

Feasibility and Severity Issues in Assessing Risk of Intimate Partner Violence in a
Correctional Population

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*This thesis is submitted in partial fulfilment of the requirements for the Honours
degree of Bachelor of Psychological Science*

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October 2020

Word Count: 9,479

Table of Contents

<i>List of Tables</i>	5
<i>Abstract</i>	6
<i>Declaration</i>	7
<i>Contribution Statement</i>	8
<i>Acknowledgements</i>	9
CHAPTER I	10
<i>Introduction</i>	10
1.1 Overview	10
1.2 Intimate Partner Violence (IPV)	11
1.3.1 Risk: Likelihood of Reoffending	13
1.3.2 Risk: Severity.....	13
1.3.2.1 Severity: Strangulation.....	13
1.3.2.2 Severity: Sexual Assault	14
1.3.2.3 Severity: Weapon Use.....	15
1.4 Cost of Severe Forms of IPV	16
1.6 Current Risk Assessment Instruments for IPV	17
1.6.1 Danger Assessment (DA)	17
1.6.2 Domestic Violence Screening Inventory (DVSI)	17
1.6.3 Spousal Assault Risk Assessment Guide (SARA).....	18
1.6.4 Ontario Domestic Assault Risk Assessment (ODARA).....	18
1.6.4.1 Use of the ODARA in Various Countries.....	19
1.6.4.2 ODARA in Correctional Settings	20

1.7 Summary	21
1.8 Current Study	22
1.8.1 Project Aims.....	22
CHAPTER II	23
Method	23
2.1 Study Design	23
2.2 Participants	23
2.3 Measures	24
2.4 Coding for Severity Variables	25
2.7 Descriptive and Inferential Analysis	26
CHAPTER III	27
Results	27
3.1 Preliminary Analysis	27
3.2 Research Aim One: Exploration of the Feasibility of the ODARA and its Use in South Australian Correctional Setting	29
3.2.1 Missing Data.....	29
3.2.2 Interrater Reliability.....	30
3.2.3 Internal Consistency.....	32
3.3 Research Aim Two: to Examine the Link Between Severe Forms of IPV Offending and the ODARA	33
3.3.1 Interrater Reliability for Severity Variables.....	33
3.3.2 Point-Biserial and Phi Correlations.....	33

Running Head: FEASIBILITY AND SEVERITY ISSUES IN ASSESSING RISK	4
3.3.3 Prediction of Severity Variables	35
CHAPTER IV.....	38
<i>Discussion.....</i>	<i>38</i>
4.1 Overview	38
4.2 Current Findings.....	38
4.2.1 Feasibility of the ODARA	38
4.2.2 Relationship between Severity and the ODARA.....	41
4.3 Limitations and Implications on Policy	44
4.4 Direction for Future Research	46
4.5 Conclusion	47
<i>References</i>	<i>48</i>
<i>Appendix A.....</i>	<i>60</i>

List of Tables

Table 1. <i>Descriptive Statistics of ODARA and Severity Variables</i>	28
Table 2. <i>Frequency of ODARA Items in Original and Retest Scoring</i>	29
Table 3. <i>Frequency of Missing Data in Original and Retest Scoring</i>	30
Table 4. <i>Interrater Reliability of Original ODARA Scores with Retest Scores</i>	31
Table 5. <i>Item-Total Correlations with the ODARA Items</i>	32
Table 6. <i>Interrater Reliability Between Supervisor and Researcher on Severity Variables</i> ...	33
Table 7. <i>Phi Correlations (Φ) Between Severity Variables and ODARA Items</i>	34
Table 8. <i>Phi Correlations(Φ) Between Severity Variables</i>	35
Table 9. <i>Logistic Regression Analysis for Predictors of Weapon Use</i>	37

Abstract

Domestic violence or intimate partner violence (IPV) is well known to be a significant issue that impacts the psychological, physical, economic and social wellbeing of survivors. The Ontario Domestic Assault Risk Assessment (ODARA) is a risk assessment tool designed to assess the likelihood of reoffending in men who assault their female partners. The ODARA was validated in Canada as an assessment to be used by frontline police, and therefore has had minimal investigation in Australia or in correctional settings. Further, the tool has had minimal analysis of its relationship with the severity aspect of risk assessment. The present study includes 291 South Australian IPV offenders who had an ODARA completed for them. This study uses retrospective data in order to analyse the feasibility of using the ODARA in a South Australian correctional setting, as well as its ability to account for severity. The results cast doubt on the feasibility of using the ODARA within the South Australian correctional setting as there were significant patterns of missing data and poor internal consistency. A series of regression analyses also confirmed that the severity indicators were poorly accounted for by the ODARA. Improved practices in collecting and storing data within DCS may improve the feasibility of the tool. Further research could look into the inclusion of items that are significantly related to severity in order to improve the ODARA's ability to assess for severe indicators of IPV.

Keywords: intimate partner violence, feasibility, severity, risk assessment

Declaration

This thesis contains no material which has been accepted for the award of any other degree or diploma in any University, and, to the best of my knowledge, this thesis contains no material previously published except where due reference is made. I give permission for the digital version of this thesis to be made available on the web, via the University of Adelaide's digital thesis repository, the Library Search and through web search engines, unless permission has been granted by the School to restrict access for a period of time.

Signature:

28 October 2020

Contribution Statement

In writing this thesis, my primary and secondary supervisor and I collaborated to generate research questions of interest and design the appropriate methodology. Alongside my secondary supervisor, I was responsible for creating the dataset based on the archival data. I conducted the literature search and completed the ethics application. With support from my supervisors, I was also responsible for data analysis and thesis write-up.

Acknowledgements

First and foremost I would like to thank my primary supervisor, Michael Proeve. Without your valuable insight, considered feedback and guidance this thesis would not be what it is. I feel very grateful to have learnt from such a great supervisor. To my secondary supervisor Gene Mercer – thank you for always being an email or phone call away. Your experience and wisdom within this field was instrumental in shaping this thesis. I would not have been able write this without your insightful suggestions and constant support. I feel very privileged to have worked alongside the both of you.

I would also like to deeply thank my friends and family for their support. Particularly to my mum – thank you for always checking up on me, showing interest in my research, and for providing me with your delicious homemade food that fuelled me to keep writing.

Finally, thank you to my heavenly Father, who has been with me the entire process and has helped me to overcome every obstacle that this year has presented.

CHAPTER I

Introduction

1.1 Overview

Intimate partner violence (IPV) has significant physical, psychological, social and economic implications that affect not only the survivors, but also families and society as a whole (Cortis & Bullen, 2016; García-Moreno et al., 2013; Wong & Bouchard, 2020). IPV is problematic as its aggression against an individual is contrary to prevailing society's standards on violence. It is also harmful because of the adverse physical and mental health outcomes it produces (Nicholls, Pritchard, Reeves & Hilterman, 2013; Stockman, Hayashi & Campbell, 2015). Further, the rate of reoffending among IPV perpetrators is much higher than for other violent crimes (Nicholls et al., 2013), with recidivism rates found to vary between 13% and 60% in some studies (Klein & Tobin, 2008; Loinaz, 2014; Petersson & Strand, 2017). The Risk-Need-Responsivity model (RNR) is a widely used approach in the offender rehabilitation context (Bonta & Andrews, 2007). According to this model, reoffending can be reduced if the level of service provided to the offender matches their risk of reoffending. Reducing the risk of reoffending is a key objective for correctional services. Specifically, this objective is included in the South Australian Department for Correctional Services' (DCS) 2018-2022 strategic plan (Department for Correctional Services, 2018). In order to meet this important objective and effectively respond to IPV, appropriate risk assessments must be used.

Risk assessment instruments are employed by police and correctional services to make intervention and treatment decisions in order to prevent further IPV (Bonta & Andrews, 2007; Nicholls et al., 2013). Among the available risk assessment tools that assess IPV, the Ontario Domestic Assault Risk Assessment (ODARA) has become a popular validated actuarial risk assessment (Kropp, 2008). The ODARA evaluates the likelihood that a man,

who has committed an IPV offence against his female partner, will reoffend (Hilton et al., 2004). However, there has been minimal examination of the ODARA in terms of the instrument's relationship with the severity of offending, as well as limited investigation of the tool in the Australian correctional setting. Therefore, this study endeavours to address these gaps by exploring the feasibility of the ODARA in an Australian correctional population and to explore the ability of the tool to account for severity of IPV offending. The following chapter explores the IPV and risk assessment literature, particularly in terms of the ODARA and its properties. Severity as a key component of risk is then discussed by examining three types of severe IPV; strangulation, weapon use and sexual assault. Finally, previous research concerning the ODARA will be reviewed, including its use in correctional settings.

1.2 Intimate Partner Violence (IPV)

Domestic violence (DV), also known as intimate partner violence (IPV) has been identified as a global health issue of universal consequence that demands immediate attention and action (García-Moreno et al., 2013). According to a publication by the World Health Organization (WHO), IPV is defined as 'any behaviour within an intimate relationship that causes physical, psychological or sexual harm to those in the relationship' (Krug, Dahlberg, Mercy, Zwi & Lozano, 2002. p. 89). Whilst this definition does not discriminate gender, the majority of research indicates that women are more likely than men to experience IPV, and are more likely to have severe injuries as a result (Anderson, 2005; Dobash & Dobash, 2004; Johnson, 2006; Ubillos-Landa, Puente-Martinez, Gonzalez-Castro and Nieto-Gonzalez, 2020; Whitaker, 2013).

The National Violence Against Women Survey (NVAWS) conducted in the USA indicated that approximately 22% of surveyed women reported physical IPV over their lifetime, in comparison to just over 7% of men (Tjaden & Thoennes, 2000). Australian statistics support this gender difference, indicating that 17% of women have been subject to

IPV since the age of 15, in comparison to 6% of men (Australian Bureau of Statistics, 2016). This suggests that women are almost three times more likely to experience IPV. It is estimated that 20-30% of women still experience IPV, a rate which is alarmingly high (Lutwak, 2018; Rose, 2015; Wong & Bouchard, 2020). Because women are more likely to experience IPV, this study's discussion will focus on IPV towards women.

IPV is severely damaging and dangerous to the physical, sexual and psychological makeup of women both in the immediate and long-term (García-Moreno et al., 2013; Svalin & Levander, 2019). The most significant consequence of IPV is domestic homicide. IPV was found to occur in 41% of the 487 homicide incidents in Australia in 2012-2014 (Bryant & Bricknell, 2017). Short-term consequences of IPV also include fractures, low-weight child-births, genital trauma and burns (García-Moreno et al., 2013; Wong & Mellor, 2014). However, the impact of the abuse can cause long-term trauma even after the violence has ended (Lutwak, 2018). The long-term effects can include post-traumatic stress disorder (PTSD), chronic pain, brain trauma, memory loss, mental health issues and even suicidality (García-Moreno et al., 2013; Lutwak, 2018; Wong & Mellor, 2014).

1.3 Risk of IPV

Risk is defined as a 'situation involving exposure to danger' (Oxford Dictionary of English, 2011) and includes two key concepts of probability and effect (Breakwell, 2014). Practically, risk in IPV is the probability or likelihood of an IPV offence recurring, as well as the extent of harm, or severity of that violence (Kropp, 2008; National Collaborating Centre for Mental Health, 2015). Clearly, IPV poses a significant risk of harm as it is both physically and psychologically harmful to women. Being able to identify this risk is important in order to prevent or minimise the harm caused to women impacted by IPV. Therefore, a deeper understanding of risk, including the likelihood of recidivism and severity of the offence is warranted.

1.3.1 Risk: Likelihood of Reoffending

An Australian study conducted by Millsted and Coghlan (2016) found that 51% of IPV offenders were involved in another recorded IPV offence within four years of their initial offence. Research on short-term reoffending also indicated that 23% of IPV offenders reoffended within 6 months (Morgan, Boxall & Brown, 2018). This concurs with research in the USA which found that 40% of IPV offenders were arrested for new charges of domestic violence within 6 months to 2 years following probation (Klein & Crowe, 2008). The high level of recidivism globally highlights the need to effectively identify and assess those who are at risk for reoffending (Petersson & Strand, 2017).

1.3.2 Risk: Severity

The seriousness, or severity of the offence is also an important part of defining risk in IPV (Breakwell, 2014; Kropp, 2008; National Collaborating Centre for Mental Health, 2015; Nicholls et al., 2013). Severity includes acts of IPV that have serious implications for survivors, including severe injury or even death (Weisz, Tolman & Saunders, 2000). Severe forms of violence include forced sex, choking or strangulation and using a weapon. These dangerous forms of violence have more recently become of interest in both the justice and mental health sphere (Weisz et al., 2000).

1.3.2.1 Severity: Strangulation

Strangulation is defined as the 'external compression of a person's neck and/or upper torso in a manner that inhibits that person's airway or the flow of blood into or out of the head' (Pritchard, Reckdenwald & Nordham, 2017, p. 410). Strangulation is common in IPV, with one particular study suggesting that 68% of women from women shelters in the USA had a history of being strangled by their partner (Wilbur et al., 2001). Similarly, Dobash and Dobash (2004) conducted a study with 95 hetero-sexual couples selected from a larger study

on IPV and intervention, where over 66% of the women reported experiencing ‘choking’ by their partner.

Strangulation is often fatal and a common form of homicide (Messing, Thomas, Ward-Lasher & Brewer, 2018). However, non-fatal strangulation also has important implications for IPV survivors (Baker & Sommers, 2008; Pritchard, Reckdenwald & Nordham, 2017). During the act of strangulation, the individual is at the mercy of the assaulter, intensely struggling for air and unable to breathe (Joshi, Thomas & Sorenson, 2012). The sheer brutality and control displayed in strangulation makes this form of violence severe not only in its consequences, but also during the act itself (Joshi et al., 2012; Thomas, Joshi & Sorenson, 2014). Strangulation can cause a multitude of complications such as loss of consciousness, dizziness, difficulty breathing and difficulty swallowing (dysphagia) (Wilbur et al., 2001; Zilkens et al., 2016). Whilst strangulation can often be lethal, consequences of non-fatal strangulation include long-term physical and psychological issues (Messing et al., 2018). These can include neurological problems, insomnia and memory difficulties (Messing et al., 2018; Wilbur et al., 2001). Strangulation is therefore important to consider as a specific form of IPV.

1.3.2.2 Severity: Sexual Assault

Sexual assault, particularly within a domestic relationship is often underreported (Jung, Faitakis & Cheema, 2020; Lehner, 2017; Wolitzky-Taylor et al., 2011). Australian statistics indicate that women are eight times more likely to be sexually assaulted by their partner than men (Australian Bureau of Statistics, 2016). Sexual assault is defined as ‘illegal sexual contact that usually involves force upon a person without consent’ (Merriam-Webster, 2020), and has become more commonly recognised in this context as intimate partner sexual violence (IPSV; Bagwell-Gray, Messing & Baldwin-White, 2015). Research indicates that IPSV is common, with the prevalence of IPSV among IPV survivors from across 11 unique

studies being over 36% (Bagwell-Gray et al., 2015). Another study with IPV survivors who were seeking a protection order found that 68% of the sample had been sexually assaulted at least once during their relationship (McFarlane et al., 2005).

IPSV is important as it poses a significant threat to women in terms of both psychological and physical injuries obtained. Women who are sexually assaulted experience gynaecological problems that are often long lasting. These issues include sexually transmitted diseases, vaginal bleeding and infections, chronic pelvic pain, and urinary-tract infections (Campbell, 2002; McFarlane et al., 2005; Sachs-Ericsson, 2014). Such gynaecological problems are the greatest distinction between physical and sexual violence, and this highlights the importance for including it as a type of severe IPV. In addition, psychological trauma such as PTSD, depression, fear and anxiety are also significant consequences of sexual assault (Campbell, Dworkin & Cabral, 2009; McFarlane et al., 2005).

1.3.2.3 Severity: Weapon Use

IPV frequently involves the use of weapons, and this type of violence has been identified as severe (Folkes, Hilton & Harris, 2012). A large number of studies have indicated weapon use to be a common form of violence committed in IPV (Abramsky et al., 2011; Connors, Mills & Gray, 2013; Echeburúa, Fernández-Montalvo, de Corral & López-Goñi, 2009; García-Moreno et al., 2013; Messing & Thaller, 2015; Millstead & Coghlan, 2016). Research with residents living in Californian women's shelters revealed that almost 57% of respondents had a household object used against them, and 32% reported use of a handgun (Sorenson & Wiebe, 2004). Using weapons such as knives, guns or household items (i.e. pot/pans, electrical cords, scissors) increases the ability to inflict harm on the individual that is potentially lethal (Folkes et al., 2012; Sorenson & Wiebe, 2004), therefore making this a severe type of IPV.

1.4 Cost of Severe Forms of IPV

Aside from these three severe forms of IPV, there are many other types of assault that not only occur regularly, but have long-lasting implications on survivors. This includes, but is not limited to; financial abuse, coercive control, and stalking (Cleak, Schofield, Axelsen & Bickerdike, 2018; García-Moreno et al., 2013; Hall, Walters & Basile, 2012). However, from a systematic perspective, the economic implications related to severe forms of violence such as strangulation, weapon use and sexual assault are much greater in general than other types of violence survivors experience.

Strangulation and weapon use are frequently related to lethality, as they pose a significant harm to the victim which can lead to death (Folkes et al., 2012; Messing, Patch, Wilson, Kelen & Campbell, 2018; Spencer & Stith, 2020). The economic impact of homicide is astounding, with the Australian Institute of Criminology (AIC) estimating the cost to be over \$3 million per incident (price inflated to 2020; Smith, Jorna, Sweeney & Fuller, 2014). \$3 million multiplied by the number of IPV homicide cases reported in Australia in 2012-2014 is equal to \$378 million of medical, loss of output and intangible costs as a result of homicide (Bryant & Bricknell, 2017). Sexual assault is also considered severe because of its significant physical and psychological impact on survivors (Campbell et al., 2009; McFarlane et al., 2005). In addition to these individual implications, such severe forms of IPV carry significant economic burdens. Medical costs for sexual assaults were just over \$62 million dollars for the estimated number of Australian sexual assault cases with sustained injuries in 2011 (price inflated to 2020; Smith et al., 2014).

These figures highlight the awful individual and economic consequences associated with IPV, specifically regarding strangulation, sexual assault and weapon use. As a result, mental health and correctional practitioners have a professional responsibility to assess the risk of reoffending, as well as the risk of severe violence (Nicholls et al., 2013).

1.6 Current Risk Assessment Instruments for IPV

The need to screen for the risk of IPV reoffending has brought about a variety of risk assessment instruments. According to Kropp (2008), there are four assessment tools that seem to be the most promising: Danger Assessment, Domestic Violence Screening Inventory, Spousal Assault Risk Assessment Guide and the Ontario Domestic Assault Risk Assessment.

1.6.1 Danger Assessment (DA)

The Danger Assessment (DA) was developed to assess the likelihood of spousal homicide (2007). The DA consists of two key parts. The first part is a calendar where survivors are asked to record both the severity and frequency of violence throughout the past year. This is recorded on a scale of 1-5 with 1 being no injuries or lasting pain e.g. a slap and 5 being wounds from a weapon (Campbell, 2007). The second part of the DA is a 15-item yes or no list of risk factors that are related to IPV. The DA was found to be associated with severity and frequency of IPV (Kropp, 2008). However, the DA requires the self-report of the survivor as well as enough time for survivors to recount previous experiences of assault. This makes the DA a lengthy assessment which requires not only an assessor, but also the survivor to be a part of the assessment.

1.6.2 Domestic Violence Screening Inventory (DVSI)

The Domestic Violence Screening Inventory (DVSI) is a risk assessment tool that was developed in Colorado and validated on a sample of 1,465 male IPV offenders (Williams & Houghton, 2004). The DVSI contains 12 items which address both behavioural and social factors deemed to be significantly correlated with IPV recidivism (Kropp, 2008; Williams & Houghton, 2004). The behavioural factors include the offender's history of both IPV and non-IPV offending, while the social factors include presence of children and relationship status. The DVSI has been noted for its validity in predicting recidivism (Williams & Houghton, 2004). However, as the items on this assessment are scored on a 3 or 4 point

Likert scale, it increases the subjectivity of the scale and therefore may impact the validity of the tool (Mercer & Ziersch, 2017).

1.6.3 Spousal Assault Risk Assessment Guide (SARA)

The Spousal Assault Risk Assessment Guide (SARA) is a structured professional judgement tool that has been designed as a set of guidelines to assess IPV recidivism (Helmus & Bourgon, 2011; Kropp, 2008; Kropp & Hart, 2000). The SARA includes 20 risk factors based on empirical literature that explore general violence and spousal violence. This tool is indicated by the authors as being a guideline rather than a formal psychological test (Kropp & Hart, 2000) and therefore has a greater reliance on professional experience in order to administer.

1.6.4 Ontario Domestic Assault Risk Assessment (ODARA)

The Ontario Domestic Assault Risk Assessment (ODARA) is an actuarial risk assessment tool, designed to assess the likelihood that an IPV offender will reoffend (Hilton et al., 2004). An actuarial approach is designed to predict future violence and is based on statistics rather than solely using professional's opinions and experience (Kropp, 2008). This approach is useful as it avoids subjective biases of professionals. The ODARA's construction sample consisted of 589 male offenders with an average age of 38 (Hilton et al., 2004). There are 13 items that were selected based on being the best-performing predictors of recidivism (Hilton et al., 2004). These items range from questions about previous violence (e.g. has a prior domestic assault), to specific questions about the assault (e.g. unlawful confinement of victim during index offence; Hilton et al., 2004).

This tool was originally designed for frontline police officers attending domestic dispute calls, so that it is simple to administer and does not require specific professional qualifications. The questions are scored on the basis of an 'index offence', which is the most recent occurrence where the offender assaulted his female partner (Hilton, Harris & Rice,

2010). In the original validation study, recidivism over a 5-year period ranged from 7% for those who scored 0, through to 74% for those who scored in the 7-13 range (Hilton et al., 2010).

In comparison to the other three risk assessments, the ODARA was found to have the highest average weighted 'Area Under the Curve' (AUC) and effect size (AUC = .67, $d = .608$; Messing & Thaller, 2013). The AUC is used to indicate the accuracy of a particular test to correctly predict future events (Kebbell, 2019). According to Rice and Harris (2005) an AUC of .56 is considered to have small predictive validity, .64 is considered moderate and .71 is considered large. Therefore, the ODARA has moderate predictive validity (AUC = .67).

The ODARA, whilst primarily assessing the likelihood of reoffending, has also been examined against measures of severity. These measures were: the total of victim injury scores, the Cormier-Lang Scale which assesses criminal history, and the sum of subsequent offences that were considered acts of severe violence. These were positively correlated with the ODARA score with an average Pearson's r of .36 (Hilton et al., 2004). However, these severity indicators did not consider specific forms of severe violence such as strangulation, weapon use and sexual assault. This warrants further research as to whether indication of severity, particularly as it relates to strangulation, weapon use and sexual assault, is encompassed within the ODARA.

1.6.4.1 Use of the ODARA in Various Countries

The ODARA was validated in Ontario, Canada, and has also been used in Switzerland, Austria, Germany, New Zealand and Australia (Gerth, Rossegger, Urbaniok & Endrass, 2014; Lauria, McEwan, Luebbers, Simmons & Ogloff, 2017; Rettenberger & Eher, 2013). In an Australian frontline police study, the ODARA was able to predict recidivism with an AUC of .68 (Lauria et al., 2017). This moderate predictive accuracy is consistent

with the developmental sample, and therefore a possible indication that this tool can be applied to international settings. However, Lauria et al. (2017) also found that items 2 and 10 which relate to the offender's history of violence towards others, accounted for the majority of the ODARA's recidivism prediction, with the other items not being as useful in the performance of the tool. However, this is one of the only significant studies conducted on the ODARA in an Australian setting. Given that the ODARA has had limited use in Australia, it is important to conduct further research in this context.

1.6.4.2 ODARA in Correctional Settings

Most research using the ODARA concerns its use by frontline police. There has been limited research concerning its application in correctional settings (Day, Richardson, Bowen & Bernardi, 2014). One study included 150 incarcerated men that were referred to an IPV program. The authors concluded that some of the items in the ODARA were so frequent in the sample that they contributed little towards the ODARA's aim of prediction of recidivism (Hilton, Harris, Popham & Lang, 2010). Overall, the ODARA was able to predict IPV recidivism with an AUC of .64 within this correctional population (Hilton et al., 2010). An Austrian study on an incarcerated sample of men who had committed at least one sexually motivated offence against their partner had similar results (AUC = .71; N=66; Rettenberger & Eher, 2013). These results are insightful as they show that the ODARA has had moderate predictive validity in correctional settings.

A recent study looked at the ODARA in a sample of 258 males charged with a violent offence against a female intimate partner who were referred for threat assessment. This study simply analysed the reliability of the ODARA and found the tool to have good inter-rater reliability (Hilton, Pham, Jung, Nunes & Ennis, 2020). However, aside from the studies reported above, there has been minimal research to further support or dispute the ODARA's ability to predict recidivism in a correctional setting.

Correctional services hold the responsibility of management, rehabilitation and program creation for all offenders, particularly IPV perpetrators (Day, Richardson, Bowen & Bernardi, 2014). Determining the level of risk an IPV offender has by utilising risk assessment tools is important in being able to effectively manage offenders. Applying risk assessment tools in this way will aid in the appropriate placement of offenders in interventions, in order to ultimately support the decrease of reoffending. Therefore, further research is required to examine the way in which the ODARA functions in a correctional setting, specifically within Australia.

1.7 Summary

The impact of IPV on survivors and society, and the need to assess the risk of IPV has been well researched. As a result, several risk assessments were created, with varying levels of validity and application. In particular, the ODARA has become a popular risk assessment that has been used around the world in frontline police settings, including Switzerland, Canada and Australia (Gerth et al., 2014; Hilton et al., 2004; Lauria et al., 2017). However, minimal research has been conducted into the suitability, or feasibility of the ODARA in a correctional setting, particularly in an Australian population. Conceptually, feasibility examines whether a risk assessment or intervention can be adapted into a particular setting. The main objective when assessing feasibility is to answer the question: can it work? by evaluating the processes of the particular tool (Orsmond & Cohn, 2015). In order to further understand how the ODARA performs within the correctional setting, an assessment of feasibility is necessary.

In addition, there has been a shortage of research regarding a key component of risk – severity, and how it is accounted for in this particular risk assessment. Whilst some risk assessments (i.e. DA) emphasise the potential severity of reoffending, the likelihood of reoffending is the main focus of most IPV risk assessments. For example, the goal of the

SARA is to predict recidivism, and out of the 20 items, only one item specifically explores the severity of the assault (Kropp & Hart, 2000). This lack of emphasis on severity reveals a gap which needs to be explored. To date there is limited understanding of how the ODARA performs in Australian correctional settings, and whether it also accounts for types of IPV severity.

1.8 Current Study

This thesis is part of a research agenda that aims to validate the ODARA in the South Australian (SA) correctional setting. The current study aims to first investigate the feasibility of using the ODARA in the SA correctional setting. The study also seeks to analyse whether the ODARA accounts for particular types of severity. Increasing the knowledge in this under researched area will support the possible validation of the ODARA in SA. This will in turn contribute to improved intervention, treatment and management of IPV offenders, which can support the reduction of IPV in SA.

1.8.1 Project Aims

The aims of this study are:

1. To explore the feasibility of the ODARA's performance in the South Australian correctional setting by analysing the missing data, interrater reliability and internal consistency of the tool.
2. To examine the relationship between ODARA scores, ODARA items, and severity indicators of strangulation, weapon use and sexual assault.

CHAPTER II

Method

2.1 Study Design

In order to achieve the study aims outlined in chapter 1, a cross-sectional study design was used. This study was approved by the Human Research Ethics Sub-Committee of the School of Psychology at the University of Adelaide (Approval No. 20/23). Participant data were collected from archival data in the Justice Information System (JIS) used by enforcement and correctional officers in South Australia.

2.2 Participants

The study was conducted using data collected by the Department for Correctional Services (DCS) in Adelaide, South Australia. Participants included in this study were male offenders from South Australia aged 18 and over. The participants had at least one police apprehension report detailing an IPV offence, which was either physical assault against an intimate partner or credible threat of harm or death with a weapon in hand. The vast majority of participants included in the data-set were offenders currently or previously imprisoned, who commenced a Domestic and Family Violence Intervention Program (DFVIP) as a result of their ODARA score. Under department guidelines, male offenders with a current or prior charge of IPV against a female intimate partner were assessed with the ODARA. The participants were assessed by close to 50 different clinicians. All men with an IPV index offence from an apprehension report and subsequent completed ODARA from 2000 to 2019 were included.

The research team continued data collection until the 3rd of April 2020, where the researcher was no longer able to attend the correctional office and access offender records due to COVID-19. An initial data-set of 417 participants was available. However, the

ODARA assessment forms were not able to be located for 109 participants. The maximum number of missing items for a valid score is 5 (Hilton et al., 2010), therefore a further 17 participants were removed for having 5 or more missing items. In total there were 291 participants included in this study.

The mean age of participants included in this study was 31.87, and 21.4% of participants identified as Aboriginal and Torres Strait Islander (ATSI). Further, 85% of participants had recorded at least one previous IPV offence. A post hoc power analysis confirmed that there were sufficient participants to conduct the analyses required. The results showed that we achieved power of .93 with a medium effect size ($\chi^2 = .3$) and alpha ($p < .05$) with a sample size of 291. Full results from this analysis can be seen in Appendix A.

2.3 Measures

Demographic Measures

Participants' demographic information was collected from JIS and included information on age, ATSI identification and relationship status. Relationship status was determined by indication on the apprehension report as to whether or not the offender and survivor were still together. If the survivor or offender made comments such as 'we broke up last month' or 'I moved out, I told him I don't want to be with him anymore', relationship status was reported as 'separated'. If there was no indication of separation, relationship status was reported as 'together'.

Ontario Domestic Assault Risk Assessment (ODARA)

The ODARA is an actuarial risk assessment tool developed by the Ontario Provincial Police (OPP) to assess the risk of domestic violence recidivism (Hilton et al., 2004; Olver and Jung, 2017). The tool is made up of 13 items which assess: (1) prior domestic violent incident of assault in police records; (2) prior non-domestic violent incident in police records; (3) prior custodial sentence of 30 days or more; (4) failure on prior conditional release; (5) threat

to harm or kill at the index assault; (6) confinement of partner at index offence; (7) victim concern about future assault; (8) more than one child between victim and offender; (9) victim's biological child from previous partner; (10) violence against others; (11) substance abuse; (12) assault on victim while pregnant and (13) barriers to victim support.

The assessor scores each variable as either present (1), not present (0), or missing (?). Possible scores range from 0-13. The raw score of 0-13 is prorated according to how many missing items were included, and then converted into 1 of 7 probability categories that range from 7-74% probability of re-offending within 5 years post index assault (Hilton et al., 2010). In order to measure the inter-rater reliability of the ODARA scores, the researcher rescored a random subsample of 89 participants. The researcher retested this subsample after being trained under the supervision of employees at DCS and receiving a certificate of completion for the ODARA training.

2.4 Coding for Severity Variables

Each of the 219 participants were scored against the severity variables of strangulation, weapon use and sexual assault, being indicated as present or absent by the researcher. The severity variables were coded on the basis of multiple discussions between the researcher and DCS supervisor, who has a bachelor in Behavioural Science and has been working for DCS overseeing the development and evaluation of criminogenic rehabilitation programs for over 6 years. Coding the severity variables was also based on widely accepted definitions of the variables that are explained below. In order to measure inter-rater reliability of the severity variables, the DCS supervisor rescored a random subsample of 50 participants.

Strangulation

Strangulation was defined as the 'external compression of a person's neck and/or upper torso in a manner that inhibits that person's airway or the flow of blood into or out of the head' (Pritchard et al., 2017, p. 410). This item was coded by including all written

indications of the offender using any means to restrict the victim's breathing. For example, if the survivor recounts feeling shortness of breath due to physical restraint inflicted on her from the offender, that was included and scored as present (1). Any case where there was no written indication of strangulation was scored as not present (0).

Weapon Use

Weapon use was defined as any instance where the offender used an object other than his hands or feet to cause, or attempted to cause, bodily harm towards the survivor, or used the weapon to make a credible threat of death. Any case where the offender used an object, the item was scored present (1), and any instance where he only used his hands or feet, weapon use was scored as absent (0).

Sexual Assault

Sexual assault was defined as sexual behaviours and acts inflicted on the survivor, where they have not given consent. In order for sexual assault to be coded as present (1), the researcher had to have a clear written indication of a sexual act occurring, and indication of the victim either implicitly or explicitly not agreeing to it. For example, instances where the victim said 'he told me to perform a sexual act on him so I did it so he would stop bashing me', this was included as sexual assault. Any case where there was no written indication of a sexual act occurring, or where there was no clear implicit or explicit lack of consent, was scored as not present (0).

2.7 Descriptive and Inferential Analysis

The data were analysed using IBM SPSS Statistics Version 26. In order to address the first aim of exploring the feasibility of the ODARA in the South Australian correctional setting, descriptive statistics were calculated. The ODARA items require information about individuals that may not have been recorded on justice systems. As a result, sometimes the answers were left as 'missing'. These 'missing' answers were analysed to determine the

frequency of missing information. The missing information was also assessed to explore whether it was missing at random or whether there were patterns of data missing from particular items. Internal consistency was calculated by analysing Cronbach's alpha as well as item-total correlations. Interrater reliability was used to calculate the percentage of agreement between the clinicians and the researcher's overall ODARA score, as well as the scoring on each individual ODARA item.

To address the second research aim, the severity variables were analysed alongside the ODARA in various tests. A test of interrater reliability was run to determine the percentage of agreement between the researcher and the supervisor on the severity variables. Point-biserial and Phi correlations were calculated to look at the relationship between the total ODARA score, as well as each individual ODARA item, against the severity variables. Phi correlations were also used in order to examine the relationship between the severity variables themselves. Finally, three separate analyses of logistic regression were run to examine the combined effects of the severity variables against the ODARA items.

CHAPTER III

Results

3.1 Preliminary Analysis

Data screening of the raw total ODARA score variable was performed prior to analyses to test for normality of data and homogeneity of variance. A Kolmogorov-Smirnov (K-S) goodness-of-fit test was used to test for normality of this variable. Using the K-S alongside visual inspection of graphical data is recommended as large sample sizes can often generate significant results even when there is minimal deviation from normality (Field, 2009). This study yielded a significant result for the K-S, however upon inspection of Q-Q

plots, histograms and box plots, the data appeared not to deviate from normality. This was confirmed by assessing the skewness and kurtosis, both of which clustered around 0 and therefore also indicated normality (Field, 2009).

The sample characteristics of this study are presented in Table 1. As mentioned in chapter 2, a total of 291 participants were included in this study and their average age was 31.87 (SD= 8.28). Table 1 shows that the mean ODARA score for the total sample was $M = 7.49$ (SD= 1.87). This is quite high in comparison with the development sample's ODARA score ($M = 2.89$, $SD = 2.14$; Hilton et al., 2004). Table 2 shows the frequency of ODARA items being present in both the original and retest scoring. A majority of the items were found to be present, with item 4 (failure on prior conditional release) having the highest percent present for both the original and retest scores (91.3% and 88.8% respectively).

Table 1

Descriptive Statistics of ODARA and Severity Variables

Variable	Mean (SD) or %
ODARA score	7.49 (1.87)
Weapon used (%)	30.1
Strangulation used (%)	27.3
Sexual Assault occurred (%)	9.3

Note. All characteristics are based on time of the index offence. $N = 291$

Table 2

Presence of ODARA Items in Original and Retest Scoring

ODARA items	Present in original (%)	Present in retest (%)
1. Prior domestic incident	86.6	77.5
2. Prior non-domestic incident	79.2	75.3
3. Prior custodial sentence of 30+ days	70.1	85.4
4. Failure on prior conditional release	91.3	88.8
5. Threat to harm or kill at index assault	57.0	29.9
6. Confinement at index assault	19.8	8.0
7. Victim's concern about future	56.6	13.8
8. More than one child between victim and offender	57.2	68.6
9. Victim's biological child from previous partner	51.2	34.8
10. Violence against others	82.5	74.2
11. Substance abuse	87.8	48.3
12. Assault on victim when pregnant	10.5	2.4
13. Barriers to victim support	73.2	73.9

Note. n=291 (original scoring), n=89 (retest scoring).

3.2 Research Aim One: Exploration of the Feasibility of the ODARA and its Use in South Australian Correctional Setting

3.2.1 Missing Data

Analysis of the missing data found in the ODARA items showed interesting patterns. As can be observed in Table 3, from the ODARA tests originally scored by the DCS clinicians, items

7, 9, 12 and 13 all had more than 20% of data missing. From the ODARA tests retested by the researcher, only items 8 and 9 had more than 20% of data missing.

Table 3

Frequency of Missing Data in Original and Retest Scoring

ODARA items	Missing in original (%)	Missing in retest (%)
1. Prior domestic incident	2.4	0
2. Prior non-domestic incident	1	0
3. Prior custodial sentence of 30+ days	1	0
4. Failure on prior conditional release	1.4	0
5. Threat to harm or kill at index assault	11.3	2.2
6. Confinement at index assault	10	1.1
7. Victim's concern about future	24.7	2.2
8. More than one child between victim and offender	9.3	21.1
9. Victim's biological child from previous partner	28.9	47.8
10. Violence against others	2.1	0
11. Substance abuse	6.9	2.2
12. Assault on victim when pregnant	27.8	7.8
13. Barriers to victim support	29.6	1.1

Note. n=291 (original scoring), n=89 (retest scoring).

3.2.2 Interrater Reliability

A test of interrater reliability was conducted to determine if there was agreement between the researcher and the clinicians who scored the participants on the ODARA tool. The results showed good to excellent agreement between the researcher and the clinicians on their total raw ODARA score; (ICC single measure = .82, 95% CI = .74 - .89, $p < .001$). This

was slightly lower, however still in keeping with both the development (ICC=.90) and subsequent samples (ICC=.89) (Hilton et al., 2004; Rettenberger & Eher, 2013). Interrater reliability was also analysed to determine the agreement between the clinicians and researcher on all individual ODARA items. Table 4 shows the result of this analysis. Percentage agreement between particular items varied, with item 2 having the highest agreement (98.9%) and item 7 having the lowest percentage agreement (54%). Kappa results confirmed this and also showed that all items had significant agreement excluding item 7.

Table 4

Interrater Reliability of Original ODARA Scores with Retest Scores

ODARA items	Kappa	Percentage Agreement
1. Prior domestic incident	.50*	85.9
2. Prior non-domestic incident	.97*	98.9
3. Prior custodial sentence of 30+ days	.55*	85.1
4. Failure on prior conditional release	.53*	93.0
5. Threat to harm or kill at index assault	.59*	77.2
6. Confinement at index assault	.41*	86.1
7. Victim's concern about future	.17	54.0
8. More than one child between victim and offender	.55*	79.7
9. Victim's biological child from previous partner	.59*	79.4
10. Violence against others	.83*	94.1
11. Substance abuse	.26*	62.5
12. Assault on victim when pregnant	.41*	91.5
13. Barriers to victim support	.30**	74.6

Note. * $p < .001$, ** $p < .05$

3.2.3 Internal Consistency

A reliability analysis was conducted on the ODARA in order to calculate the internal consistency of the tool. Cronbach's alpha showed poor internal consistency ($\alpha = .45$) for the originally rated ODARA scores as well as the retested ODARA scores ($\alpha = .41$). Such a low alpha may suggest that the items are poorly related to each other, as a cut-off point of $\alpha = .70$ is commonly adopted (Field, 2009). The internal consistency was not reported for the original validation of the ODARA, but a follow up study found $\alpha = .65$ (Hilton, Harris & Holder, 2008). This suggests that the internal consistency of this study is quite poor in comparison, as items below .3 are considered to have poor internal consistency (Field, 2009). Table 5 shows that, whilst item-total correlations ranged from -.05 to .38, all but 2 items (item 3 and 9) have low internal consistency.

Table 5

Item-Total Correlations with the ODARA Items

ODARA items	Corrected item-total correlations
1. Prior domestic incident	.29
2. Prior non-domestic incident	.25
3. Prior custodial sentence of 30+ days	.30
4. Failure on prior conditional release	.27
5. Threat to harm or kill at index assault	-.05
6. Confinement at index assault	.04
7. Victim's concern about future	-.04
8. More than one child between victim and offender	.13
9. Victim's biological child from previous partner	.38

10. Violence against others	.21
11. Substance abuse	.14
12. Assault on victim when pregnant	.16
13. Barriers to victim support	.18

3.3 Research Aim Two: to Examine the Link Between Severe Forms of IPV Offending and the ODARA

3.3.1 Interrater Reliability for Severity Variables

A test of interrater reliability was also run to determine the agreement between the researcher and the supervisor on the severity variables. Table 6 shows that there was high level of agreement on strangulation, weapon use and sexual assault between the researcher and the supervisor.

Table 6

Interrater Reliability Between Supervisor and Researcher on Severity Variables

Severity Variable	Kappa	Percentage Agreement (%)
Strangulation	.953*	98
Weapon Use	.786*	90
Sexual Assault	.834*	96

Note. * $p < .001$

3.3.2 Point-Biserial and Phi Correlations

Point-biserial correlations were used to determine the relationship between the total ODARA score and the severity variables. No significant relationships were found for any of the three variables, with an r of .062, .020 and -.025 for strangulation, weapon use and sexual assault respectively. Phi correlations were also calculated for the relationship between each severity variable and each ODARA item. Table 7 shows that a majority of the ODARA items

had no significant correlations with any of the three severity variables. However, item 6 (confinement) had a small, positive correlation with strangulation ($\Phi=.266$) and sexual assault ($\Phi=.14$), as did item 5 (threat to harm and kill) with weapon use ($\Phi=.18$). Item 10 (prior non IPV violence) had a small, negative correlation with sexual assault ($\Phi= -.13$), as did item 13 (barriers to support; $\Phi= - .16$). Phi correlations were then calculated between each of the three variables to see whether they were significantly related to one another. Table 8 shows that only strangulation and sexual assault has a significant, positive correlation. However, the relationship was small ($\Phi=.12$).

Table 7

Phi Correlations (Φ) Between Severity Variables and ODARA Items

ODARA Items	Strangulation	Weapon Use	Sexual Assault
1. Prior domestic incident	-.018	.056	.054
2. Prior non-domestic incident	.003	.001	-.069
3. Prior custodial sentence of 30+ days	-.054	.055	-.075
4. Failure on prior conditional release	-.091	.039	.100
5. Threat to harm or kill at index assault	.116	.184*	-.009
6. Confinement at index assault	.266*	.096	.141*
7. Victim's concern about future	-.001	.082	.003
8. More than one child between victim and offender	.031	-.035	-.006
9. Victim's biological child from previous partner	.068	.077	-.008
10. Violence against others	-.046	-.020	-.133*
11. Substance abuse	.07	.004	.046
12. Assault on victim when pregnant	-.046	-.018	-.105
13. Barriers to victim support	.078	-.155*	-.070

Note. * $p<.05$.

Table 8

Phi Correlations(Φ) Between Severity Variables

Severity Variable	Strangulation	Weapon Use	Sexual Assault
Strangulation	1	.09	.12*
Weapon Use	.09	1	.05
Sexual Assault	.12*	.05	1

Note. * $p < .05$.

3.3.3 Prediction of Severity Variables

As the severity variables in this study are dichotomous (i.e. strangulation present vs strangulation not present), logistic regression was an appropriate form of analysis (Field, 2009). Three logistic regressions were run to examine the combined effects of the ODARA items and the various severity variables. An initial logistic regression was run to examine the impact of the ODARA items, weapon use and sexual assault on strangulation as the dependent variable. The first model was not a significant fit of the data ($\chi^2(13) = 7.16, p = .89$) and none of the ODARA variables were significant predictors. Including the two remaining severity variables in step two did not significantly improve the model ($\chi^2(15) = 9.67, p = .84$). The whole model was able to explain between 10% and 16% of the variance in strangulation (Cox and Snell R Square and Nagelkerke R Square respectively).

A second logistic regression was run with weapon use as the dependent variable, as can be seen in Table 9. In step one, the ODARA items were included, and the overall model was not a significant fit of the data ($\chi^2(13) = 18.1, p = .15$). Weapon use and sexual assault were added as predictors in the final step. This model was found to be close to significance ($\chi^2(15) = 22.68, p = .09$), and therefore the statistically significant predictors are discussed. Weapon use was associated with a lower probability of the following predictors being

present: item 3 (prior custodial sentence; OR =.13, CI =.03-.68, $p = .02$), item 5 (threat to harm or kill; OR =.14, CI =.04-.56, $p = .005$) and sexual assault (OR =.09 CI =.01-.93 $p = .04$). The final model was able to explain between 22% and 33% of the variance (Cox and Snell R Square and Nagelkerke R Square respectively).

A final logistic regression was performed using sexual assault as the dependant variable. However, due to having very few cases ($n=27$) who endorsed sexual assault out of the 291 sample, the standard error was very large. This is in comparison to over 70 participants endorsing strangulation and sexual assault. Therefore, the output was uninterpretable and the logistic regression failed to converge on a solution.

Table 9

Logistic Regression Analysis for Predictors of Weapon Use

Variable	Model 1			Model 2		
	B (SE)	OR	95% CI	B (SE)	OR	95% CI
ODARA 1 (Prior domestic incident)	.24 (.99)	1.27	[.18, 8.82]	.67 (1.05)	1.94	[.25, 15.23]
ODARA 2 (Prior non-domestic incident)	.64 (1.05)	1.896	[.24, 14.71]	1.04 (1.08)	2.82	[.34, 23.36]
ODARA 3 (Prior custodial sentence of 30+ days)	-1.71 (.78)	.18	[.04, .83]	-2.02 (.84)*	.13	[.03, .68]
ODARA 4 (Failure on prior conditional release)	-.70 (1.39)	.496	[.03, 7.50]	-.38 (1.44)	.68	[.04, 11.53]
ODARA 5 (Threat to harm or kill at index assault)	-1.83 (.66)	7.66	[.04, .59]	-1.97 (.71)*	.14	[.04, .56]
ODARA 6 (Confinement at index assault)	-.29 (.70)	.75	[.19, 2.94]	-.12 (.75)	.89	[.21, 3.84]
ODARA 7 (Victim's concern about future)	.43 (.63)	1.54	[.45, 5.33]	.37 (.65)	1.45	[.40, 5.19]
ODARA 8 (More than one child between victim and offender)	-.62 (.66)	.54	[.15, 1.96]	-.87 (.71)	.42	[.11, 1.68]
ODARA 9 (Victim's biological child from previous partner)	.49 (.65)	1.63	[.45, 5.86]	.20 (.70)	1.22	[.31, 4.85]
ODARA 10 (Violence against others)	-.99 (.98)	.37	[.05, 2.54]	-1.89 (1.21)	.15	[.01, 1.62]
ODARA 11 (Substance abuse)	.38 (1.01)	1.47	[.20, 10.61]	.80 (1.12)	2.23	[.25, 19.91]
ODARA 12 (Assault on victim when pregnant)	.39 (.97)	1.48	[.22, 9.96]	.43 (.98)	1.53	[.23, 10.41]
ODARA 13 (Barriers to victim support)	1.19 (.70)	3.29	[.84, 12.87]	1.15 (.74)	3.16	[.74, 13.51]
Strangulation				.14 (.75)	1.15	[.26, 5.02]
Sexual Assault				-2.37 (1.17)*	.09	[.01, .93]

Note. * $p < .05$. OR = Odds Ratio. CI = Confidence Interval. Variable coding: ODARA 1-13 = 0 not present, 1 present; Strangulation = 0 not present, 1 present; Sexual Assault = 0 not present, 1 present.

CHAPTER IV

Discussion

4.1 Overview

As discussed in chapter 1, much of the literature to-date has focused on the ODARA's application within the police frontline setting. Further, it has primarily focused on the frequency of reoffending, rather than the severity of offending. The present study explored the feasibility of the ODARA in a South Australian correctional setting, in addition to examining the relationship between severe forms of violence and the ODARA. Analysing the feasibility of the ODARA found that overall, the ODARA did not perform to the same standard as it originally did, as there were significant patterns of missing data, as well as poor internal consistency. Assessing the link between the severity variables and the ODARA items also found that severity was not well accounted for within this risk assessment tool. There were small correlations observed, however only with a few of the items, and the inclusion of the severity variables within a logistic regression did not significantly improve the fit of the model. The following chapter evaluates and discusses these findings, including consideration of the practical and research implications.

4.2 Current Findings

4.2.1 Feasibility of the ODARA

The first aim of this study was to explore the feasibility of the ODARA within the South Australian correctional setting. As outlined in chapter 3, the mean ODARA score found in this study ($M=7.49$, $SD= 1.87$) was significantly higher than the development sample's mean score ($M=2.89$, $SD= 2.14$; Hilton et al., 2004). One explanation for this difference in mean ODARA scores might be due to this study's participants being previously or currently incarcerated offenders. It's likely that this contributed to the 5 criminal justice indicators (items 1-4 and 10; prior domestic incident, prior non-domestic incident, prior

custodial sentence, failure on prior conditional release, violence against others) being endorsed on a majority of assessments in this study. This was consistent with literature reporting a mean ODARA score of 7.84 (SD= 2.03) for a sample of corrections-involved males with a violent offence against a female intimate partner (Hilton, Pham, Jung, Nunes & Ennis, 2020). Slightly lower, but in line with this, was a sample of Canadian incarcerated male offenders which found an average ODARA of 5.81 (SD= 2.06; Hilton et al., 2010). This illustrates the difference between incarcerated and community samples when using the ODARA, and highlights the need to consider the feasibility of using this tool within the South Australian correctional setting. The high level of endorsement of items is also a potential cause for consideration. For example, in the current study item 4 (failure on prior conditional release) was endorsed on over 91% of ODARAs, relative to only 15% in the original validation study (Hilton et al., 2004). Previous research has also highlighted similar levels of endorsement in a correctional sample which resulted in minimal contribution to the prediction of recidivism (Hilton et al., 2010). This only further reflects the difference in samples and emphasises the necessity of considering feasibility when using particular tools in different settings.

Analysis of the missing data revealed significant patterns on items 9 and 13 (victim's biological child from previous partner and barriers to victim support respectively) for the DCS clinicians, and items 8 (more than one child between victim and offender) and 9 for the researcher. These three items rely heavily on information provided by the victim, and are therefore difficult to locate archivally. Access to victim information is not always possible, particularly in this study's context for ethical reasons. Further, the information required to score the ODARA is drawn from multiple sources within departmental case management and electronic record systems. This is consistent with literature where missing data were also most commonly found on items related to victim-offender relationship (Hilton et al., 2010).

Particularly in relation to item 13, the researcher had roughly 1% missing information on this item in comparison to just under 30% from the original clinicians. This may suggest that the understanding of how to score this item may have differed between the original and subsequent testing. The researcher used the manual as a strict guide as they had little prior experience in this field. However, it is possible that given the clinicians' many years of experience with the offending population, they were not guided as much by the scoring form and instead used the idea of barriers to victim support more broadly, resulting in greater ambiguity.

Good to excellent levels of interrater reliability were found for almost all items excluding item 7 (victim concern about future assault) and 11 (substance abuse). This is positive as it highlights that the researcher and clinicians were in agreement on items a majority of the time. However, poor levels of agreement on items 7 and 11 further emphasises that the necessary information is not always readily accessible in DCS systems. For example, the criterion for item 11 requires the assessor to search through numerous documents in order to correctly score the item. It is possible that this may have resulted in time-poor clinicians tending to endorse 'missing' more often, due to wanting to be cautious rather than underscore the ODARA.

The items within the ODARA seemed to correlate poorly with one another, with the internal consistency being unacceptably low. This was further confirmed by the item-total correlations that also showed poor internal consistency. Whilst poor internal consistency often suggests that the items do not relate to one another this may not necessarily be the case for this study. It is possible that the findings may be associated with information used to score the items being misinterpreted and therefore possibly misrepresented in this sample. For example, item 7 (victim's concern about future) had an extremely poor item-total correlation

(-.04). However, the scoring of this item, as mentioned previously, may have been misinterpreted and generalised, causing it not to be scored as according to the criteria.

The missing data and poor internal consistency bring into question the feasibility of using the ODARA within the South Australian correctional setting. Whilst the interrater reliability was good to excellent for the most part, item 7 and 11 further emphasise the need to assess feasibility.

4.2.2 Relationship between Severity and the ODARA

As indicated in chapter 1, the original ODARA validation study considered some forms of severity; however, these measures were broad and did not consider specific forms of severe violence. Considering this, the second aim of this study was to assess whether the ODARA accounted for severe forms of IPV, particularly strangulation, weapon use and sexual assault. The prevalence of strangulation and weapon use in particular within this population was alarmingly high. Just over 1 in 4 assaults included strangulation, and almost 1 in 3 assaults included weapon use, relative to the approximately 1 in 10 of assaults including weapon use in the original validation sample (Hilton et al., 2004). Of note is that the ODARAs were completed based on the most recent offence, rather than being selectively chosen. This highlights just how pervasive these kinds of severe, violent behaviours are. The prevalence of these behaviours also further emphasises the need to assess for severity within the ODARA.

A test of interrater reliability indicated strong percentage agreement for strangulation, weapon use and sexual assault between the researcher's original ratings, and the supervisor's subsequent retests. This is positive as it suggests that the researcher and clinicians were scoring the same concept. As a result, the coding of the severity variables seemed to be conceptualised well.

Item 5 (threat to harm or kill) was significantly related to weapon use. Research has likened weapon use to lethality (Folkes et al., 2012). Previous research has also indicated threats to injure or kill as being associated with a higher likelihood of future homicide, or lethality (Koziol-McLain et al., 2006). From this, it is possible that there is an association between threat to harm or kill and weapon use, due to their relationship with lethality.

Item 6 (confinement of victim) was positively related to both strangulation and sexual assault. This is an interesting finding that aligns with literature suggesting that confinement, sexual assault and strangulation are all related to the concepts of coercion and control (Lyndon, White & Kadlec, 2007; Stark, 2007; Vella, Miller, Lambert & Morgan, 2017). Therefore, it is possible that the relationship between item 6 and strangulation, and item 6 and sexual assault exists as they represent this idea of a controlling form of violence.

Item 10 (prior violence against non-domestic victim) was negatively correlated with sexual assault. This suggests that those who were previously violent towards non-domestic victims were less likely to sexually assault their female partner during the index offence. This may further support that sexual assault has a unique profile within IPV, that is more closely related to control (Lyndon, White & Kadlec, 2007) and therefore negatively relates to item 10, as it suggests a more general form of violence.

Item 13 (barriers to victim support) was negatively related to weapon use. As barriers to victim support includes the victim being in controlling circumstances, i.e. no access to mobile phone, no access to transportation, living in an area with no one close by, this may further support the idea that weapon use is a lethal, aggressive form of violence (Koziol-McLain et al., 2006). Whereas item 13 (barriers to victim support) is more closely related to the idea of control and coercion in violence, given its similar nature to confinement.

Nevertheless, overall, it seems that the majority of ODARA items did not have a significant relationship with any of the severity variables. The items that did correlate were

also quite small, and therefore should be viewed with caution. Correlations between the severity variables themselves also confirmed that these variables may reflect unique subtypes of IPV. Sexual assault and strangulation had a significant relationship, albeit small. Weapon use did not significantly correlate with any of the severity variables. This only further reiterates the possibility that weapon use is associated with lethality and aggression (Koziol-McLain et al., 2006; Sorenson & Wiebe, 2004) in comparison with sexual assault and strangulation which have been profiled as controlling and coercive (Lyndon, White & Kadlec, 2007; Vella, Miller, Lambert & Morgan, 2017).

Previous literature shows that the ODARA certainly predicts likelihood of reoffending (Hilton et al., 2004; Lauria et al., 2017; Rettenberger & Eher, 2013). However, if severity is considered to be an important part of risk as we are suggesting, the items in this tool seem to not account for it. Logistic regression analyses confirmed this, as the results revealed that there was no significant improvement in any of the models when including the combined effects of the ODARA items and the severity variables. The insignificant model predicting strangulation may suggest that strangulation is a specific type of IPV that is not related to, or able to be explained by any of the predictors, including the other severity variables.

Whilst there was no significant improvement in the overall model when predicting weapon use, the model was close to significance ($p < .09$) and therefore the significant predictors are discussed. Weapon use was associated with reduced probabilities for item 3 (prior custodial sentence), item 5 (threat to harm or kill) and sexual assault. On the contrary, Phi correlations revealed that each of these predictors had positive relationships with weapon use. This is an interesting contradiction and may be a result of many factors. When controlling for the other predictors in the logistic regression, the direction of relationship with weapon use changed. This could be due to the other predictors explaining a large amount of

the variance in the relationship that was controlled for within the logistic regression.

However, all associations were weak so interpretation of the significance of these findings should be done with caution.

A logistic regression predicting sexual assault was uninterpretable due to the significantly low sample size. It is possible that there was such a low number of cases of reported sexual assault simply because it did not occur often. However, more troubling is the possibility that the low occurrence of sexual assault within this population was due to it being underreported. Previous research tends to suggest that sexual assault is often underreported due to its sensitive and intimate nature (Bagwell-Gray et al., 2015; Lehner, 2017; Wolitzky-Taylor et al., 2011).

4.3 Limitations and Implications on Policy

This study provides an important contribution to the existing literature on the ODARA, particularly on its feasibility and inclusion of severity. It appears to be one of the first to analyse its use in an Australian correctional setting, as well as the inclusion of severity variables within the tool. This study also added to the existing literature on strangulation, weapon use and sexual assault, particularly as it relates to the Australian context. The present study endeavoured to overcome reliability limitations by retesting a subsample of the ODARA items as well as the key severity variables, in order to increase the consistency of scoring the ODARA. Due to the archival nature of the data, a favourable sample size was created, however there were limiting factors about this sample. The sample was limited by a lack of ethnic/cultural identification, as offenders identified as either ATSI, or non-ATSI. There was also an overrepresentation of offenders who had at least one previous IPV-related offence, which may have influenced the results of this study.

One key limitation of this study, which has also been highlighted by previous research, is the limited access to information (Hilton, Harris, Rice, Houghton & Eke, 2008).

As this study relied heavily on archival data, there was a degree of difficulty with locating particular information in order to correctly score the ODARA items. The archives of correctional services did not enable optimal assessment when using the ODARA as the information needed to score the various items is often found in many different places. This makes it difficult for clinicians and researchers alike to score on the sole basis of the archival data, as it is unclear whether information such as victim's biological child from previous partner (item 9) is not present, or whether it simply has not been recorded. We acknowledge that as the ODARA was originally created for frontline police officers, the police would have the ability to simply speak with the offender and/or the victim. However, the difficulties accessing key information has practical implications for correctional and justice professionals, as well as survivors and offenders. The ODARA score is used by DCS SA to determine whether offenders are referred to the DFVIP. Accordingly, a lack of information at assessment may result in incorrect scoring and subsequent placement or lack thereof, of the offender into an intervention program.

In this study, the focus shifted from the importance of assessing likelihood of reoffending, to the importance of assessing the severity of offending. Doing so provided an insight into severe forms of violence as key indicators of risk, and has also highlighted potential barriers of the tool. The results seem to suggest that there may be different profiles of IPV that the ODARA is not capturing. The literature on subtypes of IPV exists, however there has been minimal attention on how they relate to the ODARA specifically (Hilton et al., 2008). Further, previous research suggests that the ODARA may be assessing a more general form of IPV violence rather than any specific types or subtypes (Olver and Jung, 2017). Particularly in terms of the severity variables, there seemed to be no significant results that would suggest severity is accounted for within the ODARA. This is particularly concerning given the high prevalence of weapon use and strangulation within this cohort, both of which

have such high risk of lethality. Further, the results also suggest that there is no significant relationship between the severity variables themselves. This could also suggest that the severity variables are unique subtypes of IPV within themselves, and therefore do not relate well to one another. It is important that mental health, correctional and justice professionals recognise these differences in subtypes of IPV offenders. A greater understanding of the characteristics of IPV could consequently lead to more in-depth and thorough risk assessment tools that not only assess likelihood of reoffending, but also include the type of reoffending as an important element of risk.

4.4 Direction for Future Research

Practice

This study has illustrated some key difficulties faced by professionals when accessing offender-related information. A more systematic approach in the sorting and storing of offender information may improve access to information. This could include ensuring that all reports relating to offenders are stored in one specific location for the entire department, as well as ensuring that all physical documents are transferred into electronic files. In order to further improve the access to offender-related information, the ODARA could also be scored closer to index offence or subsequent time of incarceration in order to have greater access to further information if needed (Hilton et al., 2010). It is suggested that a tightening of application of the criteria may also increase validity when scoring offenders on the ODARA. This may be done by requiring the administration of the tool to be completed strictly alongside the criteria for clinician's constant and mandatory reference.

Research

Future research should explore increasing the feasibility of the ODARA in this particular setting. This could be done by validating the use of the tool in the South Australian correctional setting and assessing how well the tool is able to predict recidivism on a 5-year

trajectory (Hilton et al., 2010). However, this may not address the ODARA's lack of attention to the severity of violence. Therefore, future research could also look more thoroughly into subtypes of IPV to gain a better understanding of these profiles and how they can be assessed. Further research could explore the utility of including or adding items to the ODARA that significantly capture severe forms of violence. This may also reveal an opportunity for a new IPV risk assessment tool to be created.

4.5 Conclusion

This study has contributed valuable research to the risk assessment literature, by highlighting further questions about the feasibility of the ODARA, as well as its lack of ability to account for severe forms of violence. The results of this study seem to suggest further research is needed in order to consider the ODARA a valid risk assessment tool within the South Australian correctional setting. Further, this study has demonstrated that whilst severity of offence is a key component of risk, this information is not assessed or captured in the ODARA. The results of this study could inform public policy and practice changes, which may in turn support the aim to reduce reoffending, particularly offending that is IPV-related.

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Appendix A

