about this Code should in the first instance raise these with their immediate supervisor.

3 Research Data

3.1 Research workers must keep clear and accurate records of the research procedures they followed and the results obtained, including interim results.

3.2 Research data must be recorded in a durable and auditable form, with appropriate references so that it can readily be recovered.

3.3 Unless already regulated by legislation or confidentiality agreements, or where there are valid ethical reasons for not doing so, primary research data and research evidence must be accessible in confidence to other authorised researchers for verification purposes for reasonable periods after completion of the research; data should normally be preserved and accessible for ten years, but for projects of clinical or major social, environmental or heritage importance for 20 years or longer. These periods are in accordance with current University guidelines and guidance from the UK Research Councils:

<https://intranet.birmingham.ac.uk/as/libraryservices/records/index.aspx#research>

<http://www.jiscinfonet.ac.uk/partnerships/records-retention-he/managing-researchrecords>

<http://www.rcuk.ac.uk/Publications/researchers/Pages/grc.aspx>

3.4 Unless there are particular reasons, including any legal or regulatory requirements (including without limitation the requirements of a research ethics committee), for not doing so, data should be stored in their original form. Storage media such as tapes and disks should not be erased and/or reused, but should be stored securely.

3.5 It is the duty of the Principal Investigator in any research project to comply with the DPA. The DPA applies to all processing of personal data (which includes the obtaining, the processing and the storage of data). Advice on appropriate procedures for compliance with the DPA may be obtained from the University's Information Compliance Officer in Legal Services.

3.6 Some central issues for research workers in relation to personal data include:

- (i) all Staff and Registered Students using personal data in research have a duty of confidentiality to the individuals concerned,
- (ii) unless there are ethically or legally justified reasons for doing otherwise, research workers must ensure that they have each study participant's explicit informed written consent to obtain, hold and use their personal data,

(iii) data security arrangements must be sufficient to prevent unauthorised breaches of confidentiality or **un**authorised disclosure of personal data,
(iv) The University, through the Colleges, will develop and implement procedures for complying with the University's Data Protection Policy and the University's Records Management Policy. As appropriate affected groups and individuals will have input to the development of the procedures. Once approved by the University, Heads of Colleges have responsibility to ensure that these procedures are made known to all Staff and Registered Students.

3.7 The University through the Colleges is responsible for establishing appropriate procedures for security and retention of research data in a form which would enable retrieval by an authorised third party, subject to any limitation imposed by the confidentiality of personal data.

3.8 Specific arrangements should be made to protect the security of research data where there is a contractual requirement to do so.

3.9 Research data related to publications should be available for discussion with other research workers, except where confidentiality provisions prevail. Confidentiality provisions relating to publications may apply in circumstances where the University of Birmingham or the researcher has made or given confidentiality undertakings to third parties, including research subjects, or confidentiality is required to protect intellectual property rights. It is the duty of the Principal Investigator to familiarise him/herself with any provisions of confidentiality relating to any particular research grant or contract and to inform research workers under his/her supervision of their duties with respect to these provisions. Advice on individual grant or contract terms may be obtained from Research & Commercial Services.

3.10 The Principal Investigator should also ensure that third-party Intellectual Property rights are not breached.

4 Publications

4.1 Publication is the dissemination of the outcomes of scholarship and research not only in conventional paper form but also in other media, including electronic media. The

University encourages its Staff and Registered Students to disseminate the findings of their research through appropriate and timely publication. In this context publication may be taken to include, *inter alia*, books, chapters, articles, conference proceedings, reviews, patents, catalogues, compositions, the production of creative arts, software and databases.

4.2 Ethical considerations apply to the production of all categories of publication and external communications, including web-sites, e-bulletins, press releases, media briefings or other events. The University of Birmingham expects research workers to abide by the University's core principles of openness, transparency and accountability and adopt appropriate ethical and professional standards and responsibilities in their publications as set out below.

4.3 Good practice requires that all University of Birmingham Staff include the details of their research outputs in the relevant University research publications databases according to the relevant procedures for recording that information. Staff and Registered Students should also help to ensure wide dissemination of their publications and therefore cooperate in requests from the University to include their outputs in a publicly accessible repository where appropriate.

4.4 There is a fundamental ethical obligation on authors to acknowledge and attribute external sources of information. Citation of sources should be carried out in accordance with the Harvard referencing system which has been adopted as standard by the University, or in accordance with the house style of the relevant publisher and/or the normal practices of the discipline concerned. Citation not only gives credit to the work of others, but also enables readers to identify elements in the text and therefore recognise the contribution of the author or authors in the context of previous work. Failure to cite sources could, inter alia, constitute plagiarism and may be subject to disciplinary procedures.

4.5 The University of Birmingham cannot endorse citation arrangements which are contrary to academic conventions (such as citation clubs or the unnecessary use of self-citation). Guidance will be provided by the Research and Knowledge Transfer Committee as to acceptable use of self-citation. Membership of Citation Clubs may be regarded as misconduct as set out in clause 10.1.4(iii) or 10.1.4(iv)

4.6 It is in the interests of Staff, Registered Students and the University of Birmingham that good practice in the matter of co-authorship is disseminated, understood and followed. New research workers should familiarise themselves with the principles of the Vancouver Protocol on authorship of articles in medical journals (see clause 4.8), the conventions of their particular discipline and any specific guidelines that may be issued by the University from time to time.

4.7 A publication must contain appropriate reference to the contributions made by all those who have made what might reasonably be regarded as a significant contribution to the relevant research. Any person who has materially contributed through conceiving, executing or interpreting at least part of the relevant research should be given the opportunity to be included as an author of a publication derived from that research. Accepting the status of co-author implies a full commitment to having one's name and reputation fully associated with the content of the publication.

4.8 In interpreting clause 4.7 above, researchers should, where appropriate, be guided by the Vancouver Protocol on determining authorship. The Vancouver Protocol can be found at www.icmje.org. However, no provision of the protocol should be used as a reason for excluding from authorship any research worker who has contributed materially to the research.

4.9 Any person who has contributed to at least part of the relevant research, but who does not fulfil the criteria set out in clause 4.7 above on authorship should not be included as an author of a publication derived from that research, but their contribution should be acknowledged in accordance with clause 4.10

4.10 There is a general ethical obligation that the contributory efforts of persons who have helped in the work being reported in a publication should be identified and acknowledged in it. It may, therefore, be appropriate to identify those who have *assisted* substantively in the work presented in a publication. This may include financial sponsors, colleagues within and outside the University who have given advice and any others who have facilitated the collection of material or data on which the publication is based or who have assisted in producing the publications. Those identified should be approached for permission if it is intended to acknowledge their assistance in the publication, and they should be offered the opportunity of seeing the publication.

4.11 A publication which is substantially similar to other publications derived from the same research must contain an appropriate reference to the other publications. A researcher must disclose to a publisher at the time of submission (a) substantially

similar work which is being submitted to another publisher at the same time or (b) work which has been previously published.

4.12 Authors should be aware that in contract and collaborative research it may be necessary to seek permission for publication from all parties to the contract in advance of submission of the work to a publisher.

5 Intellectual Property and Copyright

5.1 Unless Intellectual Property is assigned to a research Sponsor or Funder as a condition of grant or contract, intellectual property and any intellectual property rights therein developed during research by Staff in the course of their employment belongs to the University of Birmingham.

5.2 The University does not in practice assert its ownership of the copyright in respect of material such as books, journal articles, and musical compositions. However, the University retains its right to use and reproduce such materials for internal educational purposes whilst recognising the author's moral rights.

5.3 The procedures to be followed by research workers in the event of an invention or discovery in the course of a research project carried out as part of their normal university activities is set out in University of Birmingham Regulation 3.16, and in Appendix 6 of the Conditions of Employment Governing Academic and Academic related Staff. Under Regulation 5.4, Registered Students involved in research are expected to comply with the requirements of Regulation 3.16

5.4 Where an invention or discovery has been made in the course of a research project, research workers are required to make appropriate notification as set out in Regulation 3.16, or Regulation 5.4. Staff and Registered Students are reminded of the need to maintain confidentiality regarding the results of the research pending legal protection in accordance with any instructions or advice from the appropriate office in the University. Breaches of confidentiality may result in actions for recovery of losses from a Sponsor against the University and the individual concerned together with loss of income.

5.5 Research workers are required to familiarise themselves with and to abide by the terms relating to intellectual property and confidentiality in any grant, contract or collaboration agreement relating to their research projects. Breaches of confidentiality relating to externally funded or collaborative research projects may result in actions for recovery of losses from a Sponsor against the University and the individual concerned.

5.6 Research workers who leave the University of Birmingham are reminded that Intellectual Property developed during their employment, which is owned by the University of Birmingham or any research funder to whom such Intellectual Property has been assigned in accordance with the relevant contract, remains the property of that organisation and may not be divulged to third parties without permission from the owner of the Intellectual Property unless it is already in the public domain. Information received from third parties under terms of confidentiality whilst in the University's employ remains confidential, and breaches of such confidentiality may render the researcher liable to claims by the owner of the information.

5.7 All reports issued by research workers should bear an appropriate assertion of copyright.

5.8 Where a research worker is required to make an assignment of copyright to a publisher, e.g., in submitting a paper for publication, he or she may consult with either Research and Commercial Services RCS@contacts.bham.ac.uk or Legal Services

legalservices@contacts.bham.ac.uk regarding the suitability of such an assignment and the necessity for the University of Birmingham to be a party to that agreement. The University of Birmingham encourages its Staff and Registered Students to assert moral rights (as defined in the Copyright, Designs and Patents Act 1988) over material submitted for publication. Where the publisher has a general policy of not granting copyright to third parties once it has been assigned to the publisher, Staff and Registered Students are required to submit a statement to the publisher (a standard version of which will be made available by the University) asserting the University of Birmingham's perpetual right of licence to use the material for all non-commercial purposes without charge following the assignment. Further advice can be obtained from RCS.

6 Conflicts of Interest

6.1 Research workers in the exercise of their functions should not be constrained to reach any particular conclusion or to make any particular recommendations. However, in some situations a research worker may find him/herself in a position where there is an actual or potential conflict of interest. Such a situation needs to be recognised and the research worker will need to make an appropriate disclosure.

6.2 Conflict of interest may take several forms:

6.2.1 Conflict of interest of a financial nature could arise from any personal or close family affiliation or financial involvement with any organisation sponsoring or providing financial support for a project undertaken by a research worker, or which is providing goods and services to the University. 'Financial involvement' includes direct personal financial interest, provision of personal benefits (such as travel and accommodation) and provision of material or facilities for personal use. The provision of sponsored studentships, or elements of grant including travel/accommodation for a student, should be excluded from this definition unless the recipient is a family member.

6.2.2 Conflict of interest can arise in situations so as to risk compromising the decision making of the University or third parties or the proper execution of University procedures. This can be in consequence of actions taken or procedures followed in collaborating or sponsoring organizations which could result in non-financial benefits to the research worker or close family (e.g., the granting of favours, or inappropriate inducements or an inappropriate influence on decisions to the advantage or detriment of the University).

6.3 A disclosure of a personal potential or actual conflict of interest in research must be made to the University (through Head of College or Registrar and Secretary) as soon as is reasonably practicable and in accordance with any guidance issued from time to time. Failure to declare known conflicts of interest may be deemed misconduct.

6.4 A member of Staff must comply with a direction made by the University in relation to a personal conflict of interest in research. The research worker will have the right of appeal if s/he considers the direction is unlawful, unreasonable or impracticable.

7 Ethical Review

7.1 The University of Birmingham requires that all Staff and Postgraduate Registered Students' research projects undergo an ethical self-assessment and, where further scrutiny is required, an ethical review by an appropriate University or external ethical review committee. Where required by law (such as the Human Tissue Act) or where the research involves the NHS (e.g., patients, patient data, patient records or patient tissue, or where the research involves adults without the mental capacity to give informed

consent or any aspect of the NHS), confirmation should be sought from the relevant NHS body as to whether or not the research needs to be reviewed by an National Research Ethics Service (NRES) research ethics committee.

7.2 Responsibility for ensuring the proper ethical review lies with the Principal Investigator. In the case of Postgraduate Registered Students, the academic supervisor of the research is responsible for ensuring that the postgraduate researcher obtains ethical review for their project.

7.3 Failure to obtain appropriate ethical approval will be deemed a breach of this Code. No research project (or stage of a research project) may be conducted unless and until the project (or that stage) has been granted ethical approval by the appropriate body.

7.4 Research workers involved in research involving human participants falling within the remit of the Department of Health's Research Governance Framework or the Medicines for Human Use (Clinical Trials) Regulations should obtain the necessary regulatory approvals from the appropriate bodies set up for this purpose and must comply with all applicable requirements including Good Clinical Practice principles.

7.5 Advice on procedures for obtaining University ethical review and NHS governance approvals or requirements may be obtained from the Research Ethics Officer or the Research Governance Officer in Research & Commercial Services.

(<http://www.rcs.bham.ac.uk/staff/researchers/ethics.shtml>)

8 Additional Requirements

8.1 Any special standards of work performance or conduct imposed by law or by the University of Birmingham in relation to particular categories of research are deemed to be included in this Code in its application to persons engaged in that research in the University.

8.2 In the case of work involving animals, there is a general requirement for research workers to demonstrate that they have considered seriously the use of alternative methods of research before the use of animals is proposed, and that the likely impacts on animals have been weighed against the improvement in knowledge and understanding of the living world. The Named Veterinary Surgeon has an explicit duty to advise research workers about welfare issues in relation to the use of animals for research purposes.

8.3 In respect of the use of animals in research, including use in research conducted in collaboration with others outside of the University, the Director of the Biomedical Services Unit, acting on behalf of the Certificate Holder, shall bring projects (or planned projects) to the attention of the appropriate University Ethical Review Committee. In such cases Home Office licensees (or potential licensees) for the project (or planned project) shall have the opportunity to make a submission to the Ethical Review Committee.

8.4 Research workers should familiarise themselves with the terms of any funding agreement (grant or contract) related to their work, and ensure that any research undertaken is consistent with those terms and conditions.

8.5 Research workers must report to the University any events which result in unforeseen financial consequences or which could be damaging to the good name and reputation of the University.

8.6 As appropriate, Health and Safety Risk Assessment should be carried out for all research work. Any procedures which may present a hazard to the researcher,

participants, or to the public should be discussed with the School/College Health and Safety Coordinator.

9 Adverse Events

9.1 Research workers have a duty to monitor and report any Adverse Events occurring in the course of the research and each College must have systems in place to ensure that all such Adverse Events are recorded and, if appropriate, investigated. In this context, an Adverse Event is an event which results in harm to the researcher, the research participants, or the environment.

9.2 Accidents, incidents and "near misses" occurring during the course of research should be reported to the School/College Health and Safety Coordinator in accordance with the University Health and Safety Policy

<https://intranet.birmingham.ac.uk/hr/wellbeing/index.aspx>

9.3 Researchers should be aware that there may be a legal or regulatory requirement for them to report adverse events directly to external bodies, such as NRES committees.

10 Misconduct

10.1 Misconduct in research is a failure to comply with the provisions of this Code and, without limiting the generality of the foregoing provisions, is taken to include:

10.1.1 Fabrication, including the creation of false data or other aspects of research including research documentation such as regulatory or internal approvals or participant consents.

10.1.2 Falsification, including

- (i) falsification and/or inappropriate manipulation and/or selection of consents
- (ii) falsification and/or inappropriate manipulation and/or selection of data/imagery with the intention to deceive.

10.1.3 Plagiarism, including

- (i) the wrongful appropriation or purloining and publication as one's own, of the thoughts, ideas or the expression of ideas (literary, artistic, musical, mechanical, etc) of another;
- (ii) the deliberate exploitation of the ideas, work or research data of others without proper acknowledgement.

10.1.4 Misrepresentation, including

- (i) falsely or unfairly presenting the ideas or the work of others as one's own, whether or not for personal gain or enhancement, including both by deliberate mis-statement or as a result of negligent or inadequate reference;
- (ii) misrepresentation of data for example suppression of relevant findings with intention to deceive and/or data or knowingly, recklessly or by gross negligence presenting a flawed interpretation of data;
- (iii) misleading ascription of authorship to a publication;
- (iv) undisclosed duplication of publication, including undisclosed simultaneous duplicate submission of manuscripts for publication
- (v) deliberately attempting to deceive when making a research proposal;
- (vi) misrepresentation of skills, qualifications and/or experience, including claiming or implying skills, qualifications or experience which are not held;
- (vii) misrepresentation of interests, including failure to declare material interests either of the researcher or of the funders of the research.

10.1.5 Mismanagement of Data and/or Primary materials, including failure by those identified under 2.2 as having relevant roles and responsibilities to

- (i) keep clear and accurate records of the research procedures followed and the results obtained, including interim reports;
- (ii) hold records securely in paper or electronic form;
- (iii) make relevant primary data and research evidence accessible to others for a reasonable period after the completion of research;
- (iv) manage data according to any data policy of a research funder and all relevant legislation.

10.1.6 Breach of any relevant Duty of Care, which may involve recklessly or through gross negligence;

- (i) failing to follow procedures and health and safety protocols which are designed to prevent unreasonable risk or harm to humans, animals or the environment;
- (ii) breaching the confidentiality of individuals or groups involved in research whether research workers or research subjects without their consent, including, for example, improper disclosure of the identity of individuals or groups;
- (iii) placing any of those involved in research in physical danger, whether as researchers, research subjects, participants, or associated individuals, without their prior consent, and without appropriate safeguards where informed consent is given;
- (iv) not taking all reasonable care to ensure that the risks and dangers, the broad objectives, and the sponsors and funders of research are made known to participants or their legal representatives in order to ensure that appropriate informed consent is obtained properly, explicitly and transparently;
- (v) failing to obtain appropriate informed consent, unless there are valid reasons for not doing so, and that permission to conduct research without appropriate informed consent has been obtained from the relevant University or external research ethics committee;
- (vi) failing to obtain appropriate ethical approval to conduct research;
- (vii) unethical behaviour in the conduct of research including failing to comply with any requirements or stipulations contained in ethical or regulatory consent;
- (viii) failing to meet relevant legal or ethical requirements and to follow any protocols set out in the guidelines of appropriate, recognised professional, academic, scientific and governmental bodies;
- (ix) unauthorised use of information acquired confidentially.

10.1.7 General Misconduct, including

- (i) the misuse of research findings;
- (ii) failure to declare an actual or potential conflict of interest which may significantly compromise, or appear to significantly compromise, the research integrity of the individual concerned and the accuracy of any research findings or bring the University into disrepute;
- (iii) inciting others to commit research misconduct;
- (iv) failure to declare (where known) that an collaborative partner has been found to have committed research misconduct in the past or is currently being investigated following an allegation of research misconduct. Such declarations should be made to the Head of School and to the University Research Ethics Officer, who shall inform the Chair of the relevant Ethical Review Committee;
- (v) facilitating misconduct in research by collusion in, or concealment of, such action;
- (vi) submitting an accusation of research misconduct based on vexatious or malicious motives;

(vii) breach of University or externally contracted confidentiality, except where part of genuine whistle-blowing actions in accordance with the Public Interest Disclosure Act 1998;

(viii) fraud, including financial fraud;

(viii) any misconduct which would normally be regarded as a disciplinary matter if conducted on University premises, which is committed whilst working on a collaborating institution's premises or other off-campus facility or research site, whilst conducting a university or collaborative research project, secondment, or industrial placement.

10.2 Researchers and other members of Staff have a duty to report any breach of this Code where they have good reason to believe it is occurring, to the Head of College or some other person in authority. The procedures and protections set out in the University's Code of Corporate Governance in relation to Public Interest Disclosure ('Whistle blowing') shall apply as appropriate in the area of the conduct of research.

10.3 The University considers an accusation of research misconduct to be within its remit and suitable for consideration according to its relevant disciplinary procedures if it:

(i) concerns a member of Staff, Honorary Staff, Emeritus Staff or Registered Student; or a Visiting Researcher under the supervision of a member of Staff

(ii) involves a current member of Staff or Honorary Staff, whether or not it is alleged to have occurred at a location external to the University.

10.1.4 Where possible, the University will follow an investigation through to completion even in the event that the individual(s) concerned has left or leaves its jurisdiction, either before the accusation was made or before an investigation is concluded.

10.5 An allegation of research misconduct is a serious and potentially defamatory action and could lead to a threat (or even the instigation) of legal proceedings. Consequently for the protection of the complainant and of the party against whom the allegations are made, all enquiries (including the formal investigation, if any) should be conducted on a basis of confidentiality within the process (wherever possible) as well as of integrity and non-detriment so that neither party should suffer solely as a consequence of the allegation being made in good faith.

10.6 Following the completion of an investigation and should research misconduct be found, the University may consider additional measures. Such additional measures might include (but are not limited to):

(i) retraction/correction of articles in journals or other published material;

(ii) withdrawal/repayment of funding;

(iii) notification of misconduct to regulatory bodies;

(iv) notification of other employing institutions/organisations;

(v) notification of other organisations involved in the research including the funders of the research;

(vi) review of internal management and/or training and/or supervisory arrangements;

(vii) make any public statement necessary to protect the good name and reputation of the University;

10.7 The Research Councils UK (RCUK) Policy and Code of Conduct on the Governance of Good Research Conduct requires that RCUK be notified at the commencement of into an allegation of unacceptable research conduct arising from one of their funded projects. Where serious misconduct is found to have occurred, especially

where this would appear to have been premeditated a report to relevant statutory or regulatory bodies may be required.

(<http://www.rcuk.ac.uk/Publications/researchers/Pages/grc.aspx>)

10.8 The University retains the right to report proven allegations of serious research misconduct against its Staff, Honorary Staff, former Staff and Registered Students, to potential new and subsequent employers. Where employees or students of another institution involved in a collaborative project with the University are implicated in a University finding of serious research misconduct, then the University shall notify the home institution of those individuals involved.

10.9 The identity of any individual reporting research misconduct where it is genuinely suspected, will be kept confidential wherever practicable. However, it may be necessary to reveal the identity of the individual reporting misconduct if this is deemed legally necessary to allow the person accused of misconduct to conduct their defence.

10.10 There should always be an opportunity for response by a complainant if the allegation is not accepted and if they believe that they have been misunderstood or key evidence overlooked.

10.11 Where there is prima facie evidence that an allegation of research misconduct is founded on vexatious or malicious intent, that allegation may be considered as a disciplinary matter.

10.12 All new members of Staff (including Honorary Staff) will be required to sign a declaration stating that they have not been found to have committed serious research misconduct (i.e., warranting at least a formal written warning) prior to their appointment and are not currently under investigation by another institution following an accusation of research misconduct.