

Australian Government

Australian Institute of Criminology

Trends & issues in crime and criminal justice

No. 676

Abstract | Evidence for nature-based interventions reducing recidivism among offenders is growing. Nature-based interventions have yet to be trialled with men who have perpetrated domestic violence.

This study aimed to develop, pilot, test and refine an innovative program that incorporates an integrated approach and includes community restitution through an environmental project that operated in parallel to a traditional men's behaviour change program. Data were collected pre and post intervention with men, practitioners, volunteers and (ex)partners.

Study results indicate initial positive trends in improving men's wellbeing and engagement, but further research is needed to determine impacts on behaviour change.

Trialling a nature-based intervention with men who perpetrate domestic and family violence

Dr Amy Young, Associate Professor Jennifer Boddy, Professor Patrick O'Leary and Professor Paul Mazerolle

Domestic and family violence (DFV) remains one of the most challenging social problems. Approximately one in six Australian women has experienced physical or sexual violence perpetrated by a current or former intimate partner, while one in four women has experienced emotional abuse (Australian Institute of Health and Welfare 2019). Recent government inquiries into DFV in Queensland and Victoria have called for greater focus on intervention and justice responses for perpetrators (State of Victoria 2016; Women's Safety and Justice Taskforce 2021). Both inquiries highlight the inadequacy of programs to hold perpetrators accountable and the need to expand the range of evidence-based intervention options.



CRIMINOLOGY RESEARCH GRANT



Most perpetrator interventions come in the form of men's behaviour change programs (MBCPs). 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 offer feedback on their experiences. While an 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); others suggest that the effects on violence are negligible (Arias, Arce & Vilariño 2013; Babcock, Green & Robie 2004; Feder & Wilson 2005). Thus, innovative trials that will assist in the development of practices to address DFV are needed. Given the lack of conclusive evidence for current approaches to preventing male perpetrated DFV, and recognising the importance of reducing violence against women, this study aimed to develop, pilot, test and refine a new program. It builds on an integrated approach by including restitution to the community through an environmental project that operated in parallel to a traditional MBCP. The intervention combined Duluth-informed program content with time spent in a community garden.

International evidence suggests that programs with previously incarcerated adults incorporating restitution through an ecological conservation project may be beneficial in reducing recidivism rates (Kaye et al. 2015). Being in the outdoors for a therapeutic program is understood to help change behaviours by providing a less stressful environment for participants and improving mental health (van der Linden 2015). Exposure to nature can lower levels of rumination (Bratman et al. 2015), which is associated with DFV, and promote cooperation (Zelenski, Dopko & Capaldi 2015).

Positive outcomes from horticultural programs with offenders include an increase in physical and mental wellbeing and prosocial behaviour change (Baybutt, Dooris & Farrier 2019). Participants in a study by Lee et al. (2021) reported decreased depression and increased self-esteem and life satisfaction. Four out of five participants reported making changes in their lives and behaviour because of participation. Moran's (2019) study reported that 78 percent of prisoners said that green spaces made them feel calm, and 71 percent reported that green spaces helped them find a sense of peace. Brown et al. (2016) identified benefits to their one-year garden program, including improved health and subjective sense of wellbeing, along with self-reported reduced dependence on substances. The participants stated that the gardening program was a crucial step in their journey to recovery. Timler, Brown and Varcoe (2019) reported that prisoners in their study experienced positive impacts through planting, harvesting and donating produce. The participants described the garden as meaningful work that was beneficial in increasing self-esteem and self-worth.

Horticulture programs foster a sense of community among participants, which is a critical component of recovery (Toews, Wagenfeld & Stevens 2018). Folk et al. (2016) found that connection to the broader community reduced recidivism and predicted community adjustment. Outdoor interventions offer an avenue to enhance these connections. They can also help to break down community stigma around offenders.

No. 676

Nature-based interventions appear to reduce recidivism (Baybutt, Dooris & Farrier 2019; Brown et al. 2016). However, research to date primarily involves prison offenders and lacks long-term engagement and evaluation. The lack of rigour and direction for future programs means that there are few evidence-based programs (Timler, Brown & Varcoe 2019). This study adds to the growing body of literature on nature-based interventions, providing a new perspective by applying the intervention specifically to male offenders who have engaged in DFV.

Method

This study aimed to develop, pilot, test and refine an innovative program that built on an integrated approach by including restitution to the community through an environmental project operating in parallel to a traditional MBCP. The pilot program provided offenders with an opportunity to engage not only in a standard integrated program but also in community restitution via a community garden. 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 is 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 is not compromised.

The evaluation used a mixed-methods naturalistic trial 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. 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.

Twelve men participated in the intervention 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.

The results of the study can be used to inform practice development and can be built upon in a future multi-site trial.

Data collection methods

As described in Table 1, data collection methods involved:

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

Table 1: Data collection methods

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

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

Table 2 describes the multiple data sources and methods used to address each research aim, to triangulate data and promote study rigour.

| Table 2: Data collected for each research aim | | | | |
|--|--------------------------------|--|--|--|
| Research aim | Data collection method | | | |
| | Semi-structured interviews | | | |
| 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 | Observation | | | |
| | Survey measures | | | |
| | Demographic questions | | | |
| | Semi-structured interviews | | | |
| Test and refine the study protocol by identifying unforeseen issues with data collection procedures and methods | Observation and researcher log | | | |
| with data concetion procedures and methods | Researcher log | | | |

Nine men from the intervention group and six men from the comparison group participated in semi-structured interviews. Four former partners, consisting of those whose partner was in the intervention group and those whose partner was attending a standard program—for comparison—also participated in interviews, as did nine practitioners. The nine practitioners included seven DFV specialist workers from the delivering agency and two community garden volunteers. These two groups are described as 'practitioners' to provide a degree of confidentiality and anonymity. The interviews elicited interviewees' perceptions of the program, particularly whether it contributed to victim safety and perceived changes in behaviour.

To understand the group process while also identifying any issues with the research procedures, the researchers observed the intervention and comparison groups. An observation framework was used that assisted with reviewing the program logic. It included questions such as: 'Did facilitators pick up on any safety issues and if so, how?'. Observation was also used for refining 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.

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 from participants regarding completion of scales; recruitment and follow-up rate; process; proportion of participant surveys completed; and reasons for withdrawal.

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.

| Table 3: Number of survey participants 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; Straus & Douglas 2004);
- the Acceptability of Intimate Partner Violence Against Women Scale (A-IPVAW; Martín-Fernández et al. 2018);
- the General Health Questionnaire (GHQ-28; Goldberg 1978); and
- the Prosociality Scale (Caprara et al. 2005).

Men, (former) partners and practitioners were also asked to answer a series of questions when they completed the first survey to record demographic information. This included 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 and the comparison group and involved crosschecking findings from each data source with other data. All datasets underwent initial and subsequent quality checks.

Inductive thematic analysis using NVivo 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. 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 (CTS2S, A-IPVAW, GHQ-28 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 CTS2S was further split into two sections, a perpetrator and a partner perception section, resulting in five outcome variables. The intervention group's scores were compared with both a null value of zero (ie the program had no effect) and the comparison group.

Results from the quantitative data analysis should 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.

Intervention structure

The intervention group was run over 27 weeks from September 2021 to March 2022, in south-east Queensland. Practitioners from Youth and Family Services Logan delivered the intervention. 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. Moving to a separate location every second week mitigated this risk but posed a challenge for the men, who needed to remember which space to attend. Five weeks of the intervention were delivered online, 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. 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.

A four-week implementation period allowed the delivering agency, the researchers and members of the community garden to plan the intervention. The first week of program content, for example, focused on what constitutes DFV. The next week in the garden focused on the basics of gardening, including pH testing of soil, with links made between DFV content and gardening activities. Sessions in the garden lasted two hours, were delivered on a Saturday and were co-facilitated by a specialist male and female, with a women's advocate available for support. Sessions commenced with a short check-in, which provided consistency with standard session structure and allowed facilitators to assess risk. The garden volunteers 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.

A short induction session at the beginning of the program orientated the men to the space and familiarised them with the research team, garden personnel and session structure. This session allowed both partner organisations the opportunity to outline expectations. 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 caused the planned garden activities to gradually shift to less structured activities that consistently involved weeding. This allowed facilitators to participate in the weeding, making it a good forum for informal conversations.

However, it lessened the opportunities for men to learn a range of gardening skills and to reflect on what they learned from the gardening process about respectful relationships. Further, participants exploited minor tensions between the partner organisations when they arose, which could be mitigated in future should further time be allowed to strengthen the collaborative relationship between partner organisations and practitioners in advance of any such program.

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. The group formats differed. The intervention was delivered to a closed group, where participants started and completed at the same time; the comparison participants were recruited from 'rolling groups', where new men joined as others completed. Notably, added flexibility around absences was given to the intervention group, to support data collection. 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 prior to the program were of a similar range of severity. 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.

Figure 1 provides an overview of the demographic information for the intervention group.



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.

Key findings

This section outlines findings identified across the synthesised datasets. These findings have been grouped thematically, focusing on engagement, risk and challenges, and the value of a victim-survivor gardening group.

Participant engagement

The gardening space enabled engagement for men who experienced anxiety in the classroom. Participants reported finding the garden a calming space, even when undertaking activities they held in low regard, such as weeding. Facilitators noted that men were more comfortable in conversations with the lessened levels of anxiety:

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. (Practitioner participant 1)

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

We have conversations in the classrooms, sometimes what I pick up is 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...I learn quick there. (Male participant 4)

Practitioners noted that conversations in the garden were more honest than those in the classroom. In the garden, two practitioners discussed the connection to nature and how this may positively impact men in the group who had experienced trauma. While men spoke about trauma in their past, none spoke directly about the garden as a healing space. Men confirmed that they enjoyed the informality of the garden space and the opportunity for organic discussions to arise with other men and 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)

The less formal setting of the garden made it easier to share experiences.

Program risks

Two practitioners were concerned about the physical risks men could pose in the garden. However, no added risk was observed, even when men were using power tools. Practitioners also 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...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)

Although members of the community garden had signed confidentiality agreements, practitioners were 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 it. This highlights the need for facilitators to be clear on the risks of the gardening space and their own responsibilities.

Facilitators observed men interacting more closely than they do in the classroom. This 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... between them. (Practitioner participant 7)

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

Facilitation challenges

Practitioners 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 garden;
- difficulty managing the time and tasks provided by the garden volunteers; and
- differing levels of facilitator comfort in the garden.

These challenges are significant, but facilitators also believed that the gardening setting reduced the power differential between themselves and the participants and promoted participant engagement.

Inconsistency was observed between facilitators in addressing problematic comments that support violence or sexist attitudes. Additionally, there were times when men made disclosures that were therapeutically useful to substantiate behavioural change progress but were not always addressed by facilitators. Facilitators expressed the need for more training about how to intervene in the informal process of gardening sessions.

Good rapport was observed between the male garden instructor and the participants:

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. (Practitioner participant 5)

Women's survivor groups

Because initial results indicated that men were less anxious in the garden, the research team adapted the interview schedule to explore how the gardening space could be used for healing with victimsurvivors. Former partners were positive about being in the outdoors. Eight of the nine practitioners were supportive of the idea. They noted the value of being in an open space, allowing survivors to connect with each other and creating opportunities for informal contact with professionals. 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. Concerns were raised over the potential burden on women of attending, especially in relation to managing child care. These concerns would need careful consideration in the co-design stage of future initiatives, as would consideration of how these programs could be incorporated as part of a broader strategy in community development and restorative justice responses to DFV.

Program outcomes

Survey measures were used to ascertain program outcomes. Results from the survey measures must be treated with caution because of the small sample size. Insight into program outcomes was also gathered through observations and interviews with practitioners and (former) partners. Table 4 displays the mean and standard deviation for each outcome variable for the intervention and comparison groups before and after the program. It is noted that comparison between pre and post program could not be achieved with uneven samples, so only the participants who completed both a pre and post program survey were analysed when comparing the efficacy of the program. It should also be noted that, with such a small sample size, results cannot be generalised or understood conclusively. Rather, they are suggestive of possible trends that would require further investigation.

| Table 4: Comparison of mean and standard deviations in pre and post testing | | | | | | |
|---|---|-------------|---|-------------|--|--|
| | Intervention (<i>n</i> =6) Mean (<i>SD</i>) | | Comparison (<i>n</i> =5) Mean (<i>SD</i>) | | | |
| | Pre | Post | Pre | Post | | |
| CTS2S-Perpetrator | 4.0 (0.0) | 2.5 (0.7) | 3.7 (2.1) | 3.3 (1.5) | | |
| CTS2S-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 | 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) | | |

The GHQ-28 results suggested that the gardening program positively influenced men's general wellbeing, including their mental health. Results indicated by the survey data 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. The two men who were unemployed appreciated this. Changes in behaviour could not be accurately measured without follow-up data from ex-partners and statutory services. Facilitators were asked to compare the men's attitudes and behavioural change with what they regularly see in a standard program. Facilitators believed that the men had not demonstrated as much attitudinal change as in a standard program and thought that this could be because less content was delivered, given the gardening weeks. The A-IPVAW saw little shift between T1 and T2 in either the intervention or comparison group.

Discussion

This pilot program developed and evaluated a novel intervention initiative using a community garden with men who perpetrated DFV. It used content from traditional MBCPs and identified areas for development and refinement for future larger scale trials. To this end, 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 study was still able to show that this innovative approach to perpetrator intervention offers promise and could be further developed in content, process, practice and research methodology.

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

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

The implementation period needs to include the development of a program curriculum with gardening content. This pilot demonstrated the need for specific programming for each session in the garden, rather than purely an informal process for these sessions. This should not detract from the value of organic conversations that might arise in the garden.

The intervention group saw 12 men commence, but only three complete 27 weeks. A further three men made up sessions post program, but six men withdrew from the program and study. This suggests the need for further support and case management to assist men, especially those with complex external needs such as 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 comparison group. While the primary aim of an MBCP is to reduce men's use of violence, managing mental health concerns can enhance engagement.

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 thought that they had seen less change among men than they would expect. However, facilitator inconsistency throughout the program may have affected this observation, given that no facilitators saw the men at the beginning and end of the intervention.

Considerations for future groups

A core curriculum, with suggestions on how to best integrate gardening activities, would improve program outcomes. This curriculum could be developed jointly from the learnings in this report, in consultation with experienced practitioners, ecologists 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. Finally, a curriculum could also provide strategies on how to best maintain co-facilitation in the gardening setting. Further review is needed of state-based practice standards, to ensure that any associated processes comply with practice standards across jurisdictions.

This pilot study suggests that men who may be most suited for the gardening setting include 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
- are First Nations or are from a culturally and linguistically diverse 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 larger 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.

No. 676

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 garden setting and 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 in delivering the program, which can be revised to improve outcomes. Practical constraints saw the program delivery adapted, with one week in the classroom and the following week in the garden. This caused unintentional barriers to men's attendance and to program cohesion. Ideally, sessions would be conducted at the same venue every week. The ideal venue will be able to offer a community garden space and a confidential space for group conversations. Practitioners advocated for the inclusion of activities where men could see a tangible difference, so they could feel a sense of accomplishment. Tasks such as planting, or tasks promoting ownership, may encourage greater participant engagement and reduce dropout rates. Future research could ascertain whether specific gardening activities can be linked to specific outcomes in men's attitudinal change or whether simply spending time in the gardening space produces results.

Finally, the pilot study explored possible enablers and barriers to running a victim-survivor group in a garden 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

Eliminating DFV is a considerable public policy challenge for governments. It can only be achieved by stopping violence at its source. Currently, Australia has limited options in perpetrator interventions— mostly MBCPs, underpinned by various iterations of psycho-educational frameworks. Results are mixed, as is program retention. This has seen calls for the development of a range of differential intervention options, to better cater for the heterogeneous population of perpetrators (Women's Safety and Justice Taskforce 2021). This preliminary study is one step toward developing greater sophistication and evidence in perpetrator intervention systems.

This study trialled an innovative program to address men's use of violence against women. It combined a standard intervention with an added gardening component. It suggests initial positive trends in improving men's wellbeing and engagement. Qualitative data showed mixed results, similar to traditional MBCPs, with some suggestion that the men were more forthcoming in sharing their thoughts in the garden setting. Results also demonstrated the need to ensure that partner agencies are given time to form working relationships. Future research can build upon the pilot to develop a program framework which will provide the intervention with more structure. 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. This pilot outlined key recommendations to enable a larger 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 and identify how the initiative relates to case management, community development and restorative justice processes to intervene and prevent DFV, as well as being embedded in an integrated response.

References

URLs correct as at May 2023

Arias E, Arce R & Vilariño M 2013. Batterer intervention programmes: A meta-analytic review of effectiveness. *Psychosocial Intervention* 22(2): 153–160. https://doi.org/10.5093/in2013a18

Australian Institute of Health and Welfare 2019. *Family, domestic and sexual violence in Australia: Continuing the national story.* Canberra: Australian Institute of Health and Welfare. https://doi. org/10.25816/5ebcc837fa7ea

Babcock J, Green C & Robie C 2004. Does batterers' treatment work? A meta-analytic review of domestic violence treatment. *Clinical Psychology Review* 23(8): 1023–1053. https://doi.org/10.1016/j. cpr.2002.07.001

Baybutt M, Dooris M & Farrier A 2019. Growing health in UK prison settings. *Health Promotion International* 34(4): 792–802. https://doi.org/10.1093/heapro/day037

Bratman G, Hamilton J, Hahn K, Daily G & Gross J 2015. Nature experience reduces rumination and subgenual prefrontal cortex activation. *Proceedings of the National Academy of Sciences of the United States of America* 112(28): 8567–8572. https://doi.org/10.1073/pnas.1510459112

Brown G, Bos E, Kneafsy M & Glynn M 2016. *A summary report of an evaluation of the Master Gardener Program at HMP Rye Hill: An horticultural intervention with substance misusing offenders.* Coventry: Coventry University. https://doi.org/10.13140/RG.2.1.3948.5602

Caprara G, Steca P, Zelli A & Capanna C 2005. A new scale for measuring adults' prosociality. *European Journal of Psychological Assessment* 21(2), 77–89. https://doi.org/10.1027/1015-5759.21.2.77

Feder L & Wilson D 2005. A meta-analytic review of court-mandated batterer intervention programs: Can courts affect abusers' behavior? *Journal of Experimental Criminology* 1(2): 239–262. https://doi. org/10.1007/s11292-005-1179-0

Folk J, Mashek D, Tangney J, Stuewig J & Moore K 2016. Connectedness to the criminal community and the community at large predicts 1-year post-release outcomes among felony offenders. *European Journal of Social Psychology* 46(3): 341–355. https://doi.org/10.1002/ejsp.2155

Goldberg D 1978. Manual of the General Health Questionnaire. Windsor: NFER-Nelson

Gondolf E 2004. Evaluating batterer counseling programs: A difficult task showing some effects and implication. *Aggression and Violent Behavior* 9(6): 605–631. https://doi.org/10.1016/j. avb.2003.06.001

Kaye T, Bush K, Naugle C & LeRoy CJ 2015. Conservation projects in prison: The case for engaging incarcerated populations in conservation and science. *Natural Areas Journal* 35(1): 90–97. https://doi. org/10.3375/043.035.0113

Lee A, Kim S, Kwon H & Park S 2021. Horticultural therapy program for mental health of prisoners: Case report. *Integrative Medicine Research* 10(2): 100495. https://doi.org/10.1016/j.imr.2020.100495

Martín-Fernández M et al. 2018. Measuring acceptability of intimate partner violence against women: Development and validation of the A-IPVAW Scale. *The European Journal of Psychology Applied to Legal Context* 10(1): 26–34. https://doi.org/ 10.5093/ejpalc2018a3

Moran D 2019. Back to nature? Attention restoration theory and the restorative effects of nature contact in prison. *Health and Place* 57: 35–43. https://doi.org/10.1016/j.healthplace.2019.03.005

State of Victoria 2016. *Royal Commission into Family Violence: Summary and recommendations*. Melbourne: Victorian Government. https://www.rcfv.com.au/Report-Recommendations

Straus M & Douglas E 2004. A short form of the Revised Conflict Tactics Scales, and typologies for severity and mutuality. *Violence and Victims* 19(5): 507–520. https://doi.org/ 10.1891/vivi.19.5.507.63686

Timler K, Brown H & Varcoe C 2019. Growing connection beyond prison walls: How a prison garden fosters rehabilitation and healing for incarcerated men. *Journal of Offender Rehabilitation* 58(5): 444–463. https://doi.org/10.1080/10509674.2019.1615598

Toews B, Wagenfeld A & Stevens J 2018. Impact of a nature-based intervention on incarcerated women. *International Journal of Prisoner Health* 14(4): 232–243. https://doi.org/10.1108/IJPH-12-2017-0065

van der Linden S 2015. Green prison programmes, recidivism and mental health: A primer. *Criminal Behaviour and Mental Health* 25(5): 338–342. https://doi.org/10.1002/cbm.1978

Women's Safety and Justice Taskforce 2021. *Hear her voice, Report one: Addressing coercive control and domestic and family violence in Queensland.* Brisbane, Queensland: Women's Safety and Justice Taskforce. https://www.womenstaskforce.qld.gov.au/publications

Zelenski J, Dopko R & Capaldi C 2015. Cooperation is in our nature: Nature exposure may promote cooperative and environmentally sustainable behavior. *Journal of Environmental Psychology* 42: 24–31. https://doi.org/10.1016/j.jenvp.2015.01.005

Dr Amy Young is a Research Fellow in the Disrupting Violence Beacon at Griffith University.

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

Professor Patrick O'Leary is Co-lead of the Disrupting Violence Beacon and Director of the Violence Research Prevention Program, Griffith University.

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.

General editor, *Trends & issues in crime and criminal justice* series: Dr Rick Brown, Deputy Director, Australian Institute of Criminology. Note: *Trends & issues in crime and criminal justice* papers are peer reviewed. For a complete list and the full text of the papers in the *Trends & issues in crime and criminal justice* series, visit the AIC website: www.aic.gov.au ISSN 1836-2206 (Online) ISBN 978 1 922877 08 6 (Online) https://doi.org/10.52922/ti77086 ©Australian Institute of Criminology 2023 GPO Box 1936 Canberra ACT 2601, Australia Tel: 02 6268 7166 Disclaimer: This research paper does not necessarily *reflect the policy position of the Australian Government*

www.aic.gov.au