Implementation of a group intervention to reduce intimate partner violence among women with substance use disorders.

PhD Dissertation.

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TESI DOCTORAL

Implementation of a group intervention to reduce intimate partner violence among women with substance use disorders

Implementació d'una intervenció grupal per disminuir violència de parella en dones consumidores de drogues

Memòria presentada per la llicenciada en Psicologia Judit Tirado Muñoz per optar al títol de doctora per la Universitat Autònoma de Barcelona en el programa de doctorat en Psiquiatria, sota la direcció de la doctora Marta Torrens Mèlich, professora titular de psiquiatria del Departament de Psiquiatria i medicina legal de la Facultat de Medicina de la UAB, i Directora del Programa d'Adiccions, INAD, Parc de Salut Mar de Barcelona i del grup de recerca en adiccions de Institut Hospital del Mar d'Investigacions Mèdiques (IMIM). I la doctora Gail Gilchrist, senior healthcare researcher, National Addiction Centre, Institute of Psychiatry, King's College London (UK).

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Gener 2015

…A mis padres, hermano y amigos.

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Recuerdo perfectamente el momento en que Marta me propuso hacer el doctorado: “o eso o el PIR”, dijo. Reconozco que la idea de hacer el doctorado me sedujo más, así que arrancamos enseguida. “Será un proyecto sobre violencia de pareja en mujeres que consumen sustancias”, le dije a mi hermano.

A partir de ahí, y dejando a un lado la parte técnica y el lenguaje científico, el proyecto de tesis se convirtió en un vaivén de emociones. La ilusión inicial se diluyó rápido, en cuanto me di cuenta de que esto iba en serio y para largo. Luego aprendí a calmarme, con el consuelo de que al final llegaría el día en que todo habría acabado, sería doctora y haría feliz a mis padres. Para cuando lo consiga, habrán pasado dos veranos, se habrán casado dos amigas y habré vivido dos mudanzas. Pero después de todo, ahora que escribo estas líneas, me siento muy bien conmigo misma. Al fin y al cabo, sólo tengo palabras de agradecimiento, y son muchas, así que voy al grano.

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Abstract

Background: Intimate partner violence (IPV) is a global public health problem that impacts negatively on women's physical, psychological, sexual, and reproductive health. IPV is more prevalent among women with substance use disorders (SUD) than women in the general population, with studies reporting prevalence ranging from 40% to 70% among women with SUD compared to 15% to 40% among women in the general population in developed countries.

Objectives: The overall aim of this dissertation was to adapt and evaluate a specific intervention to address IPV, substance use and depression among women with SUD.

Methods: Firstly, a systematic review with meta-analysis to evaluate the efficacy of Advocacy interventions and Cognitive Behavioral Therapy interventions (CBT) in reducing IPV among female victims was conducted. Only one intervention in the review was developed for women with SUD. This intervention was adapted and then tested in a pilot randomized controlled trial among 14 women in Barcelona seeking treatment for SUD who had experienced IPV in the past month. The potential efficacy of the intervention in reducing IPV victimization (assessed using the Composite Abuse Scale), substance use (assessed using a substance use consumption table based on the Time Line Follow-back) and depressive symptoms (assessed using the Beck Depression Inventory BDI-II) at 12 months follow up was also assessed. Participants were randomly assigned to receive the 10 sessions CBT (Intimate Partner Violence Therapy: IPaViT-CBT) group intervention (an integrated substance use and IPV group intervention) or treatment as usual. Intention to treat analysis was conducted.

Results: The meta-analysis found that both Advocacy interventions and CBT interventions resulted in significant reductions in physical and psychological but not in sexual or any IPV. The adapted evidence-based intervention tested in Barcelona reduced psychological maltreatment, increased assertiveness; reduced aggressiveness in the partner relationship, and reduced the frequency of drinking 1-month post intervention. It did not reduce the likelihood of any IPV victimization, or improve depressive symptoms, quality of life or health status, up to 12-months post intervention.

Conclusions: The adapted intervention tested in a pilot study, showed some initial positive effects and was feasible to deliver in a community substance abuse center. Despite this, we cannot conclude firmly that the IPaViT-CBT intervention is effective in reducing IPV, substance use or depressive symptoms due to the small sample size, nor that change were maintained in the long term.

Future research should replicate these results with an adequately powered trial. It may also be useful to consider further adaptation to the intervention before replication as perhaps 10 sessions are not sufficient to reduce IPV.

Resum

Antecedents: La violència de parella (VP) és un problema de salut pública mundial que repercuteix negativament en la salut física, psicològica, sexual i reproductiva de les dones. VP és més freqüent entre les dones amb trastorns per ús de substàncies (TUS) que entre les dones en població general, amb estudis que mostren una prevalença que oscil·la entre el 40% i el 70% entre les dones amb TUS en comparació amb una prevalença que oscil.la entre el 15% i el 40% entre les dones en població general en els països desenvolupats.

Objectius: L'objectiu general d'aquesta tesi va ser adaptar i avaluar una intervenció específica per abordar VP, ús de substàncies i símptomes depressius entre les dones amb TUS.

Mètodes: En primer lloc, es va dur a terme una revisió sistemàtica amb meta-anàlisi per avaluar l'eficàcia de les intervencions de Promoció i les intervencions de Teràpia Cognitiu-Conductual (TCC) en la reducció de la VP entre les dones víctimes de VP. Només una de les intervencions identificades en la revisió va ser desenvolupada i avaluada per a les dones amb TUS. Aquesta intervenció va ser adaptada i es va avaluar en un assaig clínic aleatori pilot a Barcelona entre 14 dones que busquen tractament per TUS i que havien experimentat VP en l'últim mes. Es va avaluar l'eficàcia de la intervenció en la reducció de la victimització de VP (avaluada mitjançant l'escala: Escala d'Abús Composta), l'ús de substàncies (avaluada utilitzant una taula de consum de substàncies basat en "Time Line Follow-back") i símptomes depressius (avaluats mitjançant l'Inventari de Depressió de Beck BDI- II) als 12 mesos de seguiment. Els participants van ser assignats a l'atzar per rebre la intervenció grupal de 10 sessions de TCC (Teràpia per reduir violència de parella: IPaViT-CBT; una intervenció que integra l'abordatge de la VP i el consum de substàncies) o el tractament habitual. Es va realitzar l'anàlisi per intenció de tractar.

Resultats: El meta-anàlisi va trobar que tant les intervencions de promoció i les intervencions de TCC van resultar en reduccions significatives per la violència física i psicològica, però no en la sexual o qualsevol tipus de VP. La intervenció adaptada basada en l'evidència va reduir el maltractament psicològic, va augmentar l'assertivitat; va reduir l'agressivitat en la relació de parella, i va reduir la freqüència de consum fins a un mes després de la intervenció. No va

reduir la probabilitat de qualsevol tipus de VP, o millorar els símptomes depressius, la qualitat de vida o estat de salut, fins a 12 mesos després de la intervenció.

Conclusions: La intervenció, avaluada en un estudi pilot, va mostrar alguns efectes positius inicials i va mostrar que era factible lliurar-la en un centre d'atenció i seguiment en trastorns per ús de substàncies. Tot i això, no podem concloure fermament que la intervenció IPaViT-CBT sigui efectiva en la reducció de VP, els símptomes depressius i/o l'ús de substàncies, a causa de la petita grandària de la mostra, ni que es van observar canvis a llarg termini. Les investigacions futures haurien de replicar aquests resultats amb un assaig més robust. També pot ser útil tenir en compte una major adaptació de la intervenció abans de replicar l'estudi, potser 10 sessions no són suficients per reduir VP.

Framework

Intimate partner violence (IPV) is a global public health problem that has a significant impact on victim's physical, mental and reproductive health. The medical and social cost of IPV requires effective treatments to address this problematic issue. The high worldwide prevalence of IPV, especially among women with substance use disorders (SUD), has previously been reported in the literature. This PhD dissertation aimed to develop and test evidence based intervention to reduce IPV among women with SUD.

The project presented here includes:

1) A systematic review and meta-analysis to identify what works in reducing IPV among female IPV victims.

2) Adaptation of an evidence-based psychosocial intervention to reduce IPV among women with SUD.

3) A pilot study on the feasibility of delivering a manualized CBT intervention that could be considered as a treatment option by practitioners working with female IPV victims with SUD.

4) In order to be considered for an European Ph.D. mention, I spent 5 months at the University of Greenwich (London, England) and worked as part of a team that undertook a systematic review to determine the effectiveness of cognitive behavioral therapy (CBT) interventions with anger management components in reducing physical IPV perpetration among men with alcohol problems.

This dissertation is presented, following the instructions of the Addictions Research Group, Neurosciences Research Program, IMIM-Institut Hospital de Mar d'Investigacions Mèdiques.

To achieve the principal aim of this Ph.D., a systematic review with meta-analysis was conducted to identify existing interventions to reduce IPV among female victims. This Ph.D. dissertation summarizes the available evidence (until April 2013) on the effectiveness of interventions for women who experience IPV.

Tirado-Muñoz, J*., Gilchrist, G., Farré, M., Hegarty, K. & Torrens, M. (2014). The efficacy of cognitive behavioural therapy and advocacy interventions for women who have experienced intimate partner violence: A systematic review and meta-analysis. Ann Med, 11, 1-20. doi:10.3109/07853890.2014.941918*

Annals of Medicine (Impact Factor 4.7)

From the findings obtained in the systematic review, and using the only intervention aimed at women with SUD, we adapted a CBT group psychosocial intervention to reduce IPV, substance use and depressive symptoms among women with SUD. A pilot randomized control trial was conducted to determine the feasibility and initial efficacy of the CBT intervention compared to usual treatment in a 12 months evaluation among 14 women receiving out-patient treatment for SUD.

Tirado-Muñoz, J*., Gilchrist, G., Lligoña, E., Gilbert, L. & Torrens, M. (2015). Adaptation of a group intervention to reduce intimate partner violence among female drug users: Results from a pilot randomized control trial in a community substance abuse center. Adicciones, 27 (1), 282-292.*

Adicciones (Impact Factor 1.16)

Findings from my stage at the University of Greenwich (London, England) have also been accepted for publication. Manuscript has been added as annexes.

*Gilchrist, G., **Tirado-Muñoz, J**., Easton, C. J. (2015). Should we reconsider anger management when addressing physical intimate partner violence perpetration by alcohol abusing males? A systematic review. In press.*

Aggression and Violent Behavior (Impact factor 2.11)

Abbreviations

IPV Intimate Partner Violence

SUD Substance Use Disorder

CBT Cognitive Behavior Therapy

DSM Diagnostic and Statistical Manual of Mental Disorders

PTSD Post-Traumatic Stress Disorder

WHO World Health Organization

RCT Randomized Controlled Trial

MMT Methadone Maintenance Treatment

Definitions (WHO definitions)

Intimate partner violence: any behavior within an intimate relationship that causes physical, psychological or sexual harm to those in the relationship. There are three main types of violence:

• *Physical violence*, defined as: “being slapped or having something thrown at you that could hurt you, being pushed or shoved, being hit with a fist or something else that could hurt, being kicked, dragged or beaten up, being choked or burnt on purpose, and/or being threatened with, or actually, having a gun, knife or other weapon used on you”.

• *Psychological violence*, defined as “intimidation and constant belittling, and controlling behavior such as monitoring of movement and isolation from family and friends; monitoring their movements; and restricting access to financial resources, employment, education or medical care”.

• *Sexual violence*, defined as: “being physically forced to have sexual intercourse when you did not want to, having sexual intercourse because you were afraid of what your partner might do, and/or being forced to do something sexual that you found humiliating or degrading”.

Advocacy: In the context of services for IPV, the meaning of the term “advocacy” varies within and between countries, depending on institutional settings and historical developments of the role of advocates. Broadly speaking, “advocates” engage with individual clients who are experiencing IPV, with the aim of supporting and empowering them and linking them to community services. Advocacy includes: provision of legal, housing and financial advice; facilitation of access to and use of community resources such as refuges or shelters; emergency housing; informal counselling; ongoing support; and provision of safety planning advice. A distinction is made by the WHO between

advocacy and psychological interventions, which reflects a relatively clear distinction in the research evidence, with the latter being based on explicit psychological methods or theories.

CBT: CBT is based on the concept that thoughts, rather than external factors such as people or events, are what dictate one's feelings and behavior. People may have unrealistic or distorted thoughts, which, if left unchecked, could lead to unhelpful behavior. CBT typically has a cognitive component (helping the person develop the ability to identify and challenge unrealistic negative thoughts), as well as a behavioral component. CBT varies, depending on the specific mental health problem.

Empowerment: Helping women to feel more in control of their lives and able to take decisions about their future, as articulated in Dutton's empowerment theory (Dutton 1992). Dutton notes that female victims of IPV are not "sick", rather they are in a "sick situation" and responses need to demonstrate an understanding, and take into account, their differing needs for support, advocacy and healing. Empowerment is a key feature of advocacy interventions and of some psychological (brief counselling) interventions.

Intimate partner: A husband, cohabiting partner, boyfriend or lover, or ex-husband, ex-partner, ex- boyfriend or ex-lover.

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1. BACKGROUND

1.1 Intimate Partner Violence (IPV)

1.1.1 Epidemiology

IPV is also known as domestic violence, domestic abuse, spousal abuse, battering, family violence, and dating abuse. This thesis adopts the term IPV as it is the most commonly used term in the academic literature.

For the purpose of this thesis, IPV refers to the violence perpetrated by a current or former intimate partner or spouse among heterosexual relationships. This PhD thesis focused on heterosexual relationships as they have been studied more frequently in scientific research.

Although several studies have reported similar rates of IPV against men and women (Desmarais et al., 2012; Langhinrichsen-Rohling et al., 2012; Melton & Belknap, 2003; Testa et al., 2011; Williams et al., 2008), it is universally recognized that women are more likely than men to experience severe physical and sexual IPV victimization or to be injured, killed by an intimate partner, in comparison to men (Breiding et al., 2008; Tjaden & Thoennes, 2000; Whitaker et al., 2007; Wu et al., 2010). The level of physical violence perpetrated towards men by their female partners is generally less hazardous than that perpetrated by men towards women. A recent systematic review with data from 66 countries reported that at least one in seven homicides (13.5%) were perpetrated by an intimate partner, prevalence for females homicides was six times higher (38.6%) than for male homicide (6.35%) (Stockl et al., 2013).

Several studies have been conducted to quantify IPV prevalence across different populations and settings. Among studies in the general population, the "WHO Multi-country study on women's health and domestic violence against women" (World Health Organization, 2005) conducted in 10 mainly developing countries, found that between 15 to 71% of women globally reported physical or sexual IPV, or both, at some stage in their lives. Lifetime severe physical violence (to be hit with something that could hurt, to be kicked, dragged, beaten up, choked or burnt on purpose, use a gun, knife, or other weapon) ranged from

4% to 49% (Garcia-Moreno et al., 2006). With respect to psychological IPV, the prevalence was between 20% and 75% with belittling, insults and intimidation by a partner the most frequently mentioned behaviors. The proportion of women reporting they had experienced controlling behaviors from an intimate partner varied from 21% to 90% across countries. This high variability could be explained by cultural differences as there are some cultures where such behaviors may be more acceptable or normative. Lifetime prevalence of physical and/or sexual violence by an intimate partner among ever-partnered women was highest in South-East Asia with a 37.7% of IPV prevalence, followed by Eastern Mediterranean (37%) and Africa (36.6%).

More recently, the WHO estimated that almost one third of women (30%) worldwide have experienced physical and/or sexual violence from an intimate partner (World Health Organization, 2013).

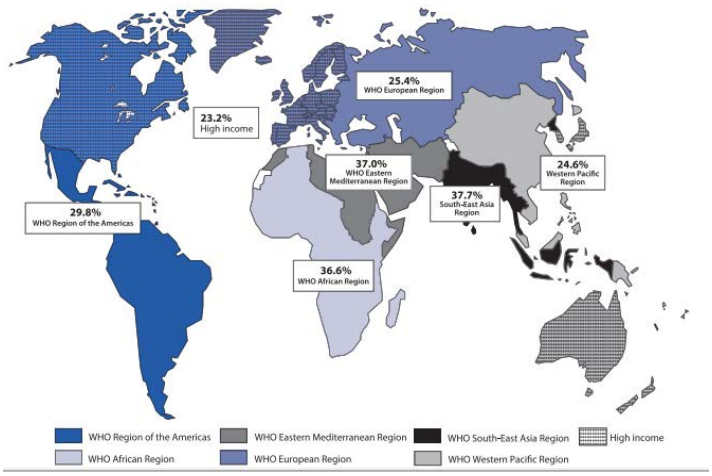

Figure 1. Global map showing prevalence rates of IPV by WHO region (World Health Organization, 2013).

WHO regions	Prevalence, %	95% CI, %
Low and middle-income regions:		
Africa	36.6	32.7 to 40.5
Americas	29.8	25.8 to 33.9
Eastern Mediterranean	37.0	30.9 to 43.1
Europe	25.4	20.9 to 30.0
South-East Asia	37.7	32.8 to 42.6
Western Pacific	24.6	20.1 to 29.0
High income	23.2	20.2 to 26.2

CI= confidence interval

Table 1. Lifetime prevalence of physical and sexual IPV among ever- partnered women by WHO region (World Health Organization, 2013).

Prevalence in general population surveys

The US National Intimate Partner and Sexual Violence Survey (NISVS) found that more than 1 in 3 women (35.6%) had experienced lifetime rape, physical violence, and/or stalking by an intimate partner (Black et al., 2011). Australia showed lower IPV prevalence rates among women in the general population than those reported in the US, the most recent national survey estimated that 17% of women aged 18 years and over had experienced IPV by a partner in their lifetime and 1.5% in the past 12 months (Australian Bureau of Statistics, 2012). In the United Kingdom and Wales, it was estimated that 23.8% of women had experienced lifetime IPV (non-sexual) (Office for National Statistics, 2012). In Spain, a national survey conducted among 7,898 women, found that 12.6% reported lifetime IPV and 3.6% in the last year (Ministerio de Sanidad, Servicios Sociales e Igualdad, 2011). Table 2 summarizes worldwide prevalence of IPV.

Prevalence in primary care studies

Other studies have been conducted in primary care. Data from 1257 Australian women attending general practice estimated that 24% had experience some type of abuse in the last 12 months (Hegarty et al., 2004). Consistent with this, 20% of Australian women attending primary care reported being afraid of their partner during their lifetime (Gilchrist et al., 2010). Similarly, in the UK, among 1027 women attending primary care, 41% reported physical abuse, and 17% had experienced in the last 12 months (Richardson et al., 2002). Spain showed higher prevalence in a similar study conducted among 1402 women, 32% of them reported had experienced IPV during lifetime (Ruiz-Pérez & Plazaola-Castaño, 2005). Research conducted among women in general practice showed higher prevalence estimations of IPV than in the general population. This could be due to the impact of IPV on victims' physical, psychological and reproductive health, resulting in victims often presenting with unexplained medical symptoms, mental health problems and injuries as discussed in detail later in this thesis. This could result in more primary care visits and appointments with health care providers (Hegarty et al., 2008).

Prevalence in specific populations

Other epidemiological studies have been done in specific populations. The most frequently studied populations include: pregnancy and among women with SUD.

Unfortunately for many women, pregnancy may be the beginning of a violent time in their lives. North American studies have found IPV prevalence ranges between 3% and 9% among pregnant women (Pallitto et al., 2013; Saltzman et al., 2003). In Australia, among 1507 women, 17% experienced physical and/or emotional abuse in the first year postpartum (Gartland et al., 2011). More recently, among WHO regions, findings showed that between 1% to 28% of surveyed women were physically abused during pregnancy (World Health

Organization, 2013), being IPV a risk factor for unintended pregnancy (OR 1.69; 95% CI, 1.53-1.86) and abortion (OR 2.68; 95% CI, 2.34-3.06) among 17.518 ever-partnered women (Pallitto et al., 2013). Comparing across countries, a recent review of African studies, estimated that the prevalence of IPV during pregnancy ranged from 2-57% with an overall prevalence of 15.23% (Shamu et al., 2011). Five of the 13 studies found significant associations between HIV and IPV during pregnancy. Being HIV positive increases the risk of experiencing IPV among pregnant women (OR 1.48 to 3.10). In Spain, IPV during pregnancy was experienced by 7.7% of women in one study; 4.8% experienced emotional abuse and 1.7% experienced physical abuse (Velasco et al., 2014).

Comparisons of findings across countries

It is difficult to make any meaningful comparisons on the prevalence of IPV across countries from the studies presented in Table 2, as findings vary in sample sizes and use different methodology, including different instruments to measure IPV. The majority of studies among the general population used simple questions following the definitions of each type of violence (psychological, physical, sexual), together with questions about the time frame (lifetime, past year, etc.). Some studies used validated instruments that might be more accurate in estimating the IPV prevalence than simple questions, such as Composite Abuse Scale (CAS) (Hegarty et al., 1999) or the (Revised) Conflict Tactics Scale (CTS/CTS-2) (Straus et al., 1996). Validated instruments to measure IPV have been frequently used in studies conducted in primary care, but not always, as we will see in table 2.

Table 2: Summary tables on worldwide prevalence of IPV

General population surveys				
Study	***Countries included***	***Methods/Instruments***	***IPV prevalence***	***Limitations***
WHO 2005	79 countries worldwide: Africa, Americas, Eastern Mediterranean ,Europe, South-East Asia, Western Pacific, High income countries	Standardized population-based household surveys. Interviewer administered. Women aged 15–49 years, fewer data available for the over-49 age group. Estimates of the prevalence of physical and sexual violence were obtained by asking about their concrete experiences according to the events defined for each type of violence. IPV was defined using conservative definitions of violence. (Specified in definitions section of this thesis)	15-71% lifetime physical and/or sexual IPV	- Wide variations in prevalence data -Cultural biases in disclosure. -Under-representing women
WHO 2013	155 studies in 81 countries	A systematic review of the prevalence of IPV from first record to 2011. Studies including women of any age above 15 years were included. Exposure to and IPV prevalence were obtained by asking respondents direct questions about their experience of specific acts of violence over a defined period of time. Conflict Tactics Scale (CTS) was used specially in the United States of America (USA)	30% lifetime physical and/or sexual IPV	- Limited availability of data, and, in particular, of data of sufficient quality to assess the health burden of IPV. - Limited to physical and sexual intimate partner violence and did not include emotional. - Limited number of health outcomes were included for methodological, time and resource reasons.
CDC 2010*	United Sates	National survey. Respondents' self-report. 9,086 women aged 18 years or older. The questionnaire included questions that assessed sexual violence, stalking, psychological and physical IPV over the lifetime and in the past 12 months.	35.6% lifetime physical violence, and/or stalking	-Lack of IPV disclosure or participation
ABS 2012	Australia	National survey, randomly selected households. Men and women. Respondents' self-report. 31,650 women aged 18 years and over. Questionnaire based on the Women's Safety Survey (WSS) from Australian Bureau of Statistics (ABS), which asked about women's experiences of physical and sexual violence, the nature of the violence, incidents of stalking and other forms of harassment.	17% lifetime IPV 1.5% past year IPV	-Non response impact

Study	*Countries included*	*Methods/Instruments*	*IPV prevalence*	*Limitations*
ONS 2012	England and Wales	Household survey, self-completion intimate violence module of the Crime Survey for England and Wales (CSEW). 35,000 households, women aged 16 to 59. Asked about the frequency and occurrence of physical and sexual IPV victimisation using questions devised for the Crime Survey for England and Wales (CSEW) which measures the extent of crime in England and Wales.	30% lifetime domestic abuse 23.8% lifetime partner abuse (non-sexual) 7.1% past year domestic abuse 4.0% past year partner abuse (non-sexual)	-Non response error -Unwillingness to report -Definitions of crime: Incidents which are legally offences may not be reported to the survey if the respondent does not view them as such
Ministerio de Sanidad, Servicios Sociales e Igualdad 2011	Spain	National survey. Interviewer administered. 7.898 women aged 18 years or older. Asked simple questions about IPV victimisation in lifetime and past year. IPV was defined using conservative definitions of violence (specified in definitions section of this thesis).	12.2% lifetime IPV 3.6% past year IPV	-Cannot establish causality relationships. -The macro survey does not identify any characteristics of the perpetrator . - Confounding conflict and violence terminology - Extrapolation of data
		Primary Care		
Richardson 2002	UK	Self-administered questionnaire survey. 13 randomly general practices in Hackney (London). 1027 women. IPV victimisation was assessed with a self-administered questionnaire. IPV questions looked at different forms of physical, sexual and psychological PV from conservative definitions of violence (specified in definitions section of this thesis).	41% lifetime physical IPV 17% past year IPV	-Low response rate that may produce an overestimate or underestimate of prevalence. -Data from the medical record was not collected
Hegarty 2004	Australia	Cross sectional survey among 30 general practices in Victoria. 1147 women. IPV was assessed using the Composite Abuse Scale (CAS) (Hearty 1999).	24% past year any IPV 6% physical and emotional IPV 7% physical IPV 2.5% emotional IPV	-Cross sectional design that not allows discriminating causal inference. -Self reported of measure outcomes
Gilchrist 2010 **	Australia	Cross sectional survey conducted among patients from30 general practices in Victoria. 7667 men and women. IPV was assessed using one item from the Composite Abuse Scale (CAS) – ever being afraid of partner.	20% females being afraid of their partner OR= 3.2	-Cross sectional design that not allows discriminating causal inference. -small number of patients with hazardous drinking and being afraid of partner.

Study	*Countries included*	*Methods/Instruments*	*IPV prevalence*	*Limitations*
Ruiz-Pérez 2005	Spain	Cross-sectional study among 23 public family practices in Spain. 1402 women. Psychological, physical and sexual IPV was assessed with single questions if any intimate partner victimization was experienced in the previous year	32% lifetime any IPV 14.4% lifetime psychological IPV 7.2% lifetime physical and psychological IPV 2.5% lifetime psychological and sexual IPV 6% lifetime physical, psychological, and sexual IPV	-Cross sectional design that not allows discriminating causal inference. -Self reported of measure outcomes -Certain data could have been misclassified. -Lack of validated instruments in Spain to assess IPV

**Black, M.C., Basile, K.C., Breiding, M.J., Smith, S.G., Walters, M.L., Merrick.,… Stevens, M.R. (2011). The National Intimate Partner and Sexual Violence Survey (NISVS): 2010 Summary Report. Atlanta, GA: National*
***Secondary analysis*

1.1.2 IPV theories

To offer a theoretical understanding of IPV in relationships, numerous theories have been proposed. Specific IPV victimization theories have not been described. IPV theories differentiate between; sociocultural theories (feminist theory and power theory) and individual theories (social learning theory, background/situational model and personality/typology theories).

Sociocultural theories:

"The Feminist Theory" is one of the original theories and supports the view that existing socially defined gender roles lead to IPV victimization towards women (Dobash & Dobash, 1977; Walker, 1984). Concepts such as patriarchy are crucial in this approach, referring to the social system of masculine domination over women, and women's subordination to men. This point of view is crucial to understand interpersonal relationships and subsequent IPV. The power and control wheel was developed to explain the nature of this abuse. The wheel describes the tactics used by violent partners to exert power and control over their victims, such as: "putting them down (emotional abuse), controlling what they do (isolation), preventing them from getting a job (economic abuse), making them feel guilty about the children (using children)", etc.

In "The Power Theory", it is argued that it is not only culture that plays a role in IPV. This theory considers the family structure as an important component that interacts and may lead to IPV. Psychosocial stressors (e.g. economic problems), the use of violence to solve family conflicts, as well as a power imbalance between partners, may increase the tension in the family and as a result, the subsequent partner aggression (Leonard & Senchak, 1996; Sagrestano et al., 1999; Straus, 1977).

Individual theories:

"The Social Learning Theory" (Bandura, 1977) of IPV argues that partner aggression is learned through modelling during childhood, experiencing abuse during childhood for instance and, observing specific parental relationships

(Bowen, 1978) may facilitate the development of tolerance and acceptance to certain behaviors (Lewis & Fremouw, 2001). Social learning constructs are able to predict repetitive intimate partner victimization (Cochran et al., 2011).

“The Background/Situational Model” argues that background (including societal and individual characteristics that determine aggressiveness in one person) and situational (including substance use, relationship satisfaction, communication styles, expectancies, problem solving skills, etc.) factors are components that may impact the intensity of conflict in the partnership and therefore, may influence the subsequent violence against intimate partners (Riggs & O'Leary, 1989).

“The Personality/Typology Theories” hypothesize that certain personality characteristics and psychopathology might have a crucial role to play in future IPV perpetration (Dutton, 1995). Impulsivity, lack of emotional regulation, the role of attachment and childhood experiences are risk factors for perpetrating violence, and may contribute to individuals being unable to inhibit anger and the subsequent act of violence when confronted with a stressful situation. Certain personality disorders (paranoid, narcissistic and antisocial) represent a significant clinical risk for violent behaviors (Esbec & Echeburua, 2010). In women, one study explored personality disorder symptoms among female who are IPV victims and found that higher scores were found for three pathological personality scales (schizotypal, borderline and paranoid) among women victims of IPV in comparison to non-abused control women (Pico-Alfonso et al., 2008).

However, these IPV theories also have a number of limitations, the most important being the lack of or mixed empirical support; the failure to adequately catch the complexity of IPV perpetration/victimization; and limited capacity to improve the clinical efficacy of IPV prevention and intervention options.

Risk and protective factors

To improve and update these theories, research has tried to explain which characteristics have been identified among women who are at greater risk for IPV. Regarding factors associated with IPV, Abramsky and colleagues identified some protective factors, including: second level education, to be married and have higher socioeconomic status. They also found that cohabitation, younger age, certain aggressive attitudes (such as an accepted behaviors of husbands beating wives), having multiple sexual partners, experiencing childhood abuse, witnessing domestic violence during childhood and alcohol abuse may increase the risk of IPV victimization among women. The impact of these risk and protective factors are increased when they are present in both the woman and her partner (Abramsky et al., 2011). In contrast to this, a recent study conducted in Sao Paulo (Brazil) with data from 940 women in the general population, did not identify neighborhood socioeconomic conditions as a possible risk factor for IPV in Sao Paulo, with no variance across neighborhoods. While, consistent with Abramsky and colleagues, this study found that women in the middle class of the socioeconomic group were more likely to report IPV victimization than other socioeconomic groups (Kiss et al., 2012).

The ecological framework

The ecological framework (Dahlberg & Krug, 2002) has been described to explain why some people are at greater risk of suffer IPV more than others. IPV is seen as an interaction of many protective and risk factors that has been categorized at four levels. The individual level posits that personal history and biological factors exist and may protect or might increase the vulnerability of being a victim of IPV. At the second level, personal relationships, defines the factors that increase the risk from peer interactions, such as family, friends, violent intimate partners and others, and how it may also lead to violence. These close social networks may influence their behavior and determine the

diversity of their experiences. The community context (school, workplaces, neighborhood, etc.) might also play an important role in the occurrence of violence; in this sense, level of unemployment, population density, and mobility might become risk factors. Finally, at a societal level, religious systems or cultural beliefs, social norms, and gender inequalities, might influence the permission and comprehension of certain behaviors such as violence, encouraging or inhibiting intimate partner violence in some cultures. This ecological model allows the inclusion of risk and protective factors in multiple spheres of influence (individual and social) to explain why IPV occurs. Some elements from the social sphere might also be identified in other spheres such as community and relationship spheres, for instance gender inequalities. Figure 2 shows the ecological framework and reports some examples of risk factors at each level.

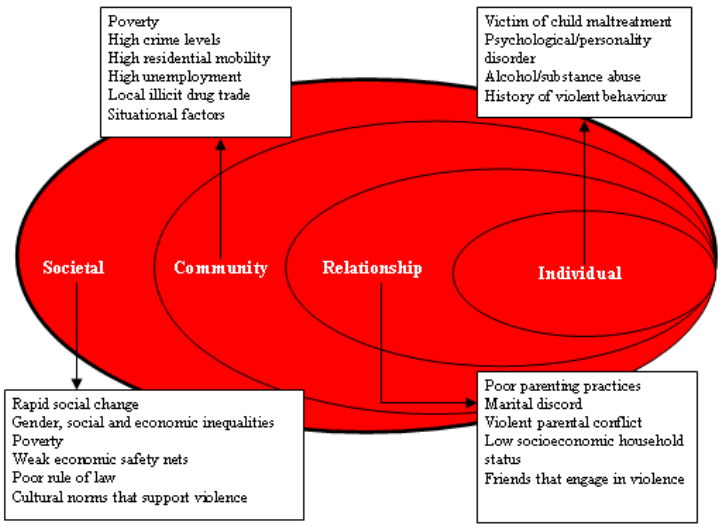

Figure. 2 The ecological framework: examples of risk factors at each level (Dahlberg 2002)

Therefore, it might be necessary to consider this model or integrative theories to explain IPV among substance users, rather than selecting one theory to understand how individual factors combined with factors from other levels of influence may result in increased risk for IPV. This framework reflects the complex interaction between individual, relationship, community, and societal factors.

Some risk factors have been more researched than others. While external levels of the ecological framework have been considered important in explaining IPV, little research documenting the role of workplace and community risk in predicting IPV has been identified (Slep et al., 2014).

Despite this, this model has been useful to understand factors that may lead to violence and determine cross-sectorial policies and prevention programs.

1.1.3 Impacts of IPV on women's health.

IPV impacts on women's physical and mental health. The direct consequences are considered dangerous and may endanger the life of the victim, including injuries and physical harm. The worst scenario may be the death of the female victim. The WHO has estimated that as many as 38% of female murders that occur globally are committed by intimate partners (World Health Organization, 2013). Other important consequences are disabilities that may result from physical trauma and psychological distress. The association between IPV victimization and the consequences on women's health can be explained by direct and indirect pathways. The morbidity and mortality are understood as direct pathways, resulting in deaths and injuries; while indirect pathways are limited by research mostly consisting of cross sectional studies that do not allow temporality and causality to be determined. To be confident in describing these pathways more research with longitudinal designs and biomarker's studies are needed to draw firm conclusions about the relationship between exposures to violence and health effects. Research has concluded that the more severe

violence experienced or when female victims experience multiple types of violence, the impact on female victims' health is greater and the risk for a greater number of adverse outcomes also increases, especially in relation to poorer mental health (Sabina & Straus, 2008). Figure 3 shows the different pathways and health effects on IPV (World Health Organization, 2013).

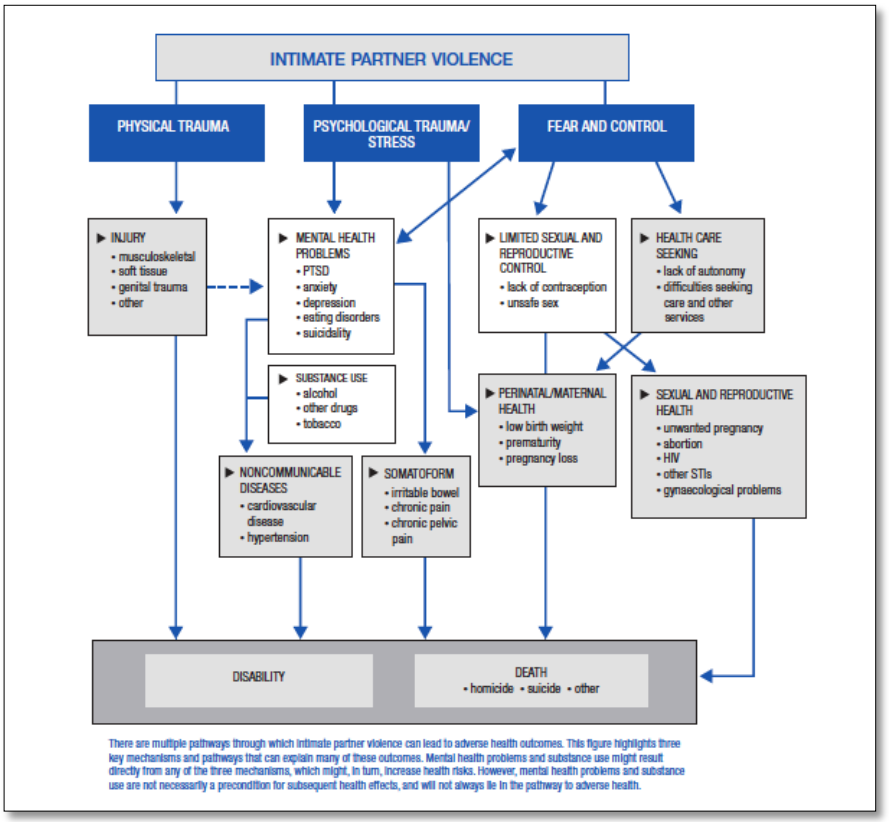

Figure 3. Pathways and health effects on intimate partner violence (World Health Organization, 2013).

Research has tried to establish the temporal relationship between IPV and mental disorders. A recent study comparing abused and non-abused women, found that new onset axis I disorders were significantly more frequent among IPV victims (OR=2.55, 2.19–2.97) (Okuda et al., 2011).

1.1.3.1 Injury and physical health

Data from the Nationwide Emergency Department Sample (NEDS) in the USA estimates that from 2006-2009, 112,664 visits for injuries, contusions or skull face fractures were coded as resulting from IPV victimization episodes (Davidov et al., 2014). In addition, a cross sectional study conducted among 2945 female participants in 12 orthopedic fracture clinics worldwide, found that one in six women had experienced IPV in the past year and 49 out of 2945 women came to visit as a direct result of IPV victimization (PRAISE Investigators et al., 2013). IPV can result in "bruises and welts; abdominal or thoracic injuries; lacerations and abrasions, fractures and broken bones or teeth; sight and hearing damage; head injury; attempted strangulation; and back and neck injury" (Garcia-Moreno et al., 2006; Heise & Garcia-Moreno, 2002). Besides these injuries, symptoms such as ailments that do not always have a medical reason (unexplained medical symptoms) can also be present, making it difficult to diagnose, for instance 'functional disorders' or 'stress-related conditions', including gastrointestinal disorders such as irritable bowel disease (Coker et al., 2000), fibromyalgia, various chronic pain syndromes and exacerbation of asthma (Heise & Garcia-Moreno, 2002), headaches and neurological symptoms such as fainting and seizures (Campbell, 2002; Diaz-Olavarrieta et al., 1999). Women exposed to IPV commonly suffer with chronic health problems (Campbell, 2002). Derived from this, women report frequently health care service use, requiring a wide-range of medical services (Campbell, 2002) and are prescribed more analgesics than non-abused women (Lo Fo Wong et al., 2007). A systematic review with meta-analysis, conducted in 31 countries using population based data, estimated that from all women who experienced IPV, 42% reported injuries as a result of IPV with an OR of 2.92 (95% CI 2.21 to 3.63) (World Health Organization, 2013).

The majority of studies have not distinguished between different types of IPV (e.g. physical, psychological and sexual) and how each type may affect women's health in different ways. It is important to distinguish by type of IPV experienced as research from the last decade highlights that psychological IPV

also produce significant physical health consequences; and therefore should be included when screening for IPV to minimize adverse consequences on women's health (Coker et al., 2000).

1.1.3.2 Mental health

Evidence suggests that women who have experienced IPV suffer higher levels of several mental health problems than women who have not experienced IPV. A recent systematic review (58 studies) that aimed to identify the impact of IPV on mental health, confirmed that mental health symptoms can increase, depending on the extent, type and severity of IPV experienced by women (Lagdon et al., 2014). Depression, anxiety and post-traumatic stress disorder (PTSD) are strongly and consistently associated with IPV victimization (Black, 2011; Devries et al., 2013; Lagdon et al., 2014; Pico-Alfonso et al., 2006; Rees et al., 2011; Trevillion et al., 2012). Recently, research has reported that women exposed to IPV, may be more than twice as likely to suffer with depression in comparison than non-abused women (Beydoun et al., 2012; Blasco-Ros et al., 2010; Devries et al., 2013; Kramer et al., 2004; Trevillion et al., 2012). To determine the temporal relationship between IPV, depression, and suicide; a recent systematic review with meta-analysis from longitudinal studies found that, IPV was associated with the presence of depressive symptoms (OR 1.97 95% CI 1.56-2.48), and depressive symptoms with IPV occurrence (OR 1.93, 95% CI 1.51-2.48). IPV was also associated with incident suicide attempts (Devries et al., 2013). Confirming that this association may be bidirectional, women exposed to IPV at baseline were at increased risk of depressive symptoms at follow up, and women with depressive symptoms were more likely to experience subsequent IPV (Devries et al., 2013). When compared by type of IPV victimization, no differences were found on incidence and severity of depressive symptoms between women who had experienced both physical and psychological abuse and women who had only experienced psychological abuse. When sexual abuse was included, higher severity of depressive

symptoms was identified (Pico-Alfonso et al., 2006). More recently, Blasco and colleagues found that when a combination of physical plus psychological IPV co-occur, the likelihood of decreases in IPV episodes was higher and therefore subsequent recovery as well, compared to when women experience psychological IPV without physical IPV. The probability of continuing to be exposed to this type of violence (psychological IPV) over time increased, and recovery was less likely (Blasco-Ros et al., 2010).

IPV victimization has also been associated with PTSD symptoms. A recent systematic review with meta-analysis of observational and intervention studies found that women who meet criteria for PTSD, are at seven times higher risk of experiencing IPV victimization (OR 7.34 95% CI 4.50–11.98) compared to women without mental disorders. Direction is not demonstrated clearly, due to the lack of longitudinal studies included in this systematic review. This study also found a higher risk of IPV victimization among women with depressive disorders (OR 2.77 95% CI 1.96–3.92), and anxiety disorders (OR 4.08 95% CI 2.39–6.97) (Trevillion et al., 2012). Consistent with this, systematic reviews of mental health correlates of IPV, found similar results with a prevalence of PTSD among those who had experienced physical IPV ranging from 40% to 84% (Jones et al., 2001; Robertiello, 2006). The link between psychological IPV and PTSD has been established throughout the literature supporting that this type of abuse is also related to PTSD symptomatology from cross sectional studies (Dutton et al., 1999; Norwood & Murphy, 2012; Pico-Alfonso, 2005; Street & Arias, 2001).

In addition, physical IPV victimization has also been significantly associated with poor self-esteem and hopelessness among a cross-sectional study among women aged 18 to 65 (Papadakaki et al., 2009). A systematic review involving 6775 women found that eating disorders increased odds of lifetime IPV; however, lack of evidence did not allow differentiate by types of violence, reasons and directions of causality (Bundock et al., 2013). Also sleep disorders have been found to be a consequence of IPV (4 studies) in a recent systematic review (Dillon et al., 2013).

Finally, IPV is also associated with SUD among population studies. Findings from a systematic review with meta-analysis found seven longitudinal studies supporting the association between alcohol and subsequent IPV victimization (OR = 1.27 95% CI = 1.07–1.52) and nine longitudinal studies between IPV victimization and subsequent alcohol use (OR = 1.25 95% CI 1.02–1.52). From cross-sectional studies, an association between IPV and alcohol use was also found (OR = 1.80 95% CI 1.58–2.06) but high heterogeneity was found in this case (Devries et al., 2014). Therefore, it seems that the relationship between IPV and some mental health problems such as depression (Devries et al., 2013) and SUD (Devries et al., 2014) is bidirectional, suggesting that screening for substance abuse and depression may help to identify individuals at high risk of IPV victimization in health care settings.

When women experience more than one type of IPV and IPV continues over time, this results in more severe IPV consequences (Johnson & Leone, 2005).

Clinicians should pay attention to experiences of violence and risk of future IPV among women in treatment for depression, PTSD and SUD.

While previous studies have confirmed associations between IPV and certain mental disorders (e.g. depression, PTSD, anxiety, alcohol use disorder) and causality of this association has been reported for some mental disorders (depression and alcohol use disorder), still remains a need to confirm these findings in other mental disorder such as PTSD and anxiety and to draw firm conclusions about the direction of this association. Limitations of the methods used including the lack of longitudinal studies and the lack of adjustment for common risk factors in some studies does not allow drawing firm conclusions about these associations and the direction of causality between IPV and some mental disorders, especially for some types of abuse.

1.1.3.3 Sexual and reproductive health

The impact of IPV victimization on sexual and reproductive health has been widely researched. Pregnancy offers an opportunity to detect and prevent IPV due to pregnant women's regular contact with health care providers during their pregnancy. IPV and sexual violence can result in gynecological problems, such as pelvic inflammatory disease, sexual dysfunction, delayed prenatal care, preterm delivery, pregnancy difficulties such as low birth weight babies, perinatal deaths and unintended pregnancy and abortion (Campbell, 2002; Campbell et al., 2008; Pallitto et al., 2013).

IPV victimization is a contributor to women's vulnerability to STIs and blood borne viruses such as Hepatitis C and HIV (Coker, 2007). IPV victimization increases women's risk for infection through forced sex with an infected partner, lack of skills to negotiate safer sex practices and increased sexual risk-taking behaviors (Kouyoumdjian et al., 2013; Maman et al., 2000; Stockman et al., 2013).

The relationship between IPV and HIV has been widely studied. A recent systematic review found 101 articles assessing these associations worldwide using different methodologies (cross sectional studies, mixed methods, etc) and independently assessing results by the different types of abuse experienced by women (Kouyoumdjian et al., 2013). Cross sectional survey data among 60,114 women in 10 developing countries found no association between HIV and IPV victimization among women (Harling et al., 2010). Although some cross sectional studies conducted in sub-saharan Africa found a significant association between IPV victimization and HIV among women (Fonck et al., 2005; Ntaganira et al., 2008; Shi et al., 2013; Zablotska et al., 2009) with IPV victims being around 2 times as likely to be infected with HIV (Fonck et al., 2005; Ntaganira et al., 2008). Data from a longitudinal study among 1099 HIV negative African women who had at least one additional HIV test over 2 years of follow-up found that women who experienced more than one IPV episode at entry acquired HIV (9.6 per 100 person-years 45/253) compared to those who

reported one or no IPV episodes (5.2 per 100 person-years, 83/846) (Jewkes et al., 2010). Therefore, IPV increases the risk of incident HIV infection in South African women (Jewkes et al., 2010).

Some studies found associations for certain types of IPV, for instance, emotional and sexual abuse victimization was significantly associated with HIV infection and total violence score but not for physical and sexual IPV victimization (Dunkle et al., 2004). Another study found that HIV positive women were more likely to report more physical and sexual IPV victimization than those HIV negative (Maman et al., 2000). Therefore, inconsistent results have been identified regarding types of IPV experienced and HIV infection among women.

North American cross sectional studies also found differences in IPV prevalence by HIV status among women (Newcomb & Carmona, 2004; Sormanti & Shibusawa, 2008; Ulibarri et al., 2010). Sormanti and colleagues assessed HIV among 620 women in New York, almost 9% of those who experienced IPV were HIV positive compared to those who had never experienced IPV (3.3%) (Sormanti & Shibusawa, 2008). Also some studies found associations only with certain types of IPV, for instance, data from a US national survey on alcohol and related conditions among 13,928 women found that physical and sexual were strongly associated with HIV infection (Sareen et al., 2009).

More recently, results from a systematic review distinguishing by type of abuse, confirmed that being a victim of combined physical and sexual IPV (OR 95% CI: 2.00 (1.24, 3.22)) and any IPV (OR 95% CI: 1.41 (1.16, 1.73)) were significantly associated with HIV infection among women (Li et al., 2014).

Lack of longitudinal data, methodological issues, lack of adjustment for some mediating variables and heterogeneity on how to measure IPV and different instruments used in many studies do not allow firm conclusions to be made about the causality of this association. Regarding how IPV and HIV are related, evidence suggests that the association is bidirectional and the mechanisms may be causal and non-causal. Qualitative data have illustrated this

association; sexual IPV can lead to HIV through forced unprotected sex (Fox et al., 2007). HIV can lead to IPV when women disclose their HIV status; the HIV illness or its treatment may cause violent behavior and HIV women may be less likely to leave their aggressive partner because they believe that very few men would want to have a woman-partner who was HIV-positive (Emusu et al., 2009; Lichtenstein, 2005). IPV may increase HIV risk behaviors such as lack of condom use, frequency of sexual intercourse and types of sexual acts (Amuyunzu-Nyamongo et al., 2007; Karamagi et al., 2006). IPV may also affect HIV testing, status disclosure or HIV care (Kiarie et al., 2006).

With regards to Hepatitis C, one case-control study identified that exposure to blood contact as a result of IPV (OR=5.5; 95% CI=1.4, 22.8) was a significant predictor of acquiring Hepatitis C infection (Russell et al., 2009) among women attending a sexually transmitted disease clinic.

While previous studies have confirmed that IPV is associated with increased risk of HIV and also Hepatitis C, there remains a need to confirm how this association occurs with longitudinal studies that include women who are IPV victims.

1.1.4 IPV and its economic impact

Furthermore, IPV victimization results in high economic costs to society, particularly those costs related to health care (including medical care, mental health care), police services, social services, and legal services or judicial systems. Based on The National Violence Against Women Survey (NVAWS), in the US, the costs of IPV exceed $5.8 billion each year; almost $4.1 billion of this cost is for direct medical and mental health care services for victims (National Center for Injury Prevention and Control, 2003). In England and Wales, an economic cost resulting from IPV of £ 5.7 billion was reported in 2004. This report includes IPV against women and men (22,463 participants). These costs come from services funded by government such us criminal justice

system, social services, health care services (physical and mental), housing, legal services and work days lost. In addition, costs resulting from emotional and human cost for the victims of IPV such as pain have been calculated to be between £17- £23 billion (Wallby, 2004).

More recently, in Australia, specifically resulting from pain, suffering, premature mortality and health problems associated with IPV a social cost of $13.6 billion was reported in 2009 (Commonwealth of Australia, 2009).

The high IPV prevalence and its impact in terms of health care resources utilization even when the IPV has already ended, suggests the increased need of early IPV preventive measures in order to reduce the social cost involved. Supporting these, a US longitudinal study among more than 3000 women found that healthcare utilization was still 20% higher 5 years after cessation of abuse compared to non-abused women with an excess cost of $19.3 million per year for every 100,000 women (Rivara et al., 2007). Clinicians should identify symptoms early that suggest women may be being victimized by their intimate partners in an attempt to identify accurately women who are being victimized and provide suitable intervention (Liebschutz & Rothman, 2012). However, a recent Cochrane review reported that, routine screening of women for IPV in health settings, in the absence of structured intervention, has been shown to have limited impact upon health outcomes and re-exposure to violence (Taft et al., 2013).

1.1.5. Interventions for IPV victims

Interventions should be added after screening in order to address IPV and its impact on women's health.

The main interventions for IPV victims once IPV has been identified are described below:

1) *Advocacy interventions*. These interventions may be offered to women who experience IPV; and are optimal for those women who have spent at least one night in a shelter or refuge. Advocacy interventions include: legal advice, help to find community resources, safety planning advice, empowerment and/or support, emergency housing or informal counselling (Ramsay et al., 2009). However, evidence from a Cochrane review regarding the role of advocacy for women exposed to IPV has been equivocal (Ramsay et al., 2009). Individually, some evidence supporting these types of interventions in reducing the occurrence of IPV has been identified from well-designed RCTs (Sullivan & Bybee, 1999; Tiwari et al., 2005).

The trials assessing these advocacy programs were conducted within and outside of the healthcare system. Although advocacy interventions aim to empower the women by helping them to achieve their goals, existing research shows that the effect is equivocal regarding whether such interventions have a positive effect on IPV victims' physical and psychological well-being (Ramsay et al., 2009).

2) *Psychological interventions*. As we have seen previously, IPV is considered a risk factor for a wide range of health problems. Health care providers have become crucial in addressing IPV. This is important as many women experiencing IPV will never seek help from the legal service, but may be seen by health services (primary care, emergency department, family planning) during their lifetime. As IPV is not considered a mental health disorder, these types of interventions are designed to respond to the symptomatology resulting from being victimized or to provide victims with the necessary skills to prevent new IPV episodes.

These interventions can be delivered in a wide range of treatment settings (primary care, substance use treatment centers, community mental health centers, etc.) by different health care providers (nurses, practitioners, psychologists, social workers, etc.) using different approaches (counselling,

cognitive behavioral interventions, etc.) to improve the physical and psychological wellbeing of those IPV victims and increase their ability to cope with new IPV victimization episodes. As a result, cognitive behavioral interventions (CBT) techniques addressing some thinking patterns and beliefs may reduce the negative consequences of IPV (Butler et al., 2006).

WHO recommends CBT interventions suggesting that they might have a positive impact upon the mental health, well-being and IPV episodes of women experiencing IPV (World Health Organization, 2013). Female IPV victims with a diagnosis of a psychiatric disorder, such as depression, should be treated for the mental disorder by professionals with a good understanding of IPV (World Health Organization, 2013). Recently, one study in primary care where family doctors delivered a brief counselling intervention (based on motivational interviewing techniques) for relationship and emotional issues to women who screening positive for IPV, found a reduction in depressive symptoms and IPV in women exposed to IPV (Hegarty et al., 2013). Furthermore, a RCT conducted in US among 150 pregnant women who screened positive for IPV, tested an integrated cognitive behavioral intervention delivered during prenatal care visits by trained interventionists (master's level social workers or psychologists) addressing 4 risk factors (depression, IPV, cigarette smoking and environmental tobacco exposure). Findings found that pregnant women receiving the CBT intervention reported reduced exposure to IPV with improved pregnancy outcomes (Kiely et al., 2010). The WHO also highlighted that CBT interventions are recommended for women who are no longer experiencing violence but are suffering PTSD that could be as a result of their history of IPV. Supporting this, one study delivered a cognitive behavioral intervention delivered by therapists to 125 women experiencing IPV-related PTSD and found a significant reduction in post-traumatic stress symptoms between initial and post therapy assessment among participants receiving a cognitive trauma therapy (Kubany et al., 2004).

As we have seen in the sections above, IPV co-occurs with a wide range of mental and sexual health problems, this fact should be taken it into account when interventions studies are conducted. Most of studies assessed diverse

outcomes that are expected to decrease when the occurrence of IPV is reduced.

Therefore, the evidence supports the use of interventions for women once IPV has been detected.

We do not discuss other types of interventions such as couple's therapy or interventions for perpetrators of IPV as the focus of this doctorate is on treatment options for women who are experiencing IPV.

1.2 IPV and Substance Use Disorders

1.2.1 Epidemiology

IPV is highly prevalent among women seeking treatment for a SUD. The Substance Abuse and Mental Health Services Administration found that among 7.7 million substance dependent women, 1.5 million were IPV survivors. Wide literature supports an association between substance use and both IPV perpetration and victimization (Chermack et al., 2008; Devries et al., 2014; Fals-Stewart et al., 2003; Foran & O'Leary, 2008; Gilchrist et al., 2012; Golding, 1999; Hien & Hien, 1998; Leonard, 2005; Moore et al., 2008; Quigley & Leonard, 2000; Wenzel et al., 2004). From longitudinal studies among community samples in the USA, women's substance use was associated with increased odds of experiencing IPV in ongoing relationships (Testa et al., 2003). More recently, a recent systematic review and meta-analysis found, from longitudinal studies, a clear positive association between IPV and alcohol use (in both directions) among women suffering IPV (Devries et al., 2014), with IPV being associated with both the cause and the consequence of alcohol use.

Among drug dependent samples, IPV prevalence rates are higher than rates found in surveys of community-based samples (Tjaden & Thoennes, 2000), with the prevalence of IPV being three to five times higher among people seeking treatment for SUD than in general population (Steele, 2000). Among women receiving substance abuse treatment, the prevalence of IPV ranges from 40-70% (El-Bassel et al., 2000; El-Bassel et al., 2005b; Engstrom et al., 2008; Gilchrist et al., 2012; Gilchrist et al., 2007; Wagner et al., 2009), with life-threatening IPV affecting up to 75% of substance dependent women (Fowler & Faulkner, 2011).

In terms of types of substance use disorder associated to IPV victimization, alcohol use has been linked with IPV (Devries et al., 2014; Kraanen et al., 2014) and alcohol and cocaine substance use disorders are considered the most relevant disorders predicting IPV victimization among women (Kraanen et al., 2014). Also findings from the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC) found that alcohol and cocaine use disorders

emerged as the disorders most strongly associated with IPV perpetration (Smith et al., 2012). In the same study, cannabis use disorder and opioid use disorder were the substance use disorders most associated with IPV victimization (Smith et al., 2012). Findings are inconsistent regarding which substance use is more prevalent among women IPV victims.

Therefore, these findings reveal that women's risk for IPV is higher among women receiving treatment for a substance use disorder. Furthermore, these results, highlight the importance of taking into account possible mechanisms (temporal sequencing, context) linking substance use to IPV.

In a study conducted among a sample of women receiving treatment for a substance use disorder in Barcelona, 57% had experienced IPV in the previous year. Twenty-two percent reported physical and sexual abuse and 15% emotional abuse or harassment (Gilchrist et al., 2012). In a recent European project involving women who inject drugs from Austria, Italy, Poland, Scotland and Spain recruited, 70.4% had experienced IPV in the past year. Data from the Spanish subsample shows that 60% of participants had experienced IPV in the past 12 months of their current or most recent partner, being consistent with previous literature (http://www.thereduceproject.imim.es/).

1.2.2 Theories of IPV and SUD

A common understanding of the causes of IPV can help researchers and professionals to develop more effective responses to the problem. Substance use and IPV are closely associated. Theories that explain this association are described in detail below:

The "Theory of Relational or Situational Use", this theory posits that substance use is a risk factor to violence, that can be explained because the introduction to and continued interaction with substances is a product of specific relationships with others and situations (Hien & Hien, 1998). This theoretical perspective of relational or situational use describes substance use/abuse as

precursors to IPV. Those women often participate in substance use as a false enhancement to their relationships (Richie, 1996). Some longitudinal studies supporting this theory have been identified (Bandura, 1977; Brewer et al., 1998; Devries et al., 2014; El-Bassel et al., 2005b; Kilpatrick et al., 1997; Smith et al., 2012). A two year longitudinal study among 3,006 women found that substance use (illicit drugs) increased the risk of future IPV episodes although it also found that IPV increased the risk of subsequent substance use (Kilpatrick et al., 1997), and for alcohol use and IPV (Devries et al., 2014). One longitudinal study conducted among women receiving Methadone Maintenance Treatment (MMT), found that this theory was supported for crack and marijuana use but not for heroin and alcohol use (El-Bassel et al., 2005b). Qualitative research also supports this theory, and several studies have found that certain activities related to substance use, such as spending money and shared consumption can cause the onset of new IPV episodes (Gilbert et al., 2001; Sterk, 1999).

The "Trauma Theory", described the use of substances to deal with various types of traumatic experiences (Harris et al., 2003; Lazarus & Folkman, 1984; Ullman et al., 2005). A recent study comparing women IPV victims with non IPV victims, found that new onset axis I disorders (OR=2.55, 2.19–2.97) were significantly more frequent among IPV victims (Okuda et al., 2011). Supporting this theory, longitudinal studies found that substance abuse represents a way of self-medication from the adverse consequence of the IPV experienced (Devries et al., 2014; Kilpatrick et al., 1997). From qualitative research, one study conducted among African American women found that women with a history of sexual trauma reported visits to substance abuse treatment programs more often than women without this background (Young & Boyd, 2000). Among women receiving MMT, substance abuse represents a way of self-medication from the adverse consequence of the IPV experienced (Gilbert et al., 2000). From other study designs, something similar has been found between psychological distress and alcohol use among sexually assaulted women (Miranda et al., 2002). Among women who have experienced childhood sexual abuse (CSA) or IPV; the substance use may be an effort to self-medicate the

distress resulting of the traumatic events (Khantzian, 1997). In this sense but focusing on PTSD symptoms, studies conducted among female IPV victims, found that they used alcohol to cope with trauma symptoms (Hellmuth et al., 2013; Kaysen et al., 2007).

Limitations are that some of these studies showed mixed results, supporting both theories. Longitudinal studies use the most rigorous method to study these variables over time, but some data come from other study designs such as qualitative research. Furthermore, some of these studies are conducted among women involved in MMT or African American women that limit the generalizability of the results to other population groups or women with other SUD.

1.2.3 Impact of IPV on women's health with SUD

1.2.3.1 Injury and physical health among women with SUD

The consequences of experiencing IPV on physical health for women with SUD are the same as those without a SUD and are described in point 1.1.2.1 of this thesis.

1.2.3.2 Mental health among women with SUD

The co-occurrence of psychiatric disorders and substance use disorders has been reported through population surveys (Devries et al., 2013; Kessler et al., 2001; Regier et al., 1990; Taft & Watson, 2008). The most recent references used population surveys with sample sizes ranging from 9,683 (Taft & Watson, 2008) to 36,163 participants (Devries et al., 2013). This association increases among treatment samples (Lehman et al., 1994; Pereiro et al., 2013; Weaver et al., 2003). Furthermore, being female is a significant variable for psychiatric disorder among drug users (OR 2.45; 95% CI 1.59, 3.77) (Torrens et al., 2011) with depression, PTSD and anxiety being the most common psychiatric disorders. Therefore, women receiving treatment for a substance use disorder

show high comorbidity with psychiatric disorders. A greater risk for IPV is found when the co-occurrence of mental health problems with substance use is present, more than the occurrence of one of these problems (McPherson et al., 2007). Several studies have reported greater odds of experiencing depression, PTSD and borderline personality disorder among women with SUD who have experienced IPV compared to those who have not experienced IPV (OR 2.42, OR 2.7, OR 3.38) (Cohen et al., 2013; Gilchrist, et al., 2012). Another study also found high prevalence of IPV (45-50%) among dually diagnosed PTSD-SUD women (Najavits et al., 2004). Furthermore, one study conducted among female IPV victims, focusing only on alcohol use, found that female IPV victims who were heavy drinkers (four or more drinks in a drinking episode) showed more severe trauma symptoms than abstainers and moderate drinkers, suggesting that alcohol use may be used as self-medication to cope with specific symptomatology (Kaysen et al., 2007). It is possible that both IPV and substance use are caused by a third factor such us trauma or other mental health problem such us depression (Devries et al., 2013) and viceversa, and the same may be true for IPV and SUD as noted previously.

In addition to the above mentioned psychiatric disorders, childhood abuse is highly prevalent for many women in substance use treatment, and plays an important role predicting subsequent IPV victimization (El-Bassel et al., 2000; Engstrom et al., 2012; Engstrom et al., 2008; Gilbert et al., 1997; Gilchrist et al., 2012; Gilchrist et al., 2007). Among women in substance use treatment, childhood sexual abuse (CSA) shows a prevalence rate ranging from 58% to 66% (Engstrom et al., 2008; Miller et al., 1993). Data from the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC) found that adverse childhood events increased the risk for alcohol dependence (OR= 1.37; 95% CI= 1.06, 1.77) (Pilowsky et al., 2009). A recent study conducted among 118 Spanish women seeking treatment for a SUD, found a childhood abuse prevalence of 70% (Gilchrist et al., 2011; Gilchrist et al., 2012).

Following these findings, childhood abuse is considered a risk factor for future trauma and IPV among women with SUD.

1.2.3.3 Sexual and reproductive health among women with SUD

Among females with SUD, the major sexual and reproductive health problems studied have been sexually transmitted infections including HIV and Hepatitis C. IPV victims seeking treatment for SUD are more likely to experience drug-taking risk behaviors which may be explained by the negative influence/control of the perpetrator (Wagner et al., 2009) increasing the risk for HIV/Hepatitis C. Among HIV positive women with SUD, the IPV prevalence varies from 30 to 67% (El-Bassel et al., 2005a) among a US sample. The odds of being HIV seropositive were greater among those women with SUD who reported past year IPV (OR 1.35; 95% CI 0.59, 3.10) (Gilchrist et al., 2011). IPV has been associated with HIV risk behavior among substance users (Gilbert et al., 2000). The link between IPV and HIV transmission risks has been reported in the literature but moderate evidence has been found (El-Bassel et al., 2005a). Women with SUD who are IPV victims are more likely to experience sex trading (Gilchrist et al., 2005) and report high-risk sexual behaviors (El-Bassel et al., 2005a; Gilchrist et al., 2011; Mosack et al., 2010) that may enhance the risk for HIV transmission. A recent review identified contexts that may explain this link. These associations can be explained by several factors; sexual coercion, negotiation of condom use, lack of condom use, lack of assertiveness to negotiate healthy sexual intercourse, fear of violence, lack of disclosure of sexually transmitted infections or HIV from the intimate partners and low social status (El-Bassel et al., 2011). Qualitative interviews assessing the contextual mechanisms associating drug use, sexual abuse and HIV risk among 38 women recruited in methadone maintenance treatment in US found that crack cocaine and heroin affect the dynamics in the sexual intercourse that may lead to sexual and physical abuse (El-Bassel et al., 2003), being the effect of these drugs responsible for the partner coercive behaviors; other women's explanation is that crack and heroin use enhance sexual desire and pleasure and may lead to IPV (El-Bassel et al., 2003).

In a recent European study conducted among females who inject drugs, found that 70% had experienced IPV in the past year and qualitative data found that

IPV exposure resulted in Hepatitis C transmission risk behaviors such as sharing needles and other paraphernalia, re-using needles and other paraphernalia, and unprotected sex including anal sex; that may lead to Hepatitis C infection (http://www.thereduceproject.imim.es/).

Therefore, the ability of females who inject drugs to avoid unsafe sexual and injecting interactions may be mediated by IPV and lack of assertiveness, putting them at greater risk for HIV/Hepatitis C transmission.

Those women who have experienced abuse during childhood are vulnerable to repeated traumas in adulthood, and those experiencing PTSD symptoms may show less capability in reducing IPV victimization episodes, increasing the risk of HIV transmission and vice versa (Classen et al., 2005; El-Bassel et al., 2011).

1.2.4 Treatment for IPV victims with SUD

Historically IPV and SUD have been recognized as independent problems; resulting in both problems being addressed with independent interventions. As we have seen in the points discussed above, the status of one influences the other problem (Testa, 2004). Over the last few decades, some research has been conducted supporting an integrated or coordinated model to address SUD and IPV. There are many reasons why IPV should be considered and addressed in drug treatment settings or for IPV and SUD services to be coordinated. Previous studies have been shown that IPV victimization can make recovery difficult. Women with SUD who are IPV victims show complicated remission, in terms of relapsing and report poorer alcohol and substance abuse treatment outcomes (Greenfield et al., 2002; Kang et al., 2002) , potentially due to continued drug use as a way of dealing with and escaping from malaise (Gilchrist et al., 2011). Furthermore, as we have seen until now, childhood abuse, IPV, psychiatric disorders, are commonly present among women seeking treatment for SUD. These conditions are also associated with poorer

treatment outcomes; for instance, negative mood may lead to increased substance use or relapse (Sinha, 2012), because substances might be used to deal with the negative mood and negative mood may reduce the skills to deal with the substance use problem. Among 432 subjects in MMT in New York, the prevalence of child abuse was high among drop-outs (Kang et al., 2002). As all these comorbidities may result in poorer treatment outcomes, they should be considered as treatment needs, and should be identified and addressed in drug treatment settings in order to enhance treatment outcomes.

Another reason for supporting the integrated treatment model for both problems (IPV/SUD) is that many times women who experience IPV may find it difficult to recognize that they are victims of IPV, or disclose that IPV could be the cause of their health problems. In addition to this, many female victims, feel pain and are afraid to disclosure IPV due to the influence of the perpetrator; or may not wish to be referred to another facility to address IPV because this could mean they need to deceive their partner regarding appointments with the facility addressing IPV.

Among women, a recent systematic review analyzed the need to provide comprehensive services for women with co-occurring SUD and IPV problems, and potential barriers to service integration including attitudes and experiences from staff and clients were highlighted. Findings showed that to achieve an effective interagency collaboration, strategies were required at various levels, (provider, director, agency, and policy levels). The challenges identified in both service sectors included: lack of highly qualified providers or their lack of training; different treatment philosophies, different legal, and policy governmental systems, different service sectors, and limited financial resources (Macy & Goodbourn, 2012).

Few studies have assessed the integrated or coordinated model among SUD. Morrisey and colleagues compared in a quasi-experimental study different intervention approaches (comprehensive, integrated, trauma informed and consumer involved) to treatment as usual among a sample of women with co-

occurring disorder (SUD and psychiatric disorders) and history of IPV. Benefits for trauma and mental health symptoms were found for those in the experimental group, but not for substance use outcomes. Findings suggest that these outcomes (mental health and trauma symptoms) may improve with integrated treatment (Morrissey et al., 2005). Similarly, a study conducted where there was collaboration between substance use service providers and agencies for IPV victims (coordinated programme) for women with SUD who screened positive for IPV victimization found that women reported less substance use and felt more efficacious following coordinated or integrated services. No differences were found depending on the services they entered treatment (IPV agencies or substance abuse treatment centers) (Bennett & O'Brien, 2007). The main limitation of this study was the lack of a comparison group and that actual IPV events were not measured.

Although the evidence is inconclusive, there is preliminary evidence supporting coordinated or integrated treatment for SUD and IPV.

1.2.4.1 Interventions for IPV victims with SUD

Eleven interventions were identified in a recent systematic review with meta-analysis of integrated interventions for SUD and IPV victimization. Majority of them were couple based interventions that are excluded in this thesis. Nine of them used trauma-focused interventions and showed no effect or small effect size (Fowler & Faulkner, 2011). One of the trauma-focused interventions (Seeking Safety), is an evidence based intervention designed for women with co-occurring PTSD and substance abuse (Najavits, 2002). A RCT assessed the effects of this CBT group intervention (Seeking Safety) compared to a health educational group among women with SUD and PTSD and found that participants in both groups reported significant improvements in PTSD and substance use outcomes with no differences between groups (Hien et al., 2009). This CBT trauma focused intervention has also been tested among incarcerated women (Zlotnick et al., 2009), homeless veteran's females with

psychiatric disorders (Desai et al., 2008), adolescent girls (Najavits et al., 2006) and male veterans (Weaver et al., 2007), showing promising results. Other trauma-focused interventions were identified: Trauma Recovery Empowerment Model (TREM) (Harris, 1998); the Triad Group model (TRIAD) (Clark & Fearday, 2001) and ATRIUM (Addiction and trauma recovery integration model) (Miller & Guidry, 2001). The main limitation of using trauma informed approaches for those IPV victims is that these interventions focuses on trauma in general, rather than IPV related trauma and does not address the specific need of IPV victims and survivors.

At present there is only one intervention identified to reduce IPV occurrence among women with SUD who report experiencing IPV (Gilbert et al., 2006). This US study conducted among 34 women who met criteria for IPV and SUD, compared 12 CBT group sessions delivered in a drug community center by trained facilitators, to a single informational session on IPV. Results found that the experimental intervention reduced physical, minor sexual, and minor or severe psychological IPV and improved some substance use outcomes among those women randomized to the group intervention. In addition to this, this study showed good attendance of participants to the sessions and good retention meaning that it is feasible to incorporate this type of intervention to community drug treatment centers. The main limitations of this study were the short follow-ups (3 months) that do not allow us to determine whether the effects of the intervention were maintained in the long term and that the study only included women involved in MMT.

2. THESIS RATIONALE

Although IPV is a prevalent global public health problem that has a significant impact on women's physical, mental and reproductive health; the majority of women are not able or ready to leave or do not want to leave their violent partners and stay in the relationships for several years. Furthermore, the evidence suggests a strong association between IPV victimization and substance use disorders with a larger proportion of women seeking treatment for SUD reporting IPV victimization than in the general population. As we have seen in the points above, women with SUD suffering IPV have specific characteristics (such us childhood abuse experiences, psychiatric comorbidity and lack of assertiveness) that may increase the risk of being IPV victimized and result in poorer substance use treatment outcomes.

However, despite the recognition of the high impact and prevalence of IPV among women with SUD, there is a knowledge gap with regards to what works to reduce IPV among women with SUD.

3. HYPOTHESIS

An evidence-based intervention will be more efficacious in reducing IPV than treatment as usual among drug dependent women.

3.1 Specific hypothesis

- A greater reduction in the frequency of IPV will be reported among the women who receive the intervention compared to the women in the control group.
- A greater reduction in the number of days that substances are used will be reported among the women who receive the intervention compared to the women in the control group.
- A greater reduction in the severity of depressive symptoms will be reported among the women who receive the intervention compared to the women in the control group.

4. AIMS AND OBJECTIVES

The overall aim of this thesis was to adapt and test an integrated (to address SUD and IPV) evidence based group intervention to reduce IPV among women in treatment for SUD who are IPV victims.

4.1. Objectives:

- To systematically review the research evidence on the effectiveness of Advocacy and CBT interventions to reduce IPV victimization for women.

- To adapt an evidence-based intervention to reduce IPV, substance use and depressive symptoms among women with SUD.

- To test the feasibility and effectiveness of the evidence-based intervention to reduce IPV, substance use and depressive symptoms among women with SUD currently (last 30 days) experiencing IPV.

5. METHODS

Two manuscripts have been produced from this doctoral research, which will be awarded by publication. The first paper that addresses objective 1, “The efficacy of cognitive behavioral therapy and advocacy interventions for women who have experienced intimate partner violence: A systematic review and meta-analysis” has been published in Annals of Medicine (Impact Factor 4.7). A systematic review and meta-analysis were conducted to determine the efficacy of Advocacy and CBT interventions in reducing physical, psychological, sexual, or any IPV. The methods and results are described in the paper. Only one intervention included in the review included women with SUD (Gilbert et al., 2006). With the authors’ consent, the WWT intervention was translated into Spanish and adapted (objective 2); reducing the number of sessions, and addressing negative mood given the high prevalence of depression, adapted from the Behavioral Therapy for Depression in Drug Dependence (BTDD) Manual (Carpenter et al., 2006). Due to the high prevalence of Hepatitis C among women with SUD, we also included education on Hepatitis C transmission in the session addressed to HIV.

This intervention was then tested (objective 3) in a pilot RCT among 14 women to assess the feasibility and initial efficacy. The second paper “Adaptation of a group intervention to reduce intimate partner violence among female drug users: Results from a pilot randomized control trial in a community substance abuse center” accepted for publication in Adicciones (Impact Factor 1.16.) describes the adaptation of the Women’s Wellness Treatment (Gilbert et al., 2006) to address IPV, substance use and depressive symptoms and presents the findings from a pilot randomized controlled trial conducted among 14 female IPV victims in outpatient substance use treatment programs in Barcelona, Spain. The methods and results are presented in the manuscript.

6. PUBLICATIONS

Peer-reviewed papers:

6.1 Manuscript 1.

Tirado-Muñoz, J., Gilchrist, G., Farré, M., Hegarty, k. & Torrens, M. (2014). The efficacy of cognitive behavioural therapy and advocacy interventions for women who have experienced intimate partner violence: A systematic review and meta-analysis. Ann Med, 11, 1-20. doi:10.3109/07853890.2014.941918

6.2 Manuscript 2.

Tirado-Muñoz J, Gilchrist G, Lligoña E , Gilbert L, Torrens M . Adaptation of a group intervention to reduce intimate partner violence among female drug users: Results from a pilot randomized control trial in a community substance abuse center. Adicciones, 27 (1), 282-292.

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Tirado-Muñoz J, Gilchrist G, Lligoña E , Gilbert L, Torrens M . Adaptation of a group intervention to reduce intimate partner violence among female drug users: Results from a pilot randomized control trial in a community substance abuse center. Adicciones, 27 (1), 282-292.

7. GENERAL DISCUSSION

This dissertation seeks to answer the question of how to respond to IPV victimization against women attending substance abuse treatment centers. This work resulted in 2 manuscripts.

Firstly, to achieve the principal aim, this project summarizes the available evidence on existing interventions in reducing IPV among women who are IPV victims. Thereafter, this thesis goes deeper into the adaptation of a CBT group intervention (IPaViT-CBT) that addressed IPV, substance use and depressive symptoms among women with SUD. A pilot randomized control trial was conducted among women attending substance abuse treatment in Barcelona to determine the feasibility and initial efficacy of this CBT intervention compared to treatment as usual at 12 months follow up.

IPV is a significant public health problem, with overwhelming individual and societal consequences. Only 19–51% of women who had ever been physically abused by their partner had left home for at least one night, and 8–21% had left two to five times (World Health Organization, 2005). In Australia, among those IPV victims, 35% had left and returned to their partners at least once (Australian Bureau of Statistics, 2007). The main barriers to leaving the violent partner, include: hope that abusers can change, fear of retaliation, concern for their children, stigma or fear of losing custody of children associated with divorce, lack of alternatives in terms of economic support, lack of support from family and friends, and religious and cultural features (Heise et al., 1999; Liang et al., 2005; Williams-Evans & Sheridan, 2004). Furthermore, a US survey, found that when women leave the partner and then return, they may be more exposed to increased violence in comparison to those who never leave their aggressive partner (Anderson & Saunders, 2003). Therefore, it is crucial to develop interventions to address IPV among women at this stage, even if they choose to remain with the perpetrator. In addition, IPV has been shown to be one of the conditions that provoke devastating consequences in women's physical and mental health (Cohen et al., 2013; Gilchrist et al., 2012). As we have seen, the

prevalence rates of IPV are higher among women with SUD than in community samples (Caetano et al., 2001; Tjaden & Thoennes, 1998).

Until now, most women exposed to IPV have been referred for advocacy support or CBT interventions to protect them from further IPV episodes. Despite this, the impact of CBT interventions remained uncertain until now and it was not known what interventions were useful for what type or types of violence experienced. On the other hand, before CBT interventions can be recommended, it is important to evaluate the benefit of these interventions among women who are IPV victims. To our knowledge, advocacy interventions for women recruited in domestic violence shelters have been shown to be effective in reducing physical abuse one to two years after the intervention; while there is insufficient evidence in regarding whether less intensive advocacy intervention is effective for women who still live with the perpetrator (Ramsay et al., 2009). Although Advocacy and CBT interventions are the most commonly used and studied interventions, the efficacy of CBT interventions in reducing IPV victimization was previously unknown. Furthermore, none of the previous reviews have examined the efficacy of advocacy and CBT interventions compared to treatment as usual by type of IPV experienced (physical, psychological, sexual or any IPV). The present systematic review with meta-analysis sought to address this important knowledge gap. The findings from the systematic review with meta-analysis found 19 studies assessing interventions for women who experience IPV; both, advocacy and CBT interventions are effective in reducing physical and psychological IPV, but not sexual IPV and/or any IPV. These results were consistent with our initial hypothesis and helped us to identify treatment options for women attended in drug treatment centers. In addition, the published findings from the systematic review will be useful for clinicians to recognize that the use of CBT interventions has positive effects on IPV, especially for psychological IPV due to the psychological nature of CBT interventions. Additionally, in contrast to Advocacy interventions, a strength of CBT interventions is that they may be delivered in different health sector settings and by different health and social care providers.

It is known that substance users report higher prevalence rates of IPV victimization than the general population (El-Bassel et al., 2005b) and that women with SUD who are IPV victims report poorer SUD treatment outcomes. IPV can also result in significant consequences in physical and mental health for women. Depression, anxiety and PTSD are the most prevalent mental health problems in women exposed to IPV (Trevillion et al., 2012). The option considered until now for this population has been trauma-focused interventions (Najavits, 2002) but the main limitations is that this approach (e.g. Seeking Safety) (Najavits, 2002) addresses trauma symptoms and not all women experiencing IPV will experience PTSD symptoms and some issues related to IPV may not be adequately addressed. Unfortunately not many interventions for female substance users were identified through the systematic review. The only one intervention identified was tested among women receiving methadone maintenance treatment in the US and showed promising results in reducing IPV and substance use, but the length of follow-up in this RCT was only 3 months (Gilbert et al., 2006). This 10 session group intervention was compared to one informational session about available community services for IPV, mental health, legal support, employment, housing and dental services. The intervention aimed to address substance use and IPV simultaneously delivered in a drug community treatment center.

The pilot RCT conducted in this dissertation showed encouraging results regarding initial effectiveness of the adapted CBT intervention but the small sample size obligates us to be cautious when interpreting and generalizing the findings of this PhD thesis. The IPaViT-CBT group intervention offered under this project, evaluated for first time the long-term effects of this type of intervention to find out whether effects were maintained in long-term or the intervention should be given to women every so often. Findings from the RCT suggest some initial positive effects of the intervention offered in this thesis. The adapted CBT group intervention was successful in reducing some, but not all, the outcomes assessed. The intervention reduced psychological maltreatment up to 3 months post intervention (but not any IPV measured by

CAS), aggressiveness in the partner relationship up to 1 month post intervention, the frequency of drinking up to 1 months post intervention, and increased the assertiveness in the partner relationship up to 1-month post intervention. This may be due to the intervention includes sessions on skills in negotiation, conflict management, assertiveness and problem solving that may be useful techniques for this type of violence. Twelve months post intervention; participants who received the intervention and remained with their partners did not significantly reduce the likelihood of any IPV, psychological maltreatment, depressive symptoms, quality of life or self-reported health status.

Regarding the efficacy of the intervention in general and the outcomes measured in particular, some reasons why certain outcomes did not reduce are discussed here. The IPaViT-CBT group intervention may not contain enough sessions to reduce any type of IPV among this population. Previous positive effects were found with a similar intervention among IPV victims from the US who were receiving methadone maintenance treatment. Including women with SUD other than opiate disorders may present other clinical characteristics and other treatment needs. That effects were not maintained for psychological maltreatment at 12 months follow up make us think that the support needs to be offered longer term or using booster/follow up sessions to update states and to again give the opportunity to discuss new violent episodes and to remind and practice the CBT techniques to ensure safer interactions with partners or new intimate partners. In the previous study (Gilbert et al., 2006) women were only followed up for 3 months so it is not possible to determine whether these results were sustained at 12 months in that population.

With regards to depressive symptoms, both groups reported reductions in depressive symptoms but no statistically significant difference was found between groups. Pharmacological treatment for depression/mood disorder was not recorded during the RCT and therefore, not controlled for in the analysis nor in the randomization. It may be that the effects of other treatment for depressive symptoms could be affecting the efficacy of the tested intervention. Another reason why no positive effect of the intervention has been found for depression

is that only a single CBT session of less than two hours is probably not enough time to improve negative mood among this population. No improvement in IPV, could be limiting improvements in other outcomes such as depression due to the continuation of IPV over time. Research has demonstrated that this association between IPV and depression can be bidirectional (Devries et al., 2013). Similar findings could be considered for health status and quality of life outcomes.

Despite this, the possibility that with a larger sample, statistical significance would have been found for other outcomes variables is not excluded.

The retention and participation in the intervention was variable, which may have some implications when interpreting findings. Lower retention could be associated with less improvement in outcomes, or that positive effects are not attributable to the tested intervention. Previous studies have reported some strategies that have been used in the present RCT in order to improve retention, some of them include: building strong relationships with clinic/research providers, trying to reduce participant barriers by using taxi or transport public vouchers, and keeping participants engaged via newsletters, SMS, and social gatherings (Warner et al., 2013). Participants received a travel card for public transport and received contingency management payment of 5 euros for attendance at each session. Dropouts during the intervention and during follow up research appointments were reduced using the techniques explained above; participants were retained in the study intervention although they did not participate in all sessions. The clinical characteristics of participants including substance use problems and comorbid mental health problems may be impeding participation in all sessions of the intervention by participants.

Although we cannot conclude firmly that the IPaViT-CBT group intervention is effective in reducing IPV, depression and the number of days substances were used due to the small sample size and power of the pilot RCT.

Limitations

This dissertation obviously has some limitations. Aside from the specific limitations of the studies included in the systematic review and meta-analysis that were reported in the published paper resulting from the work, there are certain limitations that have to be taken into account when reporting or generalizing the results from this PhD dissertation as a whole. In the case of the systematic review with meta-analysis of interventions to reduce IPV victimization, the low number of studies that assessed some outcomes (such as sexual violence) did not allow us to conclude firmly the efficacy for this type of IPV.

To minimize the complication of non-compliance, missing outcomes in the RCT, and for the reason that we only aimed to analyze those participants who were still involved in a relationship, an intention to treat analysis (ITT) was conducted. In ITT analysis, a conservative estimate of treatment effect is generally inevitable (Gupta, 2011).

Despite this, the most important limitation of the trial is the small sample size that may have resulted in Type II error, and does not allow definitive conclusions to be made and makes it difficult to find significant differences between groups. In fact, not only a recent study recommends that external pilot or feasibility studies need to have at least 70 measured subjects (35 per group) (Teare et al., 2014), but using our results the necessary sample size was estimated to be around 50 per group (N=100), for a simple random allocation 1/1 design for a target 80% power and an alpha error of 0.05, to be able to detect a difference between arms of 23% for IPV with an effect size of 0.4.

Regardless, this trial is an example of the way in which we initially chose to design the study and the methodology used to test the intervention. The use of the intervention in practice should be considered only after conducting a large RCT that is adequately powered.

Another global limitation is that under the recommendations of the new Medical Research Council guidance on Developing and evaluating complex interventions to improve health (Craig et al., 2008), an important aspect of the feasibility stage plus piloting has been missed in this dissertation. A mixture of qualitative and quantitative methods is suggested to understand barriers to participation, to estimate response rates and to discriminate positive aspects highlighted from women who participated in the RCT receiving the CBT intervention. Also qualitative research may help to discriminate certain negative aspects and/or to discriminate aspects that may help to improve the intervention in terms of number, duration, content of sessions and person who deliver the intervention.

Implications for practice

After reviewing the evidence, we can conclude that a wide range of interventions exists that professionals can offer to women who are IPV victims. The results from the systematic review with meta-analysis will be useful for health care providers to understand the efficacy of interventions in reducing IPV and help them in choosing the most appropriate treatment option depending on setting, population, duration, approach, type of IPV and demonstrated effects.

Furthermore, this thesis offers a possible treatment option (IPaViT-CBT) to address IPV, substance use and depression in a group format for women seeking treatment for SUD who are suffering IPV, but a large RCT should be conducted to confirm that. The initial evidence in terms of feasibility of the proposed intervention and its use in substance abuse community centers is optimistic. IPV was reduced, although not significantly so the results are going in the right direction. The ability of the intervention to be replicated due to its manualized-character, allows it to be used by many professionals treating female drug users exposed to IPV and within many settings. The group format allows this problem to be addressed with more patients than individual counselling, and is therefore, potentially more cost-effective than other options,

however, the cost-effectiveness still requires to be tested in a large scale future trial.

Finally, the cost of a successful intervention compared to the medical and social costs of IPV victimization, places this CBT group intervention as an opportunity to address IPV in drug treatment settings.

Implications for future research

There is a lack of research examining the efficacy of different interventions among women with SUD. More studies are needed on this topic. A better strategy to recruit participants should be taken into account before starting the RCT, for instance the strategy should increase the inclusion criteria to IPV victimization in the past 12 months rather than the last month to recruit a larger number of women. In addition, more time to recruit participants given the type of topic being evaluated (many women are not able to disclose their victimization) would be useful.

Future research should address this gap of knowledge about what works for women with SUD who are IPV victims and address the limitations of the current and other studies including the use of larger sample sizes with power to determine its efficacy in reducing IPV, depression and substance use among women with SUD. Until now, this is the only study that has studied the long term effects of the intervention in reducing IPV, previous studies have only followed women for 3 months.

Further research should include larger follow-ups, larger samples, and different inclusion criteria when developing, evaluating and implementing complex study interventions.

8. CONCLUSIONS

1. The most studied treatment options for women who experience IPV are Advocacy and CBT interventions.

2. The systematic review and meta-analysis found that Advocacy and CBT interventions reduced the occurrence of physical and psychological IPV among female victims; however, these interventions did not reduce the occurrence of sexual or any IPV for female victims.

3. Few interventions to reduce IPV have been tested among drug dependent women.

4. The intervention (IPaViT-CBT) adapted for this doctorate successfully reduced psychological maltreatment more than treatment as usual, however given the small sample size the results should be interpreted with caution and require to be validated in a definitive RCT.

5. The intervention (IPaViT-CBT) successfully increased assertiveness and reduced aggressiveness in the partner relationship more than treatment as usual.

6. The intervention successfully reduced the frequency of drinking up to 3 months post intervention more than treatment as usual.

7. The intervention did not successfully reduce the likelihood of any IPV, depressive symptoms, quality of life or self-reported health status, up to 12-months post intervention more than treatment as usual.

8. It is feasible to deliver the intervention in a community substance abuse center.

9. The manualized intervention (IPaViT-CBT) could be offered in drug treatment settings in Catalonia as a treatment option for IPV victims.

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10. ANNEXES

10.1 Other publications

Manuscript 3:

Gilchrist G, Tirado-Muñoz J, Easton CJ. Should we reconsider anger management when addressing physical intimate partner violence perpetration by alcohol abusing males? A systematic review. In press.

10.2 Spanish Manual of Intervention

A brief summary of each session is described; the Spanish manual of intervention is available through the link below.

http://www.imim.cat/programesrecerca/neurociencies/en_gratus.html

Intimate Partner violence Therapy (IPaViT-CBT)

Manual de intervención

Adaptación: Gail Gilchrist, Judit Tirado, Marta Torrens, Addiction Research Group, Institut Hospital del Mar d'Investigacions Médiques (IMIM)-Hospital del Mar, Barcelona.

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INTRODUCCIÓN

IPaViT- CBT para mujeres es una intervención novedosa; una intervención de género que consiste en 10 sesiones que abordan tanto la violencia de género en la pareja como el abuso de sustancias entre las mujeres en PMM (programas de mantenimiento con metadona) que refieren haber experimentado violencia en la pareja y el uso de drogas ilícitas.

Basado en las teorías cognitivas, la IPaViT- CBT incluye diez sesiones de grupo dirigidas por 2 facilitadores. La segunda sesión es importante para evaluar el nivel de peligro en sus relaciones de pareja y para que las mujeres tengan la oportunidad de sincerarse de ser más específicas y sensibles al desarrollar un plan de seguridad. Las sesiones de grupo se centran en la sensibilización de la co-ocurrencia de violencia doméstica y el consumo de sustancias; la práctica se realiza a través de técnicas de role play, habilidades de comunicación y negociación, y el refuerzo de autoeficacia.

Las sesiones de grupo son también óptimas para (a) el aumento de normas positivas para relaciones saludables y prevención de recaídas. (b) desestigmatizar los estereotipos de la mujeres que participan en alguna actividad relacionada con las drogas en sus comunidades y (c) aumentar el apoyo social y el acceso y utilización de los servicios para reducir el conflicto en la relaciones y el uso de drogas. Se discuten en la primera sesión las normas de confidencialidad de grupo, dónde las participantes firmarán un compromiso de confidencialidad y se recordará al final de cada sesión.

Cada sesión es una secuencia de 5 pasos:

(1) Apertura con una cita, canción o poema de inspiración, que servirá de punto de inspiración y un enlace al tema a tratar en la sesión que podrá ser recordado en el futuro.

(2) El registro de recuperación y el registro de relaciones sirve para discutir los incidentes donde las participantes utilizan drogas o experimentan conflictos en la relación y para ayudarles a identificar factores desencadenantes y generar opciones y planes para evitar el consumo de drogas y el desarrollo de un plan de seguridad para reducir la exposición a la violencia de pareja; también para reconocer una manera positiva en que las mujeres utilizan nuevas técnicas para evitar o reducir el consumo de drogas y el conflicto en la pareja.
(3) debatir para crear conciencia sobre las conexiones entre las diferentes actividades relacionadas con las drogas y los diferentes tipos de violencia en la pareja.
(4) un componente de construcción de habilidades relevante al tema de discusión Y
(5) registro de las necesidades de las participantes o los problemas que las participantes han identificado y que quieren trabajar. Al final de cada sesión, se le pide a la participante que se comprometa con un ejercicio práctico de habilidades específicas entre sesiones. Al final de la sesión número 12, hay una ceremonia de graduación de grupo donde las participantes reciben un certificado de superación o logro.

La intervención está basada en la investigación epidemiológica de dos estudios financiados por el NIDA, sobre la relación entre el abuso de drogas, el VIH y la violencia de pareja entre mujeres y hombres en PMM desde 1997, que se llevaron a cabo por la Dr. El-Nabila Bassel y Gilbert Louisa que forman parte del Grupo de Intervención Social.

A continuación se presenta el esquema de actividades para cada sesión:

Sesión 1: Preparación para el viaje: Aumento de la motivación para el bienestar.

Objetivos: (1) describir los objetivos de IPaViT- CBT, (2) identificar las razones positivas para reducir el consumo de drogas, y (3) la motivación intrínseca para obtener la abstinencia.

Actividades: (1) introducir el propósito de grupo (2) repasar las reglas del grupo y obtener un compromiso de confidencialidad, (3) el uso de la EMB para sopesar los pros y los contras del uso de drogas; (4) desarrollar las discrepancias entre los comportamientos de las participantes y sus metas de recuperación y la motivación para obtener el cambio.(5) evaluar las barreras al tratamiento, (6) desarrollar un plan de seguridad, (7) registro de servicios y ritual de despedida.

Sesión 2: Construcción de una relación segura

Objetivos: (1) evaluar el nivel actual de peligro en la relación y desarrollar un plan de seguridad adecuado, (2) identificar las razones positivas para la reducción de conflicto en la relación, y (3) la motivación intrínseca para obtener seguridad en la relación.

Actividades: (1) el uso de la EMB para sopesar los pros y los contras del conflicto en la relación, (2) generar metas factibles y opciones para reducir la violencia en la pareja, (3) desarrollar las discrepancias entre las experiencias actuales de las participantes y sus objetivos deseados en materia de reducción de su exposición a la violencia de pareja, (4) aumentar la auto-eficacia para alcanzar los objetivos y el compromiso explícito de obtener un cambio, (5) desarrollar un plan de seguridad, y (6) registro de servicios.

Sesión 3: Identificación de factores desencadenantes para el consumo de drogas y el conflicto de pareja.

Objetivos: (1) identificar desencadenantes generales y basados en la relación para el uso de drogas, y (2) desarrollar un plan para implementar la estrategia de afrontamiento de seguridad en la próxima semana.
Actividades: (1) registro de recuperación, de seguridad, y registro de relaciones , (2) discusión: sensibilizar sobre la relación entre las actividades relacionadas con la droga y la violencia de pareja, (3) identificar los factores desencadenantes de algunas recaídas recientes, (4) generar una lista de estrategias de afrontamiento saludables , (5) crear tarjetas de comodidad de uno mismo con estrategias de calmantes (6) volver a revisar los planes individuales según sea necesario y (7) el registro de servicios y ritual de despedida.

Sesión 4: Superación del maltrato psicológico.

Objetivos: (1) identificar ejemplos específicos en los que las actividades relacionadas con las drogas están vinculados con maltrato psicológico, (2) describen tres tipos de Estabilización (física, mental y calmante), y 3) identificar situaciones personales comunes en las que las habilidades de Estabilización pueden ser utilizadas.
Actividades: (1) recuperación, seguridad, y registro de relaciones, (2) discusión: la sensibilización de la relación entre las actividades relacionadas con drogas y maltrato psicológico de pareja, (3) Practicar las habilidades para la Estabilización física y calmante (4) Elaboración de un plan semanal para el uso de La Estabilización y estrategias relajantes (5) registro de servicios y ritual de despedida.

Sesión 5: Manejo de maltrato físico en la pareja: la reconstrucción de la ira.

Objetivos: (1) identificar desencadenantes relacionados con las drogas y el maltrato físico y (2) práctica de la Estabilización para manejar el enfado en las relaciones íntimas.
Actividades: (1) registro de recuperación, seguridad, y el registro de relaciones, (2) la discusión: sensibilizar sobre los vínculos entre las actividades relacionadas con

las drogas y el maltrato físico, (3) discutir cómo la ira puede ser útil y perjudicial para la recuperación y la seguridad; (4) practicar usando la Estabilización y entrenamiento en habilidades para manejar la ira, y (5) registro de servicios y ritual de despedida.

Sesión 6: La recuperación de un trauma: Identificación de desencadenantes para el trastorno de estrés postraumático.

Objetivos: (1) describir PTSD y cómo éste puede llevar al consumo de drogas, (2) evaluación para la detección de trastorno de estrés postraumático y recibir referencias apropiadas, y (3) aplicación de la Estabilización para manejar la ansiedad.

Actividades: (1) recuperación, seguridad y registro de relaciones (2) Debate: sensibilización sobre la relación entre el estrés postraumático y abuso de sustancias (3) selección de instrumentos TEPT y resultados de la evaluación; (4) identificar necesidades de atención del trastorno de estrés postraumático y discutir las referencias, (5) La práctica de las habilidades de Estabilización para hacer frente a la ansiedad en el juego de roles, y (6) registro de servicios y ritual de despedida.

Sesión 7: Manejo del estado de ánimo negativo

Objetivos: (1) conocerá las causas y síntomas asociados con la depresión y (2) conocer la relación entre su estado de ánimo y su nivel de actividad.

Actividades: (1) registro de recuperación, seguridad, y el registro de relaciones, (2) la discusión: discutir la relación entre su estado de ánimo y nivel de actividad en el modelo conductual de la depresión (3) determinar el nivel de satisfacción de los miembros del grupo en varias áreas de su vida e identificación de las áreas más importantes para ellas, (4) desarrollar una jerarquía de actividades agradables que se puedan introducir en las áreas de la vida que ha identificado como importantes y menos satisfactorias; (5) Identificar una actividad de grupo

externa y de interés, que la participante puede realizar puede fuera del período de sesiones.

Sesión 8: Límites sexuales: habilidades de negociación.

Objetivos: (1) identificar los factores desencadenantes de tener relaciones sexuales no deseadas y (2) generar estrategias de seguridad para rechazar relaciones sexuales no deseadas.

Actividades: (1) registro de recuperación, seguridad, y el registro de relaciones, (2) la discusión: la sensibilización de los vínculos entre el consumo de drogas y el maltrato sexual, (3) identificar los factores desencadenantes relacionados con las drogas para el sexo no deseado, (4) generar estrategias para evitar relaciones sexuales no deseados; (5) valorar los pros y los contras de las opciones, (6) identificar estrategias seguras para rechazar las relaciones sexuales y juegos de rol y (7) registro de servicios y ritual de despedida.

Sesión 9: Evitar relaciones sexuales peligrosas: identificar desencadenantes para riesgo de VIH/Hep C e identificar estrategias para reducir el riesgo de VIH/ Hep C

Objetivos: (1) describir cómo ocurre la transmisión del VIH i VHC (2) Identificar violencia de pareja relacionada con VIH i VHC. (3) identificar los factores desencadenantes relacionados con las drogas para el riesgo de VIH/VHC, (4) identificar estrategias seguras para rechazar relaciones sexuales no deseadas y (5) fortalecer la capacidad de negociación.

Actividades: (1) registro de recuperación, la seguridad, y el registro de relaciones, (2) el debate: Relación entre las actividades relacionadas con drogas, la violencia por parte de la pareja sentimental y el riesgo de VIH/ VHC; y reconsideración del riesgo de VIH/ VHC en las relaciones íntimas: pros y contras de reducir el riesgo de VIH/VHC. (2) hechos y mitos sobre el VIH / VHC/ ETS, (3) estrategias para evitar las relaciones sexuales sin protección; (4) entrenar con juegos de rol la

capacidad de negociación en situaciones de riesgo, (5) sopesar los pros y los contras de las estrategias, y (6) registro de servicios y el ritual de despedida.

Sesión 10: Reconsiderando el equilibrio de poder: estrategias para recuperarse de recaídas y celebrar los éxitos. Replantearse el balance de poder: conseguir apoyo.

Objetivos: (1) Describir el equilibrio de poder en las relaciones de pareja, (2) desarrollar un plan de apoyo social (3) identificar los factores desencadenantes más comunes para la violencia de pareja y el consumo de drogas, y (4) desarrollar un plan de mantenimiento para evitar los desencadenantes y un plan de emergencia para la recuperación de recaídas.

Actividades: (1) registro de recuperación, seguridad y registro de relaciones, (2) crear un mapa de ecosistemas de apoyo social; (3) identificar fuentes de apoyo para diferentes necesidades; (4) debatir sobre las recaídas, la planificación de la recaída y la recuperación, (5) generar una lista de desencadenantes para la violencia de pareja y el consumo de drogas e identificar los factores desencadenantes más frecuentes, (6) revisar las estrategias para hacer frente a los fallos, y revisar los planes para evitar las recaídas y recuperarse de ellas; (7) revisar el plan de seguridad y hacer derivaciones relacionadas con la violencia de pareja, (8) registro de servicios y ritual de despedida (9) ceremonia de graduación.

FORMATO DE LAS SESIONES

SESIONES DE GRUPO 1 A 10

Actividades

A. Apertura de inspiración
B. Registro de recuperación, registro de seguridad y registro de relaciones
C. Sensibilización/ Presentación didáctica y el debate
D. Desarrollo de habilidades
E. Registro se servicios
F. Ritual de despedida SESIÓN INDIVIDUAL 2: Actividades
A. Revisión/ discusión de la primera sesión
B. Información general de las próximas sesiones de grupo
C. Crear un plan individualizado de recuperación, seguridad y utilización de servicios

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