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Men's behaviour change programs: A pilot program incorporating nature-based intervention

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Celebrating
50 years

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Acronyms

CALD	culturally and linguistically diverse
DFV	domestic and family violence
MBCPs	men's behaviour change programs
QPS	Queensland Police Service
YFS	Youth and Family Services, Logan



Abstract

Globally, there is growing evidence for nature-based interventions in reducing recidivism and promoting wellbeing among offenders. However, nature-based interventions have yet to be trialled with men who have engaged in domestic and family violence (DFV). Given the importance of reducing violence against women and the lack of conclusive evidence for current approaches to preventing male perpetrated DFV, this study aimed to develop, pilot, test and refine an innovative program. The program builds on an integrated approach by including restitution to the community through an environmental project that sits alongside a traditional men's behaviour change program. This is the first of its kind in DFV programs internationally. Men participated in a 27-week intervention, with data collected pre and post intervention. Practitioners, community garden volunteers and (ex)partners also participated in data collection. The results of the study can be used to inform practice and training and can be built upon for a larger evaluation.



Executive summary

This report summarises the findings of an innovative intervention with male perpetrators of domestic and family violence (DFV). Given the importance of reducing violence against women and the lack of conclusive evidence for current approaches to preventing male perpetrated DFV, this study aimed to develop, pilot, test and refine a program. The program builds on an integrated approach by including restitution to the community through an environmental project that sits alongside a traditional men's behaviour change program (MBCP). This pilot was the first of its kind internationally.

The pilot program provided offenders with an opportunity to actively engage not only in a standard integrated program but also in community restitution, through engagement with a community garden. The intervention ran over 27 weeks from September 2021 to March 2022, in south-east Queensland. Practitioners from Youth and Family Services (YFS) Logan delivered the intervention, which combined Duluth-informed program content with time spent in a community garden. Partner support was provided during the men's engagement with the intervention and post engagement as required. The intervention was embedded in a multi-agency response to DFV which enabled information sharing with external agencies such as Queensland Police Service (QPS). Twelve men participated in the intervention group, with six men engaging in data collection at the end of the program. Their experiences were contrasted with those of 11 men undertaking a standard program, of whom five engaged in data collection at the end of the program. Multiple data collection methods were used to ensure rigour, with data collected from men in the intervention and comparison groups, (ex)partners, practitioners and community garden volunteers.

The study aimed to develop, pilot, evaluate and refine the nature-based intervention, in collaboration with community partner organisations. The primary aims of the study were:

- to test and refine the intervention by evaluating changes in rates of violence and men's behaviours and attitudes and by eliciting perceptions of the program and signs of safety from participants (men), practitioners, community garden volunteers, research observers and (former) partners, so that usefulness of the program was maximised; and
- to test and refine the study protocol by identifying unforeseen issues with data collection procedures and methods, so that the validity of the data in a larger study was not compromised.

To ensure that the aims were achieved, the objectives of the study were:

- to develop and implement an innovative MBCP that not only incorporated traditional methods but also differed in its approach by adopting a community environment project within a restorative framework;
- to use a mixed-methods control trial to test and refine the program and research design to create a best practice model for replication, dissemination and further research; and
- to make recommendations about the policy and practice implications of the study.

The results of the study can be used to inform practice development and training activities. It can be built upon for a larger evaluation. The pilot study drew on multiple data sources to provide a holistic overview of the program, including:

- semi-structured interviews with men in the intervention group, a comparison group, practitioners, garden volunteers and (ex)partners of men attending the intervention and a standard program;
- observations of the intervention group and comparison group; and
- survey measures with men in the intervention and comparison group.

A researcher log recorded reflections about how participants engaged with the methods employed, to inform judgements on the usefulness of specific methods for a larger study. The research log also allowed for the documentation of unexpected issues arising during the study, such as the impact of COVID-19. Unfortunately, the COVID-19 pandemic impacted the evaluation, and adjustments needed to be made to the intervention. These included a shift in region, a shift to a community garden rather than an environmental restoration site and a short period when the intervention was delivered via Zoom.

The intervention ran on Saturdays, with sessions lasting two hours. Men attended the garden one week and attended a standard session in a classroom the subsequent week. The program aimed to draw connections between the program content delivered in the standard setting and the activities undertaken in the garden. For example, week 1 of standard program content focuses on 'what is DFV?' The next week, in the garden, the content focused on basics of soil composition, allowing facilitators to draw connections between the foundations of planting and the foundations of a relationship free from violence. Garden sessions had consistencies with standard sessions in terms of structure and were similarly co-facilitated by a male and female practitioner.

Key findings

Men in the intervention group reported lower levels of anxiety when joining the gardening sessions, compared with the standard sessions. This was reflected in the General Health Questionnaire-28 (GHQ-28) scores, which showed an improvement among the intervention group across all domains of wellbeing. This result was not replicated in the GHQ-28 for men in the comparison group; however, the small sample size and the resulting inability to generalise the findings should be noted. While the primary aim of an MBCP is to reduce men's use of violence, managing mental health concerns can enhance engagement with the program. Facilitators believed that the garden was a good space to engage men who had been diagnosed with anxiety, ADHD or autism spectrum disorder because activities took their focus off the conversation. This was consistent with men's reports, including that they sometimes found it difficult to focus in the 'classroom' type environments, given past negative experiences in institutions.

The inclusion of the gardening sessions did not impact interagency communication. The pilot highlighted the importance of establishing a good relationship between the delivering agency, especially the facilitators, and the community garden volunteers. Two practitioners were concerned about the physical risks the men could pose in the garden; however, no added risk was observed, even when men were using power tools. Finally, practitioners were concerned about the risk to men's privacy during violence-focused discussions in the gardening space. This risk needs to be weighed against the benefits of men connecting with community members, and facilitators need to manage it. It also highlights the need for facilitators to be aware of the risks of the gardening space and to differentiate between their responsibilities and those of the garden volunteers, while ensuring that the garden space is suitably large to allow for meaningful conversations to occur with some level of privacy.

The gardening space allowed for more informal interactions between facilitators and men in the intervention group. Facilitators believed that men were more forthcoming in these discussions, although they remained worried that conversations in the garden could lack a violence focus and, thus, inhibit accountability. The organic nature of conversations in the garden allowed men to raise issues that they would find difficult to raise in formal group sessions. Facilitators believed that not enough of the program content was covered over the 27 weeks, because of the inclusion of the gardening sessions. However, practitioners were largely positive about the use of the garden space, particularly in reducing tension and stress while enabling more forthright conversations. Practitioners also identified challenges related to facilitating in the garden space, including:

- confusion over how best to integrate content in the gardening sessions;
- maintaining the ability to co-facilitate while in the gardening space;
- managing the time and tasks provided by the community garden; and
- differing levels of facilitator comfort in the gardening setting.

These challenges could be addressed through establishing clear roles and responsibilities for facilitators and for community garden volunteers. Noting that this program was the first of its type, facilitators suggested the need for core program content to be covered in the weeks not held in the garden. This highlights the need for further work to develop specific content to dovetail with the sessions held in the garden. The gardening setting lends itself more to one-on-one conversations or conversations in small groups, which may be impacted by facilitator skill. Facilitators thought that smaller groups were more manageable in the garden.

In sum, this pilot study shows that there is strong potential for a restorative outdoor activity to be incorporated in an intervention response for perpetrators of DFV. This will add to differential intervention options for perpetrators of DFV where the more formal psycho-educational behavioural change programs may be inappropriate for some men. Aboriginal and Torres Strait Islander and culturally and linguistically diverse (CALD) men could be considered for future development of this intervention. Such programs could be population specific, so that cultural processes of accountability and healing could be integrated with program content. The results of this pilot study should be viewed as a first step in the development of this novel approach to perpetrator intervention.

Next steps

The key findings of this pilot study illustrate the potential of this intervention. Practitioners saw great potential in the approach and identified further conceptual development of the model. These areas of enhancement should be undertaken before a larger trial of this intervention option is carried out.

The first is to develop a curriculum program combining Duluth program content with gardening sessions. This would allow greater integration of the design of violence-specific content with activities in the garden and would improve program outcomes. This curriculum could be developed jointly from the learnings in this report, in consultation with experienced practitioners, ecology experts and First Nations community leaders. A core curriculum may also assist in providing clarity on the principles that underpin the gardening sessions and how they can be constructed to form a cohesive program. A curriculum could also provide strategies on how to best maintain co-facilitation while in the gardening setting.

This pilot study has given insight into which participants may be most suited to the gardening setting, including men who:

- have high levels of anxiety;
- are unemployed or who work in an indoor setting;
- are 'hands-on' learners; or
- are First Nations people or are from a CALD community group with community protocols that value connection to nature.

Equally important to the selection of suitable men is the selection of suitable facilitators to lead gardening programs. The majority of facilitators valued the nature connection that garden sessions offered and saw the value of the program. Although most were enthusiastic, few had expertise in ecology. This led to an over-reliance on community garden volunteers to offer guidance. Ideally, facilitators would have a basic understanding of ecology, which would also assist in developing connections between the Duluth content and the gardening time. If this is not possible, facilitators should, at a minimum:

- be open to participating alongside the men in gardening activities to the best of their ability;
- be committed to the principles that underpin the gardening program;
- be comfortable having informal, individualised conversations with men in the garden setting; and
- be able to maintain productive relationships with the community garden volunteers.

Facilitators should be encouraged to visit the garden and to observe a session before facilitating in the garden.

The relationship between the community garden volunteers and the delivering agencies is crucial to the success of the program. This relationship needs to be maintained and sustained, to ensure that it is not disrupted by staff or volunteer turnover.

This pilot study highlighted practical challenges which can be overcome to improve outcomes. Ideally, the program would be conducted at the same venue every week, with the space able to accommodate a community garden and a confidential space for group conversations.

This study explored enablers of and barriers to running a victim-survivor group in a gardening setting. It is recommended that a co-design process be undertaken with victim-survivors, women's advocates and community leaders to:

- design an appropriate program that meets the needs of victim-survivors; and
- work through risk and practical concerns that may inhibit engagement.

The next trial should include multiple groups, including specific and general populations. It should be of sufficient size to produce results on the effectiveness of the intervention in comparison to other types of intervention. It must also have sufficient numbers of (ex)partners to report their experiences of the men who take part in the intervention.



Introduction

DFV remains one of the most challenging problems in society. The social, health and economic costs are indisputable: approximately one in six Australian women has experienced physical or sexual violence perpetrated by a current or former intimate partner, and one in four has experienced emotional abuse (Australian Institute of Health and Welfare 2019). This can lead to severe injuries and even death for victims. It can also adversely affect children. Children exposed to violence are more likely to experience health, developmental, social, emotional and behavioural problems (Ayre et al. 2016; Holt, Buckley & Whelan 2008). DFV is a factor in over 50 percent of child deaths (Cussen & Bryant 2015).

Recent government inquiries into DFV in Queensland and Victoria have called for greater focus on both intervention and justice responses for perpetrators (Bryce 2015; State of Victoria 2016). Both inquiries highlighted the inadequacy of programs to hold perpetrators accountable and identified the need to expand the range of evidence-based intervention options. Most recently in Queensland, the Women's Safety and Justice Taskforce noted the need for a better suite of evidence-based intervention options for perpetrators of DFV (Women's Safety and Justice Taskforce 2021). A 'one size fits all' approach to perpetrator intervention does not match the complexity and intersectionality inherent in DFV. The need to trial innovative interventions is acute.

In Australia, most perpetrator interventions come in the form of MBCPs. Generally, these programs attempt to educate and engage men about stopping violent and abusive behaviour; they focus on the safety of women and children; and they attempt to engage women to receive support and to offer feedback on their ongoing experience. While the commonly used integrated approach to MBCPs is considered best practice, there is limited conclusive evidence supporting this approach. Some studies deliver promising results when men are engaged in the system for lengthy periods (Gondolf 2004) and others suggest that the effects on violence are negligible (Arias, Arce & Vilariño 2013; Babcock, Green & Robie 2004; Feder & Wilson 2005; Herman et al. 2014). Consequently, despite being considered best practice, innovative and effective responses that will assist in the development of practices and procedures for dealing with DFV are still needed.

This study noted the lack of conclusive evidence for current approaches to preventing male perpetrated DFV and the importance of reducing violence against women. It therefore aimed to develop, pilot, test and refine an innovative program. The program built on an integrated approach by including restitution to the community through an environmental project that sat alongside a traditional MBCP. This is the first of its kind in DFV programs internationally. The pilot program provided offenders with an opportunity to actively engage, not only in a standard integrated program, but also in community restitution, through engagement with a community garden. In DFV programs, restitution has commonly involved perpetrators meeting with or helping their (former) partner through in-kind services within a restorative justice framework (see, for example, Victorian Government 2017). However, this provides perpetrators with greater access to their (former) partners, which can lead to further violence (Cameron 2006; Stubbs 2014, 2007). Consequently, our project took account of guidelines for delivering integrated programs (Babcock, Green & Robie 2016; Day et al. 2009; Gondolf 2012, 2007; Morrison et al. 2017), while also acknowledging that a form of restorative justice involving community accountability post conviction can be valuable in DFV programs (Kim 2012; Miller & Iovanni 2013). It thus moved away from an individual focus on restitution, which can make women more vulnerable to further violence, instead adopting a form of restitution centred on meaningful community work focused on a small community-run garden. The intervention sought to develop offender skills while also benefiting the community (Sarnoff 2014). This ensured that victims were not subjected to further violence, offenders were supported to change their behaviour, and a safe and healthy community space was maintained. Because this approach has not been tested before in the DFV field, a pilot program was undertaken.

The intervention ran over 27 weeks from September 2021 to March 2022 in south-east Queensland, delivered by practitioners from YFS Logan. It combined Duluth-informed program content with time spent in the community garden. Partner support was provided during the men's engagement with the program and also post engagement as required. The intervention was embedded in a multi-agency response to DFV which enabled information sharing with external agencies such as the Queensland Police Service and statutory child protection agencies. Twelve men participated in the group. Six men completed the study and engaged in data collection at the end of the program. Their experiences were contrasted with those of 11 men undertaking a standard program, five of whom completed the study and engaged in data collection at the end of the program. Multiple data collection methods were used to ensure rigour, with data collected from men in the intervention and comparison groups, (ex)partners and practitioners.

This study aimed to develop, pilot, evaluate and refine the nature-based intervention, in collaboration with community partner organisations. The primary aims of the study were:

- to test and refine the intervention by evaluating changes in rates of violence and men's behaviours and attitudes and by eliciting perceptions of the program and signs of safety from participants (men), practitioners, research observers and (former) partners, so that usefulness of the program was maximised; and
- to test and refine the study protocol by identifying unforeseen issues with data collection procedures and methods, so that the validity of the data in a larger study was not compromised.

To ensure that the aims were achieved, the objectives of the study were:

- to develop and implement an innovative MBCP that not only incorporates traditional methods but also differs in its approach by adopting a community environment project within a restorative framework;
- to use a mixed-methods control trial to test and refine the program and research design to create a best practice model for replication, dissemination and further research; and
- to make recommendations about the policy and practice implications of the study to practitioners, academics and policymakers, with a particular focus on the use of, and training activities for, a restorative environmental project.

The results of the study can be used to inform practice development and training activities and can be built upon for a larger evaluation.



Literature review

The following section provides an overview of MBCPs in general and the available literature on nature-based interventions with offenders.

Men's behaviour change programs

MBCPs vary in structure, compliance measures, length and therapeutic and educational content. However, regardless of the model (Gondolf 1999), studies have shown that MBCPs have mixed results. The utility of MBCPs is clear but not straightforward; most studies are based on small sample sizes typically found in evaluated programs (Babcock, Green & Robie 2004; Cheng et al. 2019). Despite these limitations, several meta-analyses indicate some reduction in violence (Cheng et al. 2019, Karakurt et al. 2019). Court-ordered MBCPs that operate for longer periods, such as 26 weeks, show some modest reductions in physical violence during the period of attendance (Gondolf 2004). However, there is strong evidence available that overall program effects are negligible (Feder & Dugan 2002; Feder & Wilson 2005; Feder, Wilson & Austin 2008). Further, professionals often report that there are very limited options for referral of DFV perpetrators, and MBCPs offer little sense of restitution or accountability for acts of violence (O'Leary et al. 2018).

Most MBCPs have been developed to reduce the risk of known offenders perpetrating violence. Such programs, when embedded in the criminal justice system, are commonly referred to as 'integrated' or 'coordinated' responses. Informed by the Duluth model, they generally seek to protect victims from violence. They achieve this by monitoring perpetrator behaviour through the justice system and interagency collaboration (Day et al. 2009), facilitating therapeutic groupwork—which may include some cognitive behavioural elements (Gondolf 2007)—and delivering education that seeks to confront oppressive belief systems (Day et al. 2009). The approach is founded in a feminist and sociological analysis of DFV that sees violence as an outcome of gender inequity.

The Duluth model has been important for raising awareness about the impacts of DFV and providing a framework for an integrated service response (Barner & Carney 2011). However, there is considerable debate in the literature about its effectiveness in addressing men's violence (see, for example, Dutton & Corvo 2007; Gondolf 2007; Paymar & Barnes 2007). The limited conclusive evidence supporting this approach is concerning; many victims report, at best, only moderate change in violence (Arias, Arce & Vilariño 2013; McGinn et al. 2016).

While Gondolf's (2004) study delivered promising results when men were engaged in a program for lengthy periods, many studies suggest that the effects of program completion on violence are negligible (Babcock, Green & Robie 2004; Feder & Wilson 2005; Herman et al. 2014). A meta-analysis by Babcock et al. (2004), for example, concluded that effect sizes due to treatment for all studies were in the small range ($d=0.35$) and were even smaller when only experimental designs were examined ($d=0.09$ using victim reports as the outcome measure, and $d=0.12$ based on police reports), meaning that women were only five percent less likely to be reassaulted by their (former) partner as a result of the intervention. Similarly, Feder and Wilson (2005: 239), in their meta-analysis of program outcomes with mandated clients, concluded that 'the mean effect for victim reported outcomes was zero'. Herman et al. (2014) likewise found, in their study with 156 offenders, that completion of a Duluth model behaviour change program was not associated with decreased levels of recidivism.

McGinn et al. (2016) carried out a narrative systematic review of literature examining partners' perspectives on perpetrator interventions. They found that men's participation in programs leads to some positive behavioural changes, but that change may not be sustained. Barriers to change included mental health problems, addictions, relationship dynamics and issues in the men's family of origin. Change, when it did occur, was attributed to validating survivors; constructive judicial responses; men's development of new skills, including conflict interruption and improved communication; and altered belief systems. Altered belief systems correlated with greater desistance from violence, but that was the most difficult outcome to achieve.

Nature-based interventions

International evidence suggests that programs with previously incarcerated adults incorporating restitution through an ecological conservation project may be beneficial in reducing recidivism rates and promoting prosocial behaviour (Kaye et al. 2015; Norton, Holguin & Manos 2013; van der Linden 2015). These initiatives primarily use nature-based therapy with gardening and horticulture activities, where incarcerated men engage in landscaping, cultivating plants or green roof gardening, while learning about environment stewardship and caring for nature and animals. Van der Linden (2015) evaluated the efficacy of a green prison program in the United States by comparing one- and three-year reconviction rates of those involved in the program with the reconviction rates of incarcerated men in the entire prison and elsewhere in the state and nationally. Those who had completed the green prison program ($n=568$) had a 15 percent reconviction rate after one year, compared with 65 percent ($n=14,000$) for the entire prison population, 23 percent for the state prison population ($n=59,817$) and 23 percent for the national prison population ($n=404,638$). Over three years, there was a reconviction rate of 32 percent for those who had completed the program, compared with a reconviction rate of 42 percent at the state level and 45 percent at the national level. (Data were not available for the entire prison.)

Being in the outdoors for a therapeutic program is understood to help change behaviours by providing a less stressful environment for participants and by improving mental health (van der Linden 2015). In particular, proximity and exposure to nature can lower levels of rumination (Bratman et al. 2015), which is associated with DFV, and promote cooperation (Zelenski, Dopko & Capaldi 2015). Further, some experimental studies have also found that viewing nature scenes decreases stress and negative emotions after being subjected to stressful stimuli (Brown, Barton & Gladwell 2013).

Positive outcomes from horticultural programs have been noted, including an increase in physical and mental wellbeing and prosocial behaviour change. Baybutt and Chemlal (2016: 72) concluded that horticulture can improve skills and increase employability by ‘removing barriers that impede successful rehabilitation’. The gardens provided meaning and offered prisoners ‘tools to transform their lives’ (Baybutt & Chemlal 2016: 70). Baybutt, Dooris and Farrier (2019) found positive results for their therapeutic horticulture program called ‘Greener on the Outside for Prisons’. From a mix of interviews and focus groups, the authors found that participation in the program improved outcomes such as physical and mental wellbeing, job readiness and employability, prosocial behaviour and effective resettlement. Similarly, Brown et al. (2016) found numerous benefits to their one-year Master Garden program. Salient to the research outcomes was a reduction in crime and reduced dependence on substances. The participants reported that the gardening program was a crucial step in their journey to recovery.

Only a small number of articles focused on community connection (Hoffman 2020; Timler, Brown & Varcoe 2019; Toews, Wagenfeld & Stevens 2018), but these yielded beneficial associations. Social connectedness is an integral part of human life; without it, there is an increased risk of disease, mental illness and mortality (Saeri et al. 2018), and offenders have an increased risk of reoffending and substance misuse (Folk et al. 2016). Social connection and community are fundamental to post-release integration. Many horticulture programs foster a sense of community among the participants—a critical component of recovery—as well as an improved sense of physical and mental wellbeing. Hoffman’s (2020) study, for example, brought together prisoners and community members to plant an orchard. This study differed from many others because of its emphasis on connection between community members and offenders. This had a significant effect, because offenders also felt better connected to the community. The authors outline the benefits to inmates of such community cohesiveness and connection, which are key components of behaviour change. Similarly, Toews, Wagenfeld and Stevens’ (2018) findings suggest that gardening can enhance connection between inmates and assist in developing skills that are useful for future work.

The intertwining of community connection and outdoor interventions is useful for participants. A study by Folk et al. (2016) found that connection to the broader community reduced recidivism and predated community adjustment. Outdoor interventions offer an avenue to enhance these connections. Community gardens are one example: a sound avenue in which people can foster deeper connection not only to the earth but to each other, both intergenerationally and cross-culturally. They can also help break down community stigma around offenders. Interventions with violence require not only mechanisms for accountability but a consciousness of responsibility. Working within a community setting doing environmental work is a mode of intervention that might help to deepen accountability.

Horticulture programs can also lead to improved mental health. For example, Lee et al. (2021) found positive results in a study with five male participants, who experienced decreased depression and increased self-esteem and life satisfaction. Four out of the five participants reported making changes in their lives and behaviours because of participation. Similarly, Moran and Turner (2019) and Moran (2019), in their studies on green spaces in prison, highlighted the calming, destressing effects of nature contact. Their study described the benefits of nature and, by contrast, the detrimental impact of going without, when nature contact had been used as a punitive prevention tool. The authors argued for reconsideration of nature contact for inmates, given that it is beneficial, particularly for those who exhibit poor behaviours. In the study by Moran (2019), 78 percent of prisoners said that green spaces made them feel calm, and 71 percent reported that green spaces helped them to find a sense of peace. Timler, Brown and Varcoe (2019) reported that prisoners in their study experienced positive impacts from planting, tending, harvesting and donating produce. The participants described the garden as meaningful work that increased their self-esteem and self-worth. Similarly, the study by Toews, Wagenfeld and Stevens (2018) showed a positive relationship between gardening and mental wellbeing from even a one-hour planting party. The participants reported feeling happier, calmer and more peaceful after the event.

Such studies reinforce the large body of literature on biophilia: the innate affinity for and benefits that arise from connecting with nature. The outcomes of green programs are unsurprising, given the extensive evidence about the benefits of nature engagement for mental health. For example, in a randomised control trial with 38 participants, Bratman et al. (2015) found that participants who went on a 90-minute walk through a natural environment reported lower levels of rumination and showed reduced neural activity in an area of the brain linked to risk for mental illness, compared with those who walked through an urban environment. In an 18-year longitudinal study that surveyed people using the British Household Panel Survey, White et al. (2013) reported that proximity to green space was correlated with lower distress (tested through the General Health Questionnaire scores) and higher wellbeing (indexed by ratings of life satisfaction). Further, some experimental studies have found that viewing nature scenes decreases stress and negative emotions after people have been subjected to stressful stimuli (Brown, Barton & Gladwell 2013) and promotes cooperation (Zelenski, Dopko & Capaldi 2015).

Gardens and nature-based interventions appear to reduce recidivism (Baybutt & Chemlal 2016; Baybutt, Dooris & Farrier 2019; Brown et al. 2016; Timler, Brown & Varcoe 2019; Toews, Wagenfeld & Stevens 2018; van der Linden 2015). However, the data still lack long-term engagement and evaluation. Long-term evaluative studies can help to provide a more empirical base and guidance for future programs. The lack of rigour and direction for future programs, as Timler, Varcoe and Brown (2021) pointed out, means that there are few evidence-based programs, and such programs are often run based on the interest and investment of the wellbeing officers. More formal and evidence-based consideration can help to develop programs that directly attempt to reduce recidivism and promote behaviour change. There were no programs nor formal evaluations relating to DFV and outdoor interventions. Further, few studies used quantitative data, given the small sample sizes. Numerous studies also left out the duration of the program, basic demographic details and the offence type. These details are helpful in understanding what works and in developing future interventions. For example, gardening may be found to be more useful for domestic violence offenders or drug offenders, or it may be found that gardening programs are more effective with CALD groups. Some information about how and where the data were collected was also missing. The absence of critical information points to the need for more thorough and holistic studies to determine the impacts of outdoor interventions.

Community restitution approaches

Although they are less common than the Duluth model of behavioural change programs, some perpetrator programs also involve a restorative justice approach (Mills, Barocas & Ariel 2013). This commonly includes: group conferencing, where people affected by a crime meet with the perpetrator to share the impact and discuss actions to facilitate healing and alleviate harm; a victim impact panel, where victims share their experiences with others; a facilitated conversation between the victim and perpetrator (Victorian Government 2017); community work; or in-kind services to the victim (Coker 2004). Thus, restorative justice initiatives seek to provide opportunities for people affected by a crime to be involved in responding to it.

Redress and restorative justice responses in cases of DFV bring particular challenges in ensuring that perpetrators do not use these, either purposefully or inadvertently, in ways that compromise victim safety and self-determination (Aziz 2010; Stubbs 2007). At the same time, perpetrator accountability—not only to victims of DFV but also to the whole community—can be a powerful public message that violence is abhorrent to the community (Kim 2012; Sarnoff 2014). Some evidence suggests that programs with previously incarcerated adults incorporating restitution through community work are beneficial. This can involve an environmental project, which may promote prosocial decision-making and reduce recidivism (Kaye et al. 2015; Norton, Holguin & Manos 2013).

Further, programs that take a restorative justice approach appear to be no more successful than standard treatment, and some proponents argue that they put the lives of women at risk. Mills, Barocas and Ariel (2013) compared the restorative justice approach Circles of Peace with a standard MBCP underpinned by the Duluth model. They found no significant differences in recidivism rates for DFV offences six, 12, 18 and 24 months later. Other critiques suggest that restorative justice approaches may lead to DFV becoming a private matter (Coker 2004, 2002) or that they may revictimise women when they are vulnerable, while also endangering their lives (Cameron 2006; Stubbs 2014, 2007). Restorative justice can be considered more culturally appropriate and respectful for Aboriginal and Torres Strait Islander families than the traditional justice system (Dickson-Gilmore 2014). Some studies have found that restorative justice approaches can promote healing and be more satisfying for those involved when they are facilitated post conviction (see, for example, Miller & Iovani 2013) and involve a community accountability element (Kim 2012). Westmarland, McGlynn and Humphreys (2018: 339) argue that 'rather than focus discussions broadly on "domestic abuse and restorative justice", more nuanced conversations are needed on specific forms of domestic abuse and specific restorative approaches'.

Supporting partners

It is important to include the voice of partners in the design, implementation and evaluation of programs (Westwood et al. 2020), to ensure that MBCPs are not 'perpetrator centric' (McGinn, Taylor & McColgan 2019: 1). Yet, to date, there is little information available on the needs, experiences and help-seeking activities of women whose partners are participating in MBCPs (Nnawulezi & Murphy 2019).

Partners of men attending MBCPs are often living in dangerous situations (Smith & Randall 2007), feeling entrapped and too fearful to leave (McGinn, Taylor & McColgan 2019; Westwood, Wendt & Seymour 2020). They often experience confusion, powerlessness and chronic fear (Smith & Randall 2007). Partner outreach from MBCP programs will be women's first, sometimes only, contact with support services (Nnawulezi & Murphy 2019). Australian research by Smith and Randall (2007) revealed that support for women occurs along a continuum, from those who receive no support, to those who receive limited support through partner support in MBCPs, to those who receive an integrated service response from multiple services. Support varies according to the availability of resources, the structure of local service systems, the individual worker's knowledge and skills, and what priority the work with women receives.

Partner support offers numerous benefits to women and their children. It can help women to make sense of their situation and the range of emotions they are experiencing. It can validate women's experiences as survivors. It can also assist them with safety planning, with women receiving not only practical supports—including help with intervention orders and contact numbers for emergency services—but also referral to other service providers (Westwood, Wendt & Seymour 2020). Partner contact also provides an important educative function: practitioners use the contact to inform women about DFV (McGinn, Taylor & McColgan 2015; Smith & Randall 2007). When men are in an MBCP, women can experience a reduction in fear, increased feelings of safety (McGinn, Taylor & McColgan 2015) and an improved sense of self and self-esteem (Smith & Randall 2007).

Despite the benefits of partner contact, there are inconsistencies across the sector in how this occurs (Diemer et al. 2015). Staffing shortages and the prioritisation of working with men can all affect the level of support provided to women, as Smith and Randall (2007) found. In their study, contact with partners was minimal, largely involving telephone contact on two or three occasions while men were participating in the MBCP. Further, few programs have formalised procedures for addressing breaches of intervention orders or other crimes committed during men's participation in a program, and support rarely continues after partners' participation in a program ends (Diemer et al. 2015). Consequently, numerous authors call for a review of funding models to ensure that support to women is prioritised (Diemer et al. 2015; McGinn, Taylor & McColgan 2019; Smith & Randall 2007). Smith and Randall (2007) suggest renaming partner support as 'women's support and information service', recognising that the term reinforces contact.



Methodology

As a pilot study, this project was designed partly to test the clarity and performance of the study design, measures and procedures that are intended for use in a larger subsequent national study. This is important because, when novel treatment approaches are trialled and evaluated in a new field of practice, unforeseen issues may arise in both the delivery and evaluation of the program (Moore et al. 2011). The study design was guided by the evaluation framework for MBCPs proposed by Wojnicka, Scambor and Kraus (2016) and is congruent with the requirements for a larger national study.

The evaluation used a mixed-methods naturalistic trial that mimicked real world practice as much as possible with a comparison group and a pre and post design. The comparison group underwent a traditional 27-week integrated MBCP, which includes education and therapeutic groupwork coupled with integrated service delivery. The intervention group undertook a 27-week program that included elements of a traditional integrated program coupled with a gardening component.

Men on the waiting list for a program at the service were asked by intake workers whether they were interested in participating in the intervention group. This method ensured that 12 men were recruited into the intervention group through purposive sampling. The criteria for inclusion in the study were:

- to be eligible to participate in the provider's MBCP;
- to be judged as physically able to participate in the garden activities; and
- to be able to commit to attending the sessions at the specified time.

Men commencing a standard MBCP were approached in the first four weeks of their program to be part of the comparison group. Eleven men were recruited into the comparison group; they did not have their physical fitness to participate assessed, because they did not have to take part in gardening sessions.

Data collection methods

Table 1 outlines the data collection methods:

- qualitative semi-structured interviews;
- observation of groups;
- researcher log;
- pre and post surveys; and
- collection of demographic information.

Measures were implemented within two to four weeks of commencement and completion of the program. To understand the group process and to identify any unforeseen issues with data collection procedures and methods, the researchers also observed the intervention and control groups.

Method	Participants/Data source	Time ^a	
		1	2
Semi-structured interviews	Men, (former) partners, practitioners		✓
Observation	<i>n</i> =28 sessions (3 control and 25 intervention)	✓	✓
Researcher log	Research team	✓	✓
CTS2 – Short Form (Straus & Douglas 2004)	Men and (former) partners	✓	✓
A-IPVAW Scale (Martín-Fernández et al. 2018)	Men	✓	✓
Prosociality Scale (Caprara et al. 2005)	Men	✓	✓
GHQ-28 (Goldberg 1978)	Men	✓	✓
Demographic questions	Men, partners, practitioners	✓	

a: Time 1 occurred in the two weeks after program commencement; Time 2 occurred in the two weeks after program completion

Table 2 lists the multiple data sources and methods used to address each research aim to triangulate data and promote study rigour. These allowed the project team to obtain greater insights into the reliability and validity of data collection methods, while more easily drawing conclusions from the data and identifying inconsistencies in datasets. Consequently, this study relied not only on self-report measures but also on interviews, observation, surveys with (former) partners and a researcher log to address the study aims.

Table 2: Data collected for each research aim	
Research aim	Data collection method
Test and refine the intervention by evaluating changes in men's behaviours and attitudes and eliciting participants and their (former) partners' perception of the program and signs of safety	Semi-structured interviews
	Observation
	CTS2 – Short Form (Straus & Douglas 2004)
	A-IPVAW (Martín-Fernández et al. 2018)
	GHQ-28 (Goldberg 1978)
	Prosociality Scale (Caprara et al. 2005)
Test and refine the study protocol by identifying unforeseen issues with data collection procedures and methods	Semi-structured interviews
	Observation and researcher log
	Researcher log

Further details on each data collection method are described below.

Semi-structured interviews

Figure 1 provides an overview of the number of participants from each cohort who participated in semi-structured interviews.



Former partners consisted of those whose partner was in the intervention group and those whose partner was attending a standard program, for comparison. The nine practitioners included seven domestic violence specialist workers from the delivering agency and two community garden volunteers. These two groups are described as 'practitioners' throughout the report, to provide a degree of confidentiality and anonymity to the two garden volunteers, given the small number of participants.

The interviews elicited interviewees’ perceptions of the program, particularly whether it contributed to victim safety and perceived changes in behaviour. Women were asked, for example, whether they had noticed any changes in their (former) partner’s attitudes or behaviours since joining the group. Practitioners were asked, for example, whether they perceived that the program had contributed to signs of safety (see Turnell & Edwards 1999), such as men’s willingness to change and, if so, how. Interviews with practitioners also sought feedback on the study procedures and methods, to identify unforeseen issues that might compromise the validity of the data in a large national study.

Semi-structured interviews were conducted mid-program. More men in the intervention and comparison groups participated in surveys than interviews.

Observation

To understand the group process and men’s participation in it, while also identifying any issues with the research methods and procedures, the researchers observed the intervention and comparison groups. In particular, three sessions were observed in the comparison group and 25 sessions were observed in the intervention. The observation framework used assists with reviewing the program logic and included questions such as: ‘Did facilitators pick up on any safety issues and if so, how?’; ‘Are connections made between theory and the individual’s offending and if so, how?’; ‘Were there clearly demonstrated educative discussions and if so, how?’; and ‘Did facilitators engage with non-participating or dominant participants and if so, how?’. Further, observation was used not only to review the program logic but also to refine the study design whereby the project team:

- assessed fidelity in treatment delivery and participant adherence to treatment; and
- met to review the implementation of research procedures and methods, to discuss and address any identified issues.

Researcher log

The research team also used a designated log to document issues with study procedures and methods to be addressed in future research. This log included questions arising from participants regarding completion of scales, recruitment and follow-up rate and process, proportion of participant surveys completed and reasons for non-participation or withdrawal.

Surveys

Four survey instruments were used in pre and post testing with men in the intervention and comparison groups. Table 3 shows the number of men who completed measures at each time point.

	Intervention T1	Intervention T2	Comparison T1	Comparison T2
Survey measures	12	6	11	5

The four survey measures used were:

- the Conflict Tactics Scale 2 – Short Form (CTS2S);
- the Acceptability of Intimate Partner Violence Against Women Scale (A-IPVAW);
- the General Health Questionnaire (GHQ28); and
- the Prosociality Scale.

Conflict Tactics Scale – Short Form

The CTS2S is a 20-item instrument adapted from the most widely used instrument for measuring intimate partner violence (IPV), the revised Conflict Tactics Scale (CTS2). Respondents are asked how often they or their partners engaged in a specific behaviour, such as 'I punched or kicked or beat up my partner' and 'My partner punched or kicked or beat me up'. The shorter scale is particularly useful when time is limited or concerns exist that participants will not complete the full 78-item CTS2. The short form is comparable in validity to the full CTS2, which, when tested on a college sample, has high alpha reliability for all the subscales, ranging from 0.79 to 0.95 (Straus et al. 1996). Concurrent validity, as measured by the correlation between the short form and full scales, ranged from 0.77 to 0.89 for perpetration of the behaviour, measured by each scale, and from 0.65 to 0.94 for being victimised by a partner who engaged in these behaviours. Similarly, the CTS2S has good construct validity, with high correlations between the five risk factors for partner violence measured by the CTS2S scales generally parallel to the correlation of these risk factors measured by the full CTS2. Thus, the short form is likely to produce results that are sufficiently parallel to the results from the full CTS2. It was intended that the CTS2S would be administered not only with men but also (former) partners to more accurately ascertain actual rates of violence perpetrated by participants in the program.

Acceptability of Intimate Partner Violence Against Women Scale

The A-IPVAW is a 20-item instrument to assess the acceptability of IPV against women among the general population (Martín-Fernández et al. 2018). The scale asks respondents to indicate whether they think a range of behaviours are acceptable. For example, respondents are asked whether they think that it is acceptable for a man to 'control his partner's mobile phone' or 'set limits on how his partner dresses' or 'shout at his partner if she is not treating him with respect'. All item–total corrected correlations presented values above 0.40, indicating that the items are strongly related to the measured construct. The internal consistency of the scale is good, with a Cronbach's α of 0.89. The strength of the scale is that it can very accurately estimate the attitudes toward acceptability in respondents with moderate, high and very high levels of acceptability (Cronbach's α of 0.91), making it suitable for men who have used violence against women.

General Health Questionnaire-28

The GHQ-28 is a 28-item measure of emotional distress, developed to identify those at risk of developing psychiatric disorders in healthcare settings. It includes four subscales: somatic symptoms (items 1–7); anxiety or insomnia (items 8–14); social dysfunction (items 15–21); and severe depression (items 22–28; Goldberg 1978). It has good test–retest reliability (0.78 to 0.9; Robinson & Price 1982), excellent inter-rater and intra-rater reliability with a Cronbach’s α 0.9–0.95 (Failde, Ramos & Fernandez-Palacín 2000) and high internal consistency (Failde, Ramos & Fernandez-Palacín 2000). It has been tested in numerous populations. Data derived from this scale were used to analyse the findings in more depth.

Prosociality Scale

The Prosociality Scale is a 16-item instrument with a five-point Likert scale (1 indicating never or almost never true to 5 indicating almost always or always true). It examines the degree to which respondents engage with prosocial actions related to sharing, helping, taking care of others’ needs and empathising (Caprara et al. 2005). Example statements include: ‘I try to help others’ and ‘I try to console people who are sad’. The alpha reliability coefficient was 0.93 at T1 and 0.94 at T2. The psychometric properties of the Prosociality Scale have been cross-gender and cross-nationally validated (Caprara, Alessandri & Eisenberg 2012).

Demographic questions

Men, (ex)partners and practitioners were asked to answer a series of questions to ascertain demographic information when they completed the first survey. This included, for example, questions about their education, age and ethnicity.

Data analysis

Data analysis involved, firstly, comparing change between the pre and post surveys and, secondly, thematically analysing qualitative interviews, observations, researcher log and open-ended survey responses. Analysis compared findings from the intervention group with those of the comparison group and involved crosschecking findings from each data source and method with other data. All datasets underwent initial and subsequent quality checks.

Transcripts of the semi-structured interviews, coupled with the written responses to open-ended survey questions, were coded using NVivo. Inductive thematic analysis was conducted in multiple waves of coding to ensure full representation of participants’ subjective experiences, particularly relating to their perceptions of the program, signs of safety and changes in violence. To ensure validity and rigour, peer checking was used to scrutinise the thematic analysis and ensure that these interpretations were true to the data and consistent among the research team (Denzin & Lincoln 2017). Further, content analysis was used to manually review written observations and the researcher log to identify patterns and issues in data collection methods and procedures.

In each of the four outcome measures (CTS, IPVAW, GHW and Prosociality), the participant scores were calculated as per survey instructions, after which the difference from baseline was calculated for both the intervention and the comparison group. The CTS was further split into two sections, a perpetrator and a partner-perception section, resulting in five outcome variables. To determine whether the program was beneficial, the intervention group's scores were compared both with a null value of zero (ie the program had no effect) and with the comparison group.

Ethics

The study received ethical approval from Griffith University Human Research Ethics Committee (GU Ref: 2019/315). The comparison group data were collected for a variety of comparison purposes, including this study, and this aspect of the study was approved by Queensland Corrective Services. Service providers initially contacted potential participants, using a blurb written by the research team to gauge interest in participating in the intervention group. Those interested were then invited to come to an induction session. They met the research team, were given a participant information sheet, viewed the garden space and were able to ask questions about the research. A copy of the participant information sheet can be seen in the *Appendix*. Participants then gave written consent. All men who attended the induction session agreed to participate in the intervention group.

Limitations

This study was impacted by the COVID-19 pandemic. The first phase of the study commenced in February 2020, where the intervention consisted of environmental restoration activities with standard MBCP content. Because of the COVID-19 pandemic, this initial phase was suspended in March 2020. The intervention then recommenced in September 2021. However, the intervention recommenced in a different location, with a different partner agency. This saw the intervention change from one undertaking environmental restoration to one incorporating community gardening. The pandemic continued to impact the intervention. The group moved online for five weeks in January 2022, to ensure the safety of participants and practitioners. COVID-19 also impacted the comparison group: there were short periods when they were unable to attend the standard intervention group in person and had to check in with facilitators by phone.

Thus, the COVID-19 pandemic impacted:

- the project timeline, including the time allocated for the intervention;
- the structure of the intervention and site selection;
- the comparison group structure; and
- the partner agencies, by increasing the time taken to build relationships between the research team, the delivering agency and the community garden practitioners.

It was anticipated that 32 men would be included in the study: 16 in the intervention group and 16 in the comparison group. Lower than expected recruitment saw 12 men enter the intervention group, with 11 in the comparison group. The lower numbers for the intervention group meant that the time in the garden was more manageable than with a larger group. The smaller than anticipated numbers affected the analysis that could be applied to the survey data; thus, the quantitative data analysis should be treated with caution. It is a further limitation of the study that baseline data was not collected before the program commenced. Rather, it was collected two to four weeks after the group commenced. However, the reduced timeline for the program made it impossible to collect measures before the program; recruitment for the intervention group was ongoing until the induction session.

The reduced timeline for the project meant that data collection three months post intervention has not been possible. Further research is needed into the sustainability of the intervention. Only two (former) partners were recruited from the intervention group into the study, even with the introduction of vouchers to encourage participation. Two (former) partners of men attending a standard program were also included in the study. While it was hoped that a greater number of (former) partners would participate, information from the women's advocate supplemented the lack of data collected.

It was also anticipated that case files would be reviewed for any breaches that occurred during the program. These data were instead collected from practitioners during the semi-structured interviews.

Intervention structure

The intervention group was run over 27 weeks in south-east Queensland. Men attended the garden every second week and undertook a standard program in a room at a separate location in the alternate weeks. This structural decision allowed facilitators to deliver program content confidentially. The delivering agency was concerned about delivering the content in an outdoor community space. Moving to a separate location every second week mitigated this risk but posed a challenge for men, who needed to remember which space they were to attend. Weekly texts were sent to remind men which location to attend. The secondary space also provided an alternative location in case of rain or extreme heat at the garden. For five weeks, the intervention was delivered online via Zoom, to ensure the safety of facilitators and participants during the COVID-19 pandemic. To balance this extended time out of the garden, the last four weeks of the intervention were run in the garden only, rather than on the week-by-week schedule. Sessions were run on Saturday mornings. The service delivery agency had not previously run sessions on a Saturday morning and had to ensure that the women's advocate support could also be delivered on Saturdays.

Careful consideration was given to site selection. The community garden chosen is easily accessible by public transport, is beside a local community centre—which provided the opportunity for men to engage in activities such as free community meals—and is beside a public bushland area, which enabled discussion on how this natural space contributes to the community garden and vice versa.

A four-week implementation period allowed the management and facilitators of the delivering agency, the research team and members of the community garden to plan the intervention. Members of the community garden did not receive formal training specific to DFV but were informed about the purpose, structure and content of the MBCP. They were then able to plan gardening activities that complemented the content delivered the previous week. The first week of program content, for example, focused on what constitutes DFV. Thus, the next week in the garden also focused on the fundamentals of gardening, including pH testing of soil.

Sessions in the garden lasted two hours and were co-facilitated by a specialist male and female. Sessions commenced with a short check-in, which allowed consistency with standard session structure and allowed facilitators to assess risk for the rest of the session. The community garden members then gave the group a gardening task, which the men undertook for approximately 90 minutes. While the group undertook the task, facilitators were able to have informal conversations with men about their reflections on the content from the previous week. Groups were completed with a check-out to ensure that men were regulated before leaving each session.

There were some differences between the intervention program delivery and the comparison program delivery that could not be controlled for, including that different agencies delivered the intervention and comparison groups. Table 4 outlines similarities and differences between the intervention and comparison groups.

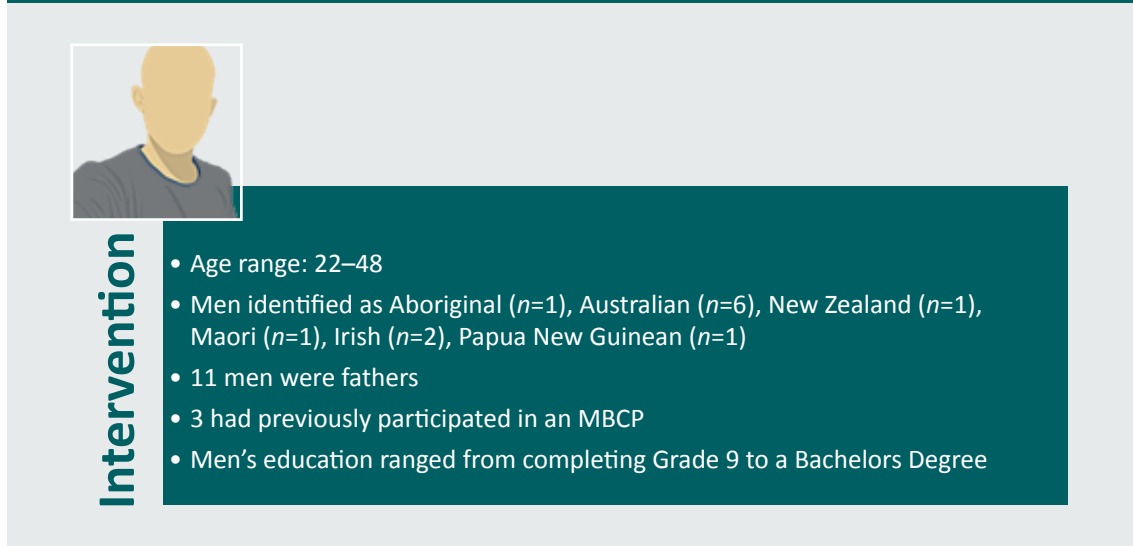
Table 4: Similarities between the intervention and comparison experiences

	Intervention	Comparison
Facilitation	Delivered by male and female facilitators, who varied across the life of the group. Differences in facilitator skill were noted.	Delivered by male and female facilitators, who varied across the life of the group. Differences in facilitator skill were noted.
Group format	Delivered to a closed group, with men starting across the initial three to four weeks of the group. Rapport and cohesion develop over time. Small number of participants (4) at the final session.	The in-person program was delivered with a rolling group, where men may join the group every week. Given that there is regular turnover of participants, rapport and overall group cohesion between participants may not easily develop.
Absences	Men were given more flexibility in terms of absences to support data collection. While men were advised that they were only allowed three absences, this was not enforced.	Men were held to three absences at sessions before being stood down. Being stood down meant men could rejoin a program after an extended period of absence.

Participants

This subsection provides an overview of participants in the study. Figure 2 provides an overview of the intervention group.

Figure 2: Intervention participant group overview



Men in the comparison group were less culturally diverse, with all identifying as Australian. One man specifically identified as Aboriginal. Men in the comparison group were generally older, ranging in age from 31 to 52. None had completed further study after high school.

While 12 men commenced the intervention, three men completed the 27-week intervention by undertaking an exit interview. Of the men who did not complete it, four completed a standard program, allowing them to complete sessions they had missed through absence. Measures were completed at the end of the 27-week gardening program with these individuals, before they were transitioned into the standard program. Five dropped out of the intervention and did not participate in a standard program. Dropout rates from the intervention and comparison group did not follow identifiable patterns. However, the two non-mandated participants in the intervention did not complete. Absences meant that only one man participated in every gardening session during the 27-week course. All others missed at least one gardening session.

Participants from the intervention group are denoted by the codes ‘Male participant 1’ to ‘Male participant 9’. Only five men from the comparison group provided demographic information, while six participated in interviews. They are denoted by the codes ‘Male participant 10’ to ‘Male participant 16’. All men in the comparison group had been mandated to attend the program through a probation order, while two men in the intervention group were attending voluntarily, without a directive through an active order. The behaviours men from the comparison and men from the environmental group reported engaging in before the program were of a similar range of severity.

Of the four (former) partners who participated, two had partners in the intervention group, and two had partners undertaking a standard program. One intervention group partner was still in a relationship and residing with her partner; the other had separated and was residing separately. This was the same for partners of the standard program. These participants are denoted by the codes 'Partner participant 1' to 'Partner participant 4'.

The practitioners category consists of seven professionals from the delivering agency and two volunteers from the community garden. Five practitioners were facilitators, one a manager and one a women's advocate. Six of the practitioner participants were female, three male. These participants are denoted by the codes 'Practitioner participant 1' to 'Practitioner participant 9'.

Findings

This section outlines key findings identified across the synthesised datasets. These findings have been grouped thematically, focusing on engagement, interagency collaboration, risk and challenges, facilitator skills and the value of a victim-survivor gardening group. Program outcomes are explored at the end of this section.

Enabling engagement

The gardening space enabled engagement for men who experienced anxiety in the classroom:

A: Yeah, the classroom sessions, like the ones when we were just in a – yeah. I'm used to it anyways. It gets a bit anxious or like I get a bit anxious when I have to get up or when I get put on the spot and I think too much on it when it's coming to my turn and sometimes it just goes all over the place. But other than that...

Q: Yeah. No, no, it always sounds good in group. Is there something that would make you less anxious in the classroom?

A: I don't know. I think it's just me personally as a person. I'm always just anxious.

Q: Yeah.

A: I think it's just something I'm learning to deal with.

Q: Do you feel anxious about coming to the garden?

A: No. No, I don't. That's weird. No, I don't. Probably the classroom pretty much because we're in a big circle, everyone's looking at you, like when you're checking in. But I don't know, when we check in [in the garden] and we're in a circle, it just feels – I get a little bit anxious but not as anxious. (Exchange between Researcher and Male participant 9)

Men generally self-reflected that they had low levels of stress, anxiety and anger when attending gardening sessions. Participants reported finding the garden a calming space, even when undertaking activities they held in low regard, such as weeding. Facilitators noted that, with the lessened levels of anxiety, men were more comfortable in conversations:

I've seen...that there's been some really great opportunity to have conversations that are unguarded. So in a classroom setting, sometimes there's anxiety, there's issues for men, they have bad experiences from school. There may be some sort of trauma related to that and they're in that hypervigilant state. So I feel like what we're getting in the garden is some unsolicited conversations which make them feel comfortable to say. I think there's a definite advantage to it at this point. (Practitioner participant 1).

Facilitators thought that the garden was a particularly good space in which to engage men who had been diagnosed with anxiety, ADHD or autism spectrum disorder. The outdoor space and activities took their focus off the conversation. This was consistent with men's reports, including that they sometimes found it difficult to focus in the classroom:

We have conversations in the classrooms, sometimes what I pick up is I pick up the starting, probably the middle, or I pick the end part of the conversation, because I'm losing focus. For me, I'm more like a person where, with learning style, I'm more hands on, so when I do something, I learn at the same time. I can read and understand, but I won't get much from reading. So when doing something physically, I understand more quickly. I get the classroom thing and all that, but with the garden, with me working and stuff, having conversations about helping improve my relationship and stuff, like, oh, yeah, I learn quick there. (Male participant 4)

Men who self-identified as 'hands-on' learners felt more comfortable in the garden setting.

Practitioners noted that conversations in the garden were often more honest than those in the classroom or on Zoom:

My impression was maybe some more honest conversations from the men. So, during check-in, they shared how their week had been, but also there was more opportunities for the men to dialogue as they worked in the garden side by side. (Practitioner participant 6)

Four practitioners thought that men were more forthcoming in the garden setting:

Not to say that everything they say in the room is fabricated but it's probably more raw and more honest [in the garden], not that I'm a mind reader and I can tell whether they're lying or whether they're telling the truth but it just seems to be more from the heart I think. When they're in the room environment, that they're very much aware of their self-image and their self-nature and what they say and very calculated but working with their hands, it's almost like because they're distracted, their minds blow away all the barriers and it's raw so you can have these open conversations and it just seems to be a lot freer for them, more so for the quieter men but also for the men that speak every week in the clinical environment as well. (Practitioner participant 3)

Practitioner 3 thought that more open conversations could occur in the garden, because men felt that it was a safe space, and highlighted the fact that men who did not feel confident speaking in a group environment were more easily engaged in the garden through one-on-one conversations. Two practitioners discussed the connection to nature that occurred in the garden and how this may positively impact men in the group who had experienced trauma. While men spoke about trauma in their past, none directly spoke about the garden as a healing space.

Interview findings from men verified their enjoyment of the informality of the garden space and the opportunity for organic discussions to arise with other men and the facilitators:

That's been useful, probably the yarns, the talks, we're out here and it's like just open, you can just talk with the blokes here. (Male participant 9)

We've had two sessions now where it's like, 'Okay, you're just going out there and doing some weeding.' But that's perfect, you've got your mind off whatever's going on in your head, you're just pulling out weeds. And if someone comes along and goes, 'Hey, how's that going,' you're more open and you're more honest with it so I think that's great...I think it's good to learn the skills but it's also important to have that time where we're just away with the guys and with the facilitators to just talk, because you don't get that chance in these [classroom] sessions and you don't get that ability when you're all sitting in a circle. (Male participant 8)

As in standard programs, men reported learning from each other's shared stories and experiences. The less formal setting of the garden made it easier to share experiences. As they do within a classroom setting, men used these stories to compare themselves to others and minimise their own actions:

So, I think mine's pretty tame, considering other guys. But then, having said that, I've never physically smashed things and – when I get to my point where I can't anymore, I'll walk away. I'll – some of the other boys said that they'll break things or – no, I haven't done that, because it only goes to your hip pocket, because then you've got to pay for it... And I was never brought up that way to – you know, you don't go hitting women and that sort of – any of that sort of stuff. (Male participant 7)

The quote above shows the need for facilitators to have a presence in the garden to build upon conversations organically arising, to demonstrate the need for responsibility and accountability.

Men reflected on differences between indoor and outdoor sessions. Three men had previously undertaken the provider's standard program. This allowed them to compare their two experiences. Men who had previously undertaken the program thought that the classroom sessions were more structured:

It's very structured whereas these, I feel I haven't gotten those lessons as much if I compared my weeks, if that makes sense. So by this time, I'd had these skills that I'd developed or learnt whereas this time, it's been lots of check-ins and things like that but that for me is not a bad thing. I think if this was my first time, I'd be going, 'Okay, what am I getting out of this?' (Male participant 6)

This sentiment was echoed by facilitators who did not believe that enough content was covered over the course of the program, given the gardening program. This was of particular concern when the program needed to run four consecutive gardening sessions to make up for time spent on Zoom following a peak in COVID-19 cases in the state.

Challenges in engagement arose when men presented with previously undisclosed injuries. For example, one man arrived at a session with a sore back, limiting what he was able to do in the garden. With no planned alternative activity, the participant was given a short task in the greenhouse, separate from the other men, inhibiting the interaction he had with the rest of the group. While this participant was still engaged one on one by the facilitator, his session lacked structure, suggesting the need for alternate activities for men who unexpectedly cannot participate in the session. Another man disclosed during a session that he had a metal hip, which occasionally inhibited his ability to participate fully in the garden. None of the other men commented or challenged this participant when he needed to work at a slower pace or take a break. This suggests that men who may need added physical support can still participate in the garden, with adaptations.

One gardening activity that inhibited engagement was the use of power tools, such as lawnmowers. These tools were used in two sessions observed. The noise created by the power tools meant that it was impossible for the man using the tool to engage in discussions, either with other men or with the facilitators. Gardening activities need to be able to facilitate informal discussions.

Men's employment influenced their participation in the garden. One man who was not currently employed conflated the gardening sessions with community service. Other men who were not currently employed thought that the gardening skills they developed could be useful in gaining employment.

Three men disengaged from the program early because of changes in their employment, which saw them begin working on Saturdays:

Now I have job offers on Saturday, which I make a little bit of extra money now. It's probably the only bit of good money I can make, is on Saturdays. But because of the course, it's taking that away from me, so then I only have Sundays to try to rest...I guess really nothing to do with the course, I think it's just me to adjust myself a bit better, not to be having late Fridays. I think it's just really up to me to adjust, so that I can work with this. (Male participant 2)

Men who worked in an office environment enjoyed the time outside in the garden. However, some men who worked outside saw the garden as an extension of their work week. One partner reported:

Look, so that was part of the issue, is that he works in construction and works five days a week, and having such limited time, and over the weekend, it's a huge chunk of the year away from family. So we talked about it, and we were like even if they did five weeks and had one week off, and then kept – yes, it would drag it out, but there would also be things that you could plan for...And really with the gardening side of it, it's not that he didn't like it, he was just like, 'I'm spending two hours of – by the time you get there, it's an hour each way, so four hours on a Saturday to learn about the ecosystem and what chemicals to use and how to use them safely.' He was like, 'That's not really my agenda.' He just wanted to get in and get it done, although he said, 'I like that it's outside and I can see that it's good', and they have those one-on-one conversations and stuff. I think it wasn't as productive in terms of getting in and learning and getting that more explicit upfront information and processing. (Partner participant 1)

Facilitators reported that one man, who was attending voluntarily, exited the group early because he found that attending on Saturday morning ate into his time with his children. Similarly, when the group initially ran on the Gold Coast, before the first COVID-19 lockdown, attendance was impacted by men who could not organise child care for those weeks when they had custody of their children.

Facilitators believed that absences among the cohort impacted the intervention group:

The other thing that's been really quite confusing at times is, some people have been absent for vast amounts of time and then come back in. So, for women who are going through any sort of mediation where they're sort of – they might have an impression that it's – three times he hasn't been there, so where does that sit with the program? I think that's a bit – that needs to be probably fine tuned a little bit more, and I suppose what we're saying to women around accountability and – I know that it's good having him in the program because that's behaviour change. If they want to change, it's a good thing. But I think it's got a bit murky around the absences. And accountability. (Practitioner participant 4)

In the comparison program, men attending who had missed three sessions would be stood down from the program; however, facilitators kept men in the intervention group.

Interagency collaboration

Interagency collaboration is integral to holding offenders accountable and is best practice in perpetrator programs. Thus, it was important to ensure that the pilot program did not impact interagency collaboration, especially with Queensland Corrective Services and QPS. Practitioners stated that the garden itself had not impacted interagency information-sharing practices but thought that running the program on a Saturday potentially could, especially if risk escalated during the session:

Well, it's not like you can have a conversation that afternoon or the next day, so definitely not ideal, but if we needed to we would use our on-call processes to be able to instigate a response. In that way, it would be clunky, but it is what it is; it's a trial program. Ideally, you don't have programs on a weekend where the risk to the system, because if something went down they would have to engage the system. That becomes difficult on a weekend. (Practitioner participant 2)

Running the program on a Saturday also impacted information sharing between the facilitators and the women's advocate:

It would have been good for me to know that that's what they were doing. It's Valentine's [Day] on Monday. You're talking sexual respect on Saturday. There's risks. And I think that that was a learning for all of us as well. (Practitioner participant)

The session discussed above was a session conducted via Zoom following an escalation in COVID-19 cases across the state. This highlights the fact that it was not the garden setting, but running the program on Saturday morning, that impacted information-sharing arrangements. Keeping the women's advocate informed of the program content is integral; it allows partners to stay informed, which they appreciated:

Just touching base about the actual subject that [ex-partner] was actually learning about and going through the particular one that they were trying to help him with. (Partner participant 2)

The casual hours worked by facilitators, along with facilitator turnover, also impacted information sharing between facilitators and the women's advocate.

A short induction session was held in the first week of the gardening session, to orientate the men to the space and to familiarise them with the research team, garden personnel and session structure. This session allowed both partner organisations the opportunity to outline expectations and guidelines. While men were allowed to have input on the group rules, they were expected to comply with the code of conduct outlined by the garden members. This included measures such as wearing enclosed shoes when attending sessions.

The induction session was planned in advance by the partner organisations, as were specific gardening activities. However, program disruptions, staffing changes and fluctuations in participant numbers forced the planned garden activities to shift gradually to less structured activities that consistently involved weeding. This allowed facilitators to participate in the weeding, which was a good forum for informal conversations. However, it did lessen the opportunities for men to learn a range of gardening skills and reflect on their learning from the gardening process about respectful relationships. The men also complained about the repetition of the activity, especially when asked to weed a garden bed that they had previously weeded:

I felt a bit terrible about just giving them weeding to do. [Researcher] kept saying to us, 'You've got to give them not just activities, but give them something meaningful to do,' and I thought that's definitely important. So if we had that consistency, we'd be able to work it that it's more meaningful. Yeah, more planting. (Practitioner participant 9)

A collaborative working relationship between the community garden and the delivering agency is crucial to the success of the program. Participants aimed to exploit tensions between the partner organisations when they arose. For example, one man misconstrued a comment from a garden instructor, stating to the facilitators that they had suggested which pH could be used to melt a dead body. The observer was able to confirm that the man had misinterpreted this comment. Points of tension that arose between practitioners from partner organisations included smoking while in the garden and the length of time taken for check-in, which detracted from time allocated for the gardening activity. These tensions can be mitigated by strengthening the collaborative relationship between partner organisations and practitioners. Staffing changes and inconsistencies in the facilitation team inhibited the relationship between the partner agencies.

Risks and challenges

Two practitioners were concerned about the physical risks the men could pose in the garden, especially when using tools. However, no added risk was observed, even when men were using power tools. Practitioner 6 reflected:

I think the only risk was they're using gardening implements, but it wasn't really a risk in the end; not with that group of men.

When one man yelled that he was getting frustrated while using a lawnmower, the facilitators dealt with the situation calmly, with no reaction from community garden members. A discussion had taken place with both partner organisations before group commencement about whether a security officer would be necessary; all parties agreed that they would not be needed.

Practitioners raised concerns about the risk to privacy for participants in the gardening space:

The one thing that I think's come up for me is other people around, and I'm not sure of the impact of what they're hearing. I mean on Saturday in particular just gone, there was some people in the little greenhouse doing some planting and I was standing with the men talking and I actually felt a little bit uncomfortable. (Practitioner participant 1)

While members of the community garden had signed confidentiality agreements, practitioners were still uncomfortable with their overhearing sensitive conversations. This risk needs to be weighed against the benefits of men connecting with community members, and facilitators need to manage the risk. This highlights the needs for facilitators to be clearly aware of all the risks of the gardening space and of their responsibilities:

I think it's been unclear the responsibility of facilitators in the gardening space, from that delineation of the roles. Was it week one or week two, first time or second time in the garden, there was some conversations about needles being discarded in the garden and those sorts of safety issues there. But also in terms of, normally within a program component, and this isn't just about setup, we can't do anything about it in terms of risks, the proximity to the bathrooms, for example. The ability to leave the gardening space where everyone is, have your phone on you, make contact with your ex-partner or partner and harass her while you were actually on program; there's no ability to monitor that. (Practitioner participant 2)

Two practitioners were also concerned about the risk of members of the community garden making unsolicited comments, including observations about previous offences, such as drug offences, committed in the garden. This occurred occasionally in the initial weeks of the program but did not occur later in the program, as practitioners became more involved in the gardening space. The quote from Practitioner participant 2 also highlighted the risks that arose from a lack of control over the community space—in particular, the distance between the garden and the toilets, and the men's use of phones in the gardening space. The second could be minimised through group rules. In the initial weeks of the program, group rules were constructed that allowed men to use phones in group time if necessary. This extended to the garden, where men could wander away with phones, so the facilitators could not overhear, giving rise to the risk that they could be harassing their partner. If group rules had prohibited the use of phones in the garden, this risk could be more easily negated.

The garden site offered the opportunity for facilitators to identify potential risks as men were arriving, because the parking area was visible from the garden. For example, one facilitator overheard a man arguing with his partner on the phone before group commenced. Partners were also observed dropping men off at the garden, allowing facilitators insight into whether contact may have been taking place.

Men were observed in the classroom and garden using behaviours that were underpinned by gendered beliefs. For example, when the female facilitator asked a question in the classroom, men would turn their bodies to respond to the male facilitator. In the garden, one man repeatedly commented that a female facilitator should take regular breaks, commentary he did not direct at the male facilitator. In both spaces, facilitators need to be mindful of not reinforcing gendered norms. However, given the physical nature of the work in the garden, there is the potential to unintentionally reinforce gender norms, if the female facilitator is unable to undertake certain physical tasks.

The final risk observed is comparable with programs conducted inside: the risk of men colluding with one another. Facilitators observed men interacting in the garden more closely and informally than they did in the classroom, which is a strength of the program but may also lead to a risk of greater collusion:

The only extra risk that I saw was collusion. And men got along really well with each other in the garden setting, and, you know, I did see and hear that jocular coercion – collusion happening in – with – between them. (Practitioner participant 7)

This highlights the need for facilitators to be aware that collusion may happen in the informal gardening space, much as it may occur in informal conversations before or after group in the classroom.

Facilitator skill

Facilitators needed to manage the group dynamics in both the classroom setting and the garden. One challenge among this cohort was that three men had previously undertaken the program, and one in particular dominated conversations and tried to take a leadership role among the other men. This is more easily managed in the garden, where conversations can be held one on one with facilitators. However, practitioners also identified challenges of facilitating in the garden space, including:

- confusion over how best to integrate content in the gardening sessions;
- inability to always co-facilitate while in the gardening space;
- difficulty managing the time and tasks provided by the community garden; and
- differing levels of facilitator comfort in the gardening setting.

These are significant challenges. Facilitators also thought that the gardening setting reduced the power differential between themselves and the participants:

I'm actually engaging in some of the work in the garden, picking leaves and things alongside men. So I'm not in front of them; I'm walking alongside them, which is a little bit different in positioning. (Practitioner participant 1)

Inconsistency was observed when facilitators engaged with men about comments that were problematic in terms of supporting violence or sexist attitudes. Additionally, there were times when men made disclosures that were therapeutically useful to substantiating behavioural change progress. Facilitators expressed the need for more training about intervening in the informal process of gardening sessions. Although facilitators explicitly stated in the classroom that they were not teachers, men conflated them with teachers when they stood in front of the men with a whiteboard:

I quite respect both of them for what they do. And they said they're not teachers, but they try to teach. It feels like they try to teach us sort of right from wrong, if that makes sense. (Male participant 2)

The lessening of power differentials in the garden setting allowed for more informal—and perhaps more honest—conversations with the men there.

Observers noted variation in facilitator skill during the evaluation. In one case, this led a man attending voluntarily to feel disrespected and to disengage from the program:

So he came home from the last session pretty just – he was a bit pissed off and he was like, 'I'm not – if that's the way that they want to speak to me, I'm not going back.'

(Partner participant 1)

The gardening setting lent itself more to one-on-one conversations or conversations in small groups, rather than co-facilitating, which may be impacted by facilitator skill. Facilitators thought that smaller groups might be more manageable in the garden. Standard programs can see up to 16 men attend a session, although facilitators believed that numbers might need to be capped at 10 to 12 for gardening sessions. The community garden volunteers also influenced the gardening sessions. Facilitators supported clearer delineation between roles when in the garden.

Observers noted little continuity between gardening sessions and classrooms. Occasionally, conversations started in the garden were resumed the following week in the classroom. One man reflected in the classroom the subsequent week on how creating good quality soil could be a metaphor for laying the foundations of a relationship. However, these connections were rare. Inconsistencies in the facilitation team affected continuity. In one facilitation pair, for example, only the male facilitator had been involved in informal conversations in the garden the week before. So, when he was absent in the next classroom session, it was difficult for the female facilitator and the substitute male to draw on these conversations.

Good rapport was observed between the male garden instructor and the participants. One facilitator noted how the male garden instructor was able to role model staying calm when a gardening tool broke:

And he just role modelled beautifully, there was something wrong with the whipper snipper, and he spent almost an hour, and this young guy's alongside him, and he didn't get annoyed, he didn't get frustrated, he didn't throw it, he just kept on going, and then he got it fixed. I just thought, 'That young kid's probably never seen that before', just that role modelling of how to solve a problem. So, I thought that was really valuable. It was just one of those things, it really stood out for me. (Practitioner participant 5)

This was also the first time that the participant had ever used a whipper snipper, so he was able to learn a new skill. Garden volunteers regularly praised men for the teamwork; however, one facilitator was concerned that volunteers may have felt pressure to act as a 'third' facilitator and overstep their role. The gender of the volunteer impacted their interactions with the men.

Women's survivor groups

Because initial results indicated that men were less anxious when in the classroom, the research team adapted the interview schedule to explore potentially developing a survivor gardening program. This idea was explored with (ex)partners and practitioners. Both survivors were positive about being in the outdoors, although one was hesitant to undertake a formal program because she works in the DFV field:

We've just moved onto acreage and I spend a lot of time planting and improving the property. And for me – and because of what I do, my job, I'm exposed to a lot of trauma, I personally wouldn't partake in a group, only because I don't want to hear and I actually don't really want to connect with any human beings. I actually am in a season where I just want to go to ground and not be around people. So I think that it has value, but I wouldn't do it at this point. (Partner participant 1)

The quote above illustrates a sentiment echoed by practitioners: the need to include the voices of survivors in the design process:

I'd be really interested in understanding from the women what that would look like, and whether it be gardening, because not all women are into gardening, or whether it be some alternative space that they could create, and activities that they would create. I think there'd be some really interesting conversations about co-designing a program with them. (Practitioner participant 2)

Eight of the nine practitioners supported the idea and noted the value of being in an open space, offering survivors the chance to connect with each other and the opportunity for informal contact with professionals. As with the male gardening program, practitioners noted the opportunity to rebalance power differentials between themselves and clients in an outdoor space.

Practitioners identified the need to consider women's safety in outdoor spaces and considered the logistical support necessary for women to fully participate:

You have to be really careful about where he was or any associates of his. It would have to be someone that's not in crisis, but we know crisis moves in and out. Yeah, that's a hard one. That's a really – yeah, tough. Whether it needs to be that formalised, I don't know. I don't know. I think the safety concerns are just so great when it's in a community space and you're also working with monitoring, where people use tech just to see where she's going, what's she doing? It's flat out getting to the GP without someone tagging along or finding out or, 'What did you say? What did you do?' I don't know, I think it would depend on where a woman was in the scheme of it. (Practitioner participant 4)

As with the current programs, concerns were raised about maintaining confidentiality and safety in a public space. Practitioners voiced the need for control of the space and control over who would be around. They raised concerns about the potential burden of attendance on women, especially in relation to managing child care. Both garden members and other practitioners were positive about the possible inclusion of children in a parallel program:

I've done a couple of, like, camps, and day things, and celebrations out in the park. And some of them, like I think it was one, we had our children's workers doing activities with the small children, and the facilitators were working with the mums. And then, we would combine them, and have a morning tea, and off everybody went. But my other experiences are generally that the children are doing something alongside their mum or caregiver, and it's a family experience. Yeah, so I've had both experiences, and yeah, the logistics of child care is always difficult. And again, like what day or time do you pick to accommodate everybody. (Practitioner participant 6)

These concerns would need careful consideration in the co-design stage of future initiatives. It is also worth thinking about how these programs could be incorporated as part of broader strategy in community development and restorative justice responses to DFV.

It is important that any program design highlight that women attending are victim-survivors, to limit the perception among men attending a program that the women's attendance suggests they are complicit in the use of violence. This misconception was already present in men's accounts; Male participant 8 stated: 'she's apparently done a similar course, whatever, I don't know what it is, when she was on the DVO [domestic violence order].' All stages of design, including communication with the integrated service sector, should highlight the fact that women participating are not responsible for the violence perpetrated against them.

Program outcomes

Survey measures were used to ascertain program outcomes. These included measuring changes in rates of violence, behaviours and attitudes, men's prosociality and changes in men's general health and wellbeing. Results from the survey measures must be treated with caution because of the very small sample size. Results are indicative, suggesting trends, but cannot be understood conclusively or be generalised to other groups. Insight into program outcomes was also gathered through observations and qualitative interviews with practitioners and (former) partners.

Table 5 displays the mean and standard deviation for each outcome variable for the intervention and comparison groups both before and after the program. It is noted that comparison between pre and post program could not be achieved with uneven samples; therefore, only the participants who completed both a pre and post program survey were analysed to compare the efficacy of the program. As noted, with such a small sample size, results cannot be generalised or understood conclusively; rather, they suggest possible trends that would require further investigation.

Table 5: Comparison of mean and standard deviations in pre and post testing

	Intervention (n=6) Mean (SD)		Comparison (n=5) Mean (SD)	
	Pre	Post	Pre	Post
CTS-Perpetrator	4.0 (0.0)	2.5 (0.7)	3.7 (2.1)	3.3 (1.5)
CTS-Partner	3.8 (1.1)	3.4 (2.1)	5.0 (2.8)	4.5 (3.5)
A-IPVAW	1.4 (1.6)	0.9 (1.1)	0.0 (0.0)	1.0 (1.8)
GHQ-28	20.0 (5.7)	32.2 (19.8)	26.3 (19.2)	23.3 (10.2)
Prosociality	64.3 (15.2)	59.2 (15.3)	65.2 (13.0)	66.6 (11.1)

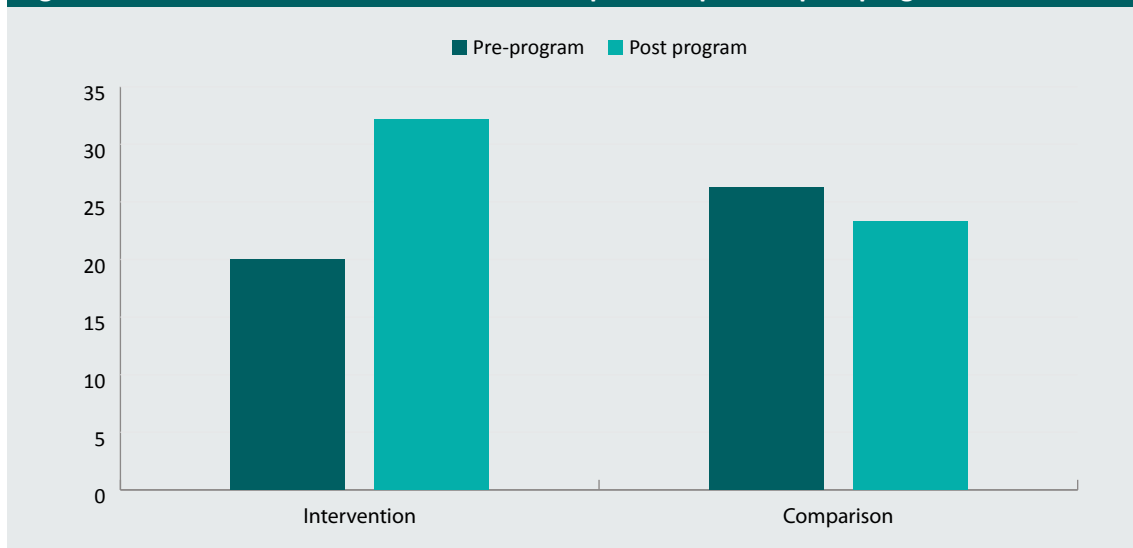
Changes in men’s health and wellbeing, as well as their views on the prosocial behaviours, were also measured in the surveys. Figures 3 and 4 depict the changes in the GHQ-28 and Prosociality scales between the time 1 and time 2 data collection for both intervention and comparison groups.

The GHQ-28 results suggested that the gardening program positively influenced men’s general wellbeing, including their mental health. Facilitators recognised that the gardening space could be part of a healing process, as Practitioner Participant 3 hypothesised:

Part of it, yeah and I suppose my First Nations thinking comes into that as well and that’s partly for the men as well because they’re in a process of healing too through their aspect of their abuse. They’ve got to come to terms with losing their home, losing their partner, losing their contact with their children and they’ve got healing. I don’t want to – not colluding with the men or making light of what they’ve done because it’s some really, really bad things that have happened for those men to be there but I think my whole perspective of this is it’s very average for a Torres Strait Islander, thinking to get back on country and that the land connected with you can heal you and all that kind of stuff. Definitely feel men but probably a bit more so for the women who have literally been broken by all of this. The healing [from being in the garden] would be phenomenal I think.

The notion of healing for Indigenous communities is often ongoing in terms of the continuing impact of colonisation and dispossession.

Facilitators reported that they believed that men responded better in the garden than on Zoom or in the classroom.

Figure 3: General Health Questionnaire-28 comparisons pre and post program

Results indicated by the survey data collected on prosociality sit in contradiction to the qualitative data collected. Men were observed engaging in prosocial behaviour at the beginning of the program in the intervention group when gardening; for example, one participant offered two others employment at his company. The two men who were unemployed appreciated this:

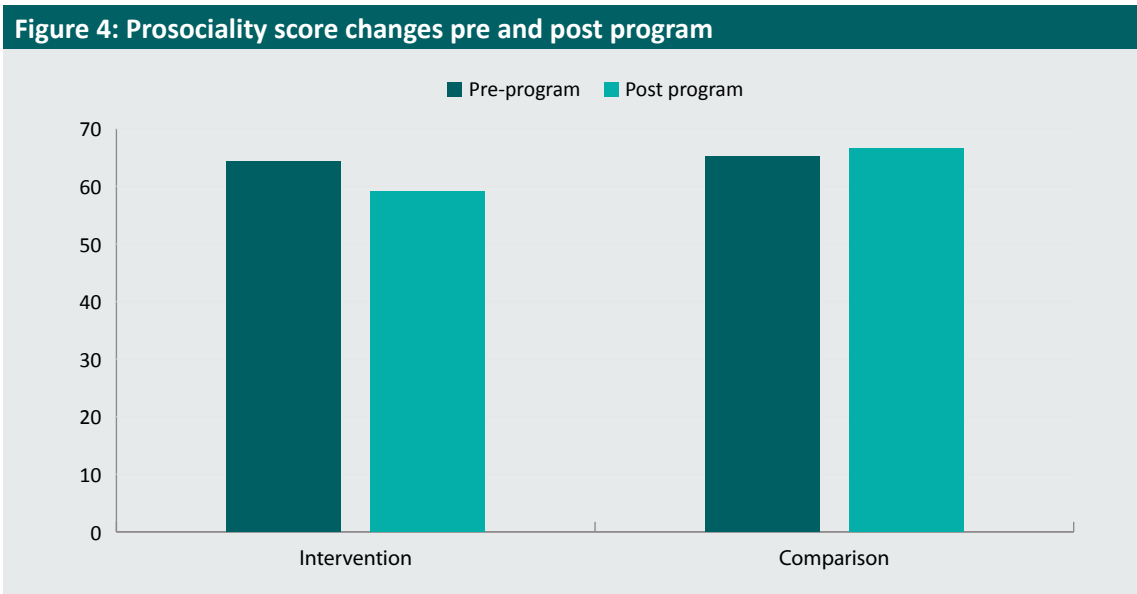
I don't really mix with the others [men in intervention group], but I appreciate that he got me a job. (Male participant 1)

One facilitator believed that one man who returned to the garden post program to assist demonstrated a greater connection to community:

Men would get from the program a feeling that they were giving back to the community for their violence, not just the restitution to their partner, but to the whole community. I think for some of the men that that was something that they took on, and there was a few men that – or two, I think, that came back [to the garden] after [the group program] hours. (Practitioner participant 6)

The particular man who returned to volunteer at the garden post program was not currently employed and was struggling with a lack of social connection. Facilitators thought that men had developed a sense of social connection to each other, although this could come from being in a closed group with fixed membership. Facilitators also believed that men had gained a sense of pride and accomplishment from completing gardening tasks:

I think that a lot of the incidental feedback that I heard from the men were that they really enjoyed the garden element; they felt a sense of accomplishment. I think some of them really enjoyed the giving back to the community, and were proud even, not that they would say that, but there was an element of feeling proud that they'd done something. And I think that that might be something for next time, is that they are given a specific project at the beginning to see through to the end. Whether they do it every gardening week, but there's something that they either grow or a garden that gets built, that they can claim was theirs. So that they really get that sense of accomplishment and that that's their legacy for the garden. (Practitioner participant 6)



Changes in behaviour could not be accurately measured without follow-up data from ex-partners and statutory services. One partner had not observed any change in the initial weeks of the program:

Nothing’s changed with him, he’s exactly the same, if not worse. (Partner participant 2)

This partner did not feel that her partner would change. This is consistent with statements from women whose partners were attending a standard program; this one was also concerned that her partner would not be influenced by the program, given his image management skills:

He’s a very strong-willed person. It’s like – yeah, I don’t know. I honestly feel he’s doing this just to tick it off. Something he has to do. (Partner participant 3)

Another partner from the environmental group had noted initial changes in behaviour:

He is not so reactive. He was quite explosive before, he’d just flip over the simplest things. And it’s made a huge impact to our family because I’ve got two kids that aren’t his, and they were just pulling away from him, and going to their room and isolating and stuff like that. But they don’t do that anymore, and they talk to him...So they talk to him now, and he thinks more about his – the impact that he has on us. Even just his non-verbal, like I used to say to him, ‘Your non-verbal is the way that you would look at me – like just aggression over really unnecessary, insignificant things.’ So that’s been a big improvement. (Partner participant 1)

One man also self-reported thinking that the program had improved his communication skills:

With the YFS course, it has helped in a way that I improve in my communication skills. So every time when we have an argument, I tell her not to yell. So we sit down and I say, 'Look, okay, this is what I'm not happy about.' Then she addresses issues as well. Then we both come up with solutions. Then it just saves all the drama, saves all the yelling and all that. She's happy and I'm happy and that's it. It's all about the relationship. There has to be good communication skills in there. We've improved in that, so I'm pretty happy, and she's happy with me. She's like, 'YFS have done a lot with you and you've improved. Now you're more understanding, and you're more matured up in your brain.' (Male participant 5)

Practitioners were asked to compare the attitudinal and behavioural change they would regularly see in a standard program with the changes they saw in men in the intervention group. Facilitators believed that the men had not demonstrated as much attitudinal change as they would in a standard program and that this could be because less content was delivered, given the gardening weeks. Attitudinal change could also have been negatively influenced by lower rates of attendance than in a standard program. One practitioner highlighted the fact that sessions in the garden did not have specific themes in relation to stopping violence, and this sometimes left women partners with a lack of information about what the men had addressed during that session. This also had implications for how the women's advocate could pass on information about program content. This situation could be alleviated by having themes or a process to feed back what was addressed in garden sessions.

The A-IPVAW saw little shift between T1 and T2 in either the intervention or comparison group. A review of the researcher log highlighted the fact that men in both groups typically responded with a '1' that the attitude listed was 'not acceptable' in T1, giving a low base for change at T2. Men typically contradicted this response in interview. This suggests that the men modified their responses in the A-IPVAW, responding in a way they thought would be desirable to the researcher. The qualitative interviews provided a more accurate overview of men's attitudes toward violence against women. This is an important lesson for larger trials.



Discussion

This pilot program set out to test and refine methods used to develop and evaluate a novel intervention initiative using a community garden with men who perpetrate DFV. It did this by using content from traditional MBCPs and identifying areas for development and refinement for future larger scale trials. It achieved these aims and objectives. While the robustness and sample size of the data was not as planned, because of COVID-19 disruption, the pilot was still able to show that this innovative approach to perpetrator intervention offers promise and could be further developed in terms of content, process, practice and research methodology.

This research highlighted several key learnings. The first of these relates to the importance of an implementation period, to allow the relationship to develop between the professional DFV service and the community volunteer groups. This will give a shared sense of clarity, purpose and role delineation that, in the current pilot, was not sustained throughout the intervention. The intervention could be classed as a community engagement project; as such, it requires a community development model for engagement in the gardening setting and with the associated volunteers. Features of the intervention that can be guided by a community development model and that need to be discussed and embedded during the intervention period include:

- confidentiality and privacy for all involved, which practitioners raised as a core concern;
- ensuring that the intervention is trauma informed, inclusive of the trauma that garden volunteers may have previously experienced;
- reporting procedures and responsibilities, inclusive of garden volunteers; and
- conceptualising what community accountability looks like in this setting.

A core component of the implementation period must be the development of a comprehensive plan that fuses the program curriculum with the gardening content. Resourcing, roles and responsibilities of members also need to be established during this period. Practitioners, including the community garden volunteers, highlighted the lack of a formal implementation period in the pilot study. This demonstrates the need for specific programming for each session in the garden, rather than a purely informal process for these sessions. This should not detract from the value of organic interventions and conversations that might arise in the gardening sessions. Clearly, the gardening sessions are a differential intervention, with the aim of addressing the men's use of violence, abuse and coercive control.

The intervention group saw 12 men commence, but only three complete 27 weeks without needing to make up sessions post program. This suggests the need for further support and case management to assist men, especially those with complex external needs such as addiction or mental health conditions, to attend. The GHQ-28 scores suggested that there was an improvement among the intervention group across domains of wellbeing. This result was not reflected in the GHQ-28 scores of the comparison group. While the primary aim of an MBCP is to reduce men's use of violence, managing mental health concerns can enhance engagement with the program. The findings of our pilot study are consistent with findings on nature-based interventions with other offender cohorts, which saw an increase in physical and mental health (van der Linden 2015). In an expanded national study, focus could be given to measuring whether this change is sustained post program.

Results were mixed in relation to social connection, with qualitative data indicating some increase in social connection among the intervention cohort, which is congruent with the literature (Hoffman 2020; Timler, Brown & Varcoe 2019). However, quantitative data collected on prosociality indicated a decrease in social connectedness among the intervention group and a slight increase among the comparison group. This could suggest a further need for integrating the community garden volunteers into the program itself, or a need for further connections to be made between the Duluth program content and the wider impacts that DFV has on the community.

Limitations in the data, including the lack of partner participants and the small sample size, make it difficult to ascertain the level of attitudinal and behavioural change among men attending the program. Practitioners were asked to compare the attitudinal and behavioural change they would expect to see in a standard program with the changes they saw in men in the intervention group. Practitioners thought that they had seen less change among men than they would expect. However, facilitator inconsistency throughout the program may have impacted this observation; no facilitators saw the men at the beginning and end of the intervention. Men in the intervention group reported higher levels of attitudinal change and greater improvement in self-reported use of violence than the comparison group. The trend of under-reporting in the CTS2 and other measures is likely to be high among men using violence and this needs to be treated with caution. The following subsection on future research directions includes further discussion on how best to measure attitudinal and behavioural changes in a national pilot program.

Future research directions

This pilot study demonstrated the utility of the garden program. However, disruptions from the COVID-19 pandemic impacted the evaluation and these disruptions should be addressed in future research. This pilot also drew attention to the research methods applied, highlighting areas that could be strengthened if gardening programs were to be trialled nationally and aligning with study aim 2, where we sought to test and refine the study protocol by identifying unforeseen issues with data collection procedures and methods. Feedback from women and children whose partner or parent is attending the program is integral. This gives accurate insight into behavioural and attitudinal change among men. Crucially, it also gives insight into unintended consequences that may be impacting women and children. It is a limitation of this study that only two partners from the intervention and control groups participated, despite a change in the study protocol to offer a small incentive for those who participated. A key learning of the evaluation was that contact with the women's advocate often occurs a few weeks after the men have commenced the program. This makes it difficult for researchers to collect data at the same intervals as for male participants, impacting the reliability of CTS2 comparisons. After initial contact is made by the women's advocate, it takes time for trust between the practitioner and the client to develop, and women may not feel open to being contacted by a researcher until this trust has been established. To improve women's engagement with the research, it is suggested that researchers make regular contact, alongside the women's advocate, to establish rapport before inviting women and children to participate in interviews at the end of the program. This change would also see a re-evaluation of the use of the CTS2S, given that partner data would not be available at T1.

The CTS2S proved challenging to administer at T2. Men had either repartnered since T1 or were not able to have any contact with their partners under their current orders. The sequence in which surveys were administered was adjusted early in the evaluation. For future studies, it is suggested that the GHQ-28 be administered first; this survey saw the most buy-in from men, because it focuses on their own health and assists in developing trust with the researcher. The A-IPVAW was of little value in this evaluation in determining men's attitudinal change, because men often gave a response that they knew to be socially acceptable, such as 'it is never acceptable to...'. The reaction of the men themselves to the questions contained in the survey was more useful.

The observations of group sessions were invaluable to the research. This saw the scheduled sessions increase through the evaluation. Not only were researchers able to observe group dynamics and processes, but the consistent presence of researchers led to the establishment of rapport with the male participants, facilitators and volunteers. One man voiced relief that the same researcher was present at initial sessions, because he had been worried that a different person would be present each week. Further, with changes among the facilitation team, a constant presence from the research team led to greater cohesion for new staff members, male participants and volunteers.

Data from statutory agencies relating to offences committed would assist in evaluating the effectiveness of the program. The case files of the delivering agency did not contain this information. A consultation period would be needed with stakeholders before undertaking a national study, to manage the administrative burden of obtaining data from multiple jurisdictions.

The interview process provided essential data for the evaluation. To ensure women's safety, interviews with men were conducted during group time, both in the garden and in classroom settings. However, facilitators reported that this could be disruptive to their sessions, and men missed content. The findings from this evaluation can be used to refine the interview schedule. For example, facilitators raised concerns about maintaining confidentiality in the garden. Inserting questions about confidentiality into the interview schedule would allow male participants' views on the issue to be collected.

Considerations for future groups

As part of study aim 1, we sought to test and refine the intervention. This pilot study highlighted areas of the intervention that could be strengthened to improve outcomes in a larger study. The first is to develop a curriculum that combines Duluth program content with gardening sessions. While the informality and flexibility in structure was a strength of gardening sessions identified by practitioners, practitioners and volunteers voiced concern about a lack of direction during gardening sessions. A core curriculum, with suggestions on how to best integrate gardening activities and to guide garden sessions, would improve program outcomes. This curriculum could be developed jointly from the learnings in this report, in consultation with experienced practitioners, ecology experts and First Nations community leaders. A core curriculum may also assist in providing clarity on the principles that underpin the gardening sessions and how they can be constructed to form a cohesive program. One practitioner raised concerns, for example, about whether it was appropriate to include a restorative justice approach in the program. These underpinning concepts need to be articulated in a curriculum. Finally, a curriculum could also provide strategies for how to best maintain co-facilitation while in the gardening setting. Further review of state-based practice standards is needed, to ensure that any curriculum and associated processes comply with practice standards across jurisdictions.

This pilot study has given insight into which participants may be most suited for the gardening setting. This includes men who:

- have high levels of anxiety, especially in a classroom setting;
- are unemployed or who work in an indoor setting;
- are 'hands-on' learners; or
- who are First Nations or are from a CALD community group with community protocols that value connection to nature.

Practitioners and one partner saw the value in trialling a specific First Nations MBCP that operates in a nature-based setting. It is recommended that, if a national trial is undertaken, a First Nations group be co-designed and run at one trial site. Community consultation would be integral and factored into evaluation processes.

Ensuring that suitable facilitators are selected to lead gardening programs is as important as ensuring that suitable men are selected for participating in gardening programs. The majority of facilitators who participated valued the nature connection that garden sessions offered and saw the value of the program. Most were enthusiastic, but few had expertise in ecology, which led to an over-reliance on community garden volunteers to offer guidance. Ideally, facilitators would have a basic understanding of ecology, which would also assist in developing connections between the Duluth content and the gardening time. If this is not possible, facilitators should, at a minimum:

- be open to participating alongside the men in gardening activities to the best of their ability;
- be committed to the principles that underpin the gardening program;
- be comfortable having informal, individualised conversations with men in the garden setting; and
- be able to maintain productive relationships with the community garden volunteers.

If possible, facilitators should be encouraged to visit the gardening setting and observe a session before facilitating in the garden for the first time.

The relationship between the community garden volunteers and the delivering agencies is crucial to the success of the program. This relationship needs to be maintained and sustained, to ensure that it is not disrupted by staff or volunteer turnover. This pilot study highlighted practical challenges which could be revised to improve outcomes in delivering the program. Firstly, practical constraints saw the program delivery adapted, with one week in the classroom and the following week in the garden. This unintentionally created barriers to men's attendance and to program cohesion. Ideally, sessions would be conducted at the same venue every week. This means that the ideal venue would be able to offer a community garden space and a confidential space for group-based conversations.

Secondly, the evaluation outcomes were impacted by conducting the program on Saturdays, a time when programs are not typically offered. Practitioners, partners and men all struggled to differentiate between the program experience and the experience of attending on Saturdays, making it difficult to identify those barriers created by the structure of the sessions and those of attending on that particular day. It is suggested that the program be conducted on a weekday morning in the next iteration, to assist in identifying unique facilitators and barriers relating to gardening sessions. Further, the pilot program commenced in September and ran through to March in south-east Queensland. Heat impacted gardening sessions, with some sessions conducted in temperatures above 30 degrees. This time of year also sees increased rainfall. To reduce the risk of heat stress and of sessions being cancelled because of extreme weather conditions, it is recommended that outdoor programs be run between February and September.

Thirdly, practitioners advocated for the inclusion of activities where men could see a tangible difference and feel a sense of accomplishment. Men voiced discouragement when asked to undertake tasks such as weeding, especially if they had previously weeded the same patch of garden. Tasks such as planting, or tasks for which they can take ownership, may see greater engagement from men and lessen the program's dropout rate.

Finally, the pilot study explored possible enablers of and barriers to running a victim-survivor group in a gardening setting. It is recommended that a co-design process be undertaken with victim-survivors, women's advocates and community leaders to:

- design an appropriate program that meets the needs of victim-survivors,; and
- work through risk and practical concerns that may inhibit engagement.



Conclusion

DFV is pervasive in Australia. MBCPs are used as a standard intervention to address the issue. While MBCPs are effective for some men, they do not meet the needs of all men, suggesting that diverse statutory interventions are needed. This study trialled an innovative program to address men's use of violence against their partners. The program combined a standard intervention program with a gardening component. The pilot was impacted by the COVID-19 pandemic, which challenged the methodology; however, it suggests initial positive trends in improving men's wellbeing while they participated in the garden intervention. Qualitative data showed mixed results similar to those observed in traditional MBCPs, with some suggestion that the men were more forthcoming in sharing their thoughts and experiences in the garden setting. Results also demonstrated the need to ensure that partner agencies, in this case the community garden and delivering agency, are given time to form working relationships.

Future research can build upon the pilot to develop a program framework that will provide the intervention with more structure, especially during garden activities. This framework or curriculum could be developed in a collaborative forum between researchers, DFV specialist workers and horticulturalists. Men and practitioners valued the time for informal conversations in the garden. It allowed men to speak more candidly and redressed power imbalances between practitioners and participants. Future consideration is needed about how victim-survivors are engaged and whether a different program, based on the gardening program, would be feasible and beneficial.

This pilot outlined key recommendations on research methods to enable a national pilot program to be run and evaluated. A larger trial of the program could include specific population groups along with general population groups. Future trials need to clearly design how the initiative relates to case management, community development and restorative justice process to intervene and prevent DFV, as well as being embedded in an integrated response.

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Appendix: Participant information sheet intervention group

Evaluation of the YFS

Community Garden Group

Who is conducting the evaluation?

The evaluation is being conducted by Dr Jennifer Boddy, Professor Patrick O’Leary, and Dr Amy Young from Griffith University. They can be contacted via phone (07 5552 7396) or email (j.boddy@griffith.edu.au and p.oleary@griffith.edu.au and amy.young@griffith.edu.au).

Why is the evaluation being conducted?

This evaluation is being conducted to assess whether the YFS Community Garden program changes participants’ attitudes and behaviours towards violence. It will also examine whether the group and research design are clear and useful.

What will you be asked to do?

You will be invited to complete a men’s behavioural change group program that includes participation at a community garden. You will be asked to complete a survey prior to commencing the group, at completion of the group, and three months post completion. You will also be asked to consent to the review of data relating to police call-outs, charges and offences during, and 3-months post, the project. Finally, you will be asked to consent to a 60 minute interview at the start and end of the group. This can be completed face-to-face at the location of the group program or via telephone.

Why have you been asked to participate?

You have been asked to participate in this evaluation as you are about to start (or have recently started) the YFS community garden program.

What are the benefits of the evaluation?

There will be limited direct benefit to being involved in this evaluation except that it will provide you with an opportunity to contribute to the improvement of the YFS community garden program.

What are the risks?

We do not anticipate that there would be any risks to you as a result of your participation in the evaluation. However, should you report any serious dangers to you, your partner, children or others, the evaluation team may need to contact other services. Additionally, should you find that participation in the evaluation is distressing please contact Professor Patrick O'Leary or Dr Jennifer Boddy or any of the following services:

YFS: 3826 1500

Lifeline: 13 11 14

MensLine: 1300 78 99 78

Your confidentiality

Any personal information obtained will be used for initial contact and follow-up purposes only and will be stored securely at Griffith University. All survey and other data will be de-identified. Information you provide for this study will be retained for a period of five years post publication and then destroyed.

Your participation is voluntary

Participation in this evaluation is voluntary. You do not have to answer every question unless you wish to do so. While YFS may be aware of your participation in this evaluation, your decision to participate will in no way impact upon your relationship with the service. You are free to withdraw from the evaluation at any time.

Questions / further information

If you would like additional information about the evaluation, please contact Dr Jennifer Boddy (07 55552 7396; j.boddy@griffith.edu.au).

The ethical conduct of this research

This study has received approval from Griffith University Human Research Ethics Committee approval (GU ref no: 2019/315). This evaluation is conducted in accordance with the NHMRC guideline: Ethical Considerations in Quality Assurance and Evaluation Activities (2014). If you have any concerns about the ethical conduct of the evaluation project please contact the Manager, Research Ethics, Griffith University, on 3735 4375 or research-ethics@griffith.edu.au.

Feedback to you

A one page summary of the research findings will be made available to all participants. If you would like a copy, please notify the evaluation team upon completion of the third survey.

Privacy Statement

The conduct of this evaluation involves the collection, access and/or use of your identified personal information. The information collected is confidential and will not be disclosed to third parties without your consent, except to meet government, legal or other regulatory authority requirements. A de-identified copy of this data may be used for other research purposes including publishing openly (e.g. in an open access repository). However, your anonymity will at all times be safeguarded. For further information consult Centacare's privacy policy at <http://www.centacare.org.au/about/client-information/privacy-confidentiality/>.

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Associate Professor Jennifer Boddy is Dean of Sustainability at Griffith University.

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Professor Paul Mazerolle is President and Vice-Chancellor of the University of New Brunswick and a former Director of the Violence Research and Prevention Program at Griffith University.

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