Situational Crime Prevention in Sexual Offenses Against Women: Offenders Tell Us What Works and What Doesn't

Abstract

This study examined the perceived effectiveness of situational crime prevention (SCP) in sexual assault as rated by 140 offenders convicted for sex offenses against women in Australia. Participants were presented with three scenarios and asked to rate the perceived effectiveness of SCP techniques relating to guardianship, victim self-protective behaviour and crime prevention through environmental design (CPTED). Results indicate that the effectiveness of SCP methods was perceived to vary across different contexts. For offenses occurring in the private setting of an offender's home, victim self-protective behaviour was seen as most effective, followed by guardianship and CPTED. In public settings, although the perceived effectiveness of victim self-protective behaviour remained the same, guardianship and CPTED were rated as significantly more effective. Further variations were identified regarding specific strategies. Findings highlight the nuances of offender decision-making in different situations and environments, and provide the first empirical comparisons of SCP perceptions among sex offenders.

Keywords: Sexual offenses, situational crime prevention, guardianship, hypothetical scenarios, crime prevention through environmental design

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Situational Crime Prevention in Sexual Offenses Against Women: Offenders Tell Us What Works and What Doesn't

Introduction

Despite the prevalence of sexual offenses (e.g. Australian Bureau of Statistics [ABS], 2018) current knowledge regarding crime prevention in this area remains relatively scarce. In more recent years, a growing body of crime research has shifted the focus to opportunity rather than propensity, underscored by the development of situational crime prevention (SCP). SCP takes a pragmatic approach to crime reduction by manipulating the immediate environment that facilitates opportunities for crime (Clarke, 1980). The emphasis is thus placed on attempting to prevent crimes before they occur rather than on the post-offense treatment of offenders. Despite growing evidence that SCP could be effective across different crime types, there are currently few empirical studies of SCP in sexual offending literature. Potential SCP prevention methods, such as enhanced guardianship, have only recently begun to be explored empirically (e.g. Cook & Reynald, 2016). For interpersonal crimes, arguably the most detailed sources of information about the offense come from the parties involved – the victim and the offender. While victim-based data contributes toward describing the event and provides accurate accounts of victim self-protective behaviour and victim characteristics, it is not as helpful in revealing the full processes of offender crime-commission or offender decision-making. Offenders are, therefore, an important source to inform on which measures prevent or facilitate offending (Jacques & Bonomo, 2016). Offender-based research can help provide a deeper understanding of crime events, and more specifically, the impact of SCP on offender decision-making.

It currently remains unclear which SCP techniques work and which techniques are ineffective, or how offender decision-making interacts with different contexts and

environments. Moreover, it is unknown how the perceived effectiveness of different SCP methods, such as guardianship, victim self-protective behaviour and crime prevention through environmental design (CPTED), vary across different contexts involving different offender-victim relationships and locations. We aim to address these gaps in the current study. To do so, we employ hypothetical scenarios to obtain sex offender ratings for the perceived effectiveness of potential SCP techniques. To our knowledge, this method has not previously been used to investigate sexual offense prevention. The use of hypothetical scenarios has predominantly been adopted in psychology to examine student attitudes regarding topics such as victim perception and blame (e.g. Angelone, Mitchell & Smith, 2016), or to determine the decision-making and perceptions of "would-be" sexual offenders using college student samples (e.g. Bachman, Paternoster & Ward, 1992; Bouffard, 2011), thus limiting the generalizability of the findings. Hence, this study's objective to examine hypothetical offender decision-making amongst actual sex offenders, with a focus on crime prevention, will be the first of its kind.

Situational crime prevention, the rational choice perspective and the routine activity approach provide the theoretical framework for the current study. Together, these perspectives bring the role of opportunity, situational factors and decision-making in crime to the forefront. While routine activity examines patterns and convergences on a macro level, rational choice breaks down each stage of the crime event on a micro level (Clarke & Felson, 1993), and SCP provides strategies to disrupt crime within this framework. The analysis is organised around three SCP methods: guardianship, victim self-protective behaviour and CPTED.

Guardianship

Guardianship is conceptually focused on the situation-specific supervision or surveillance of potential targets as a form of crime control (Felson & Cohen, 1980). Within the routine

activity framework, bystanders can be viewed as potential guardians (Reynald, 2011), including men, women and children. However, Reynald (2011) explains that the effectiveness of the bystanders is determined by the extent to which they can function as capable guardians. Bystanders can vary in their willingness to intervene (Latane & Darley, 1970), therefore, the presence of a bystander may not be an effective deterrent in itself. Various factors can impact the capability of guardianship in any given situation, including the number of bystanders, bystander characteristics, setting, bystander-victim relationship, bystander-offender relationship and proximity to the crime. General guardianship research has generally found a negative correlation between guardianship intensity and the likelihood of crime (Reynald, 2009, 2011). The effectiveness of guardianship also seems to vary under a set of specific circumstances for each particular type of crime (Hart & Miethe, 2008) and may be enhanced by developing a step-by-step intervention approach that potential guardians could follow (Leclerc & Reynald, 2016).

Guardianship has not been thoroughly explored in sexual victimization literature, with some research only highlighting the importance of guardianship in child sex offenses (e.g. Leclerc, Smallbone & Wortley, 2015; Wortley & Smallbone, 2006). Tentative evidence suggests that up to a third of sexual offenses against women are committed in the presence of a third party (Hart & Miethe, 2008; Planty, 2002), which may indicate there is potential for better guardianship if the surrounding contexts and circumstances were better understood. Overall, research generally indicates that the presence of bystanders has a positive influence on outcomes in sexual offenses, more often assisting rather than worsening the victim's situation in sexual assault (Planty, 2002). The presence of bystanders seems to be linked with successful victim resistance (e.g. Amick & Calhoun, 1987) and decreasing the odds of rape completion (Clay-Warner, 2002; Marchbanks, Lui & Mercy, 1990). One study found that 24% of offenders in their sample estimated high risks of apprehension when sexually

offending in the presence of a third party (Beauregard & Leclerc, 2007), indicating that guardianship influences offender decision-making. While these findings indicate that guardianship can be effective for preventing sexual assaults, this area warrants further study across more specific contexts and outcomes regarding the type, vicinity and impact of bystanders on the crime event. In particular, more research that examines offender's perspectives would be beneficial.

Recent developments in this area include recent work by Cook and colleagues (2018), which showed that non-cooperation by the victim and guardianship intensity were two key factors that disrupted sexual offense opportunities. Higher guardianship intensity was associated with more disrupted offenses, with 38% of offenders reporting a difference between their disrupted and completed offenses when a person was nearby, and 83.3% of offenders reporting a difference if a person witnessed the offense. Furthermore, all instances of active intervention were found to be successful in disrupting sexual contact. In offenses where present third parties did not intervene, the witnesses were identified to be either a child, co-offender or another victim, which supports prior research that the progression to intervention is dependent on intervention capability and willingness (Cook & Reynald, 2016). The findings indicate that: a) the absence or presence of a guardian is not necessarily sufficient to be effective in sexual offense prevention or disruption; and b) factors such as guardianship intensity, capability and willingness appear to influence offender decisionmaking and whether or not they choose to desist. These results suggest that the effectiveness of guardianship is highly context-specific and nuanced. This area, therefore, warrants further exploration. To our knowledge, no other studies have examined the effectiveness of guardianship in comparison to other SCP strategies and whether this effectiveness varies from context to context.

Victim Self-Protective Behaviour

Victim self-protective behaviour in rape can include physical and verbal resistance, as well as the use of self-protection devices. Studies on victim self-protective behaviour have most commonly examined victim resistance and its relationship to the severity of sexual outcomes, rape avoidance and the level of victim injury. In general, victim resistance has been associated with less sexual abuse and rape avoidance (e.g. Atkeson, Calhoun & Morris, 1989; Kleck & Sayles, 1990; Ullman & Knight, 1992; Wong & Balemba, 2018). Certain forms of resistance have been found to be more effective than others. Forceful physical and verbal resistance, resistance with a weapon and fleeing were seen to be effective in rape avoidance, whereas non-forceful verbal resistance was related to more severe outcomes (Ullman & Knight, 1992; Zoucha-Jensen & Coyne, 1993). Mixed results were found regarding victim injury, with some studies finding an association between resistance and injury (Block & Skogan, 1986; Cohen, 1984; Marchbanks et al., 1990; Wong & Balemba, 2016), whereas a few studies that incorporated analysis of the sequence of actions found that victim resistance rarely preceded injury (Kleck & Sayles, 1990; Ullman & Knight, 1992), and was not positively associated with the risk of subsequent injury (Quinsey & Upfold, 1985; Guerette & Santana, 2010). Ullman and Knight (1991) found that forceful victim resistance was associated with less severe outcomes and was not related to the level of injury after taking into account situational danger and the level of offender aggression. Despite these findings, it is important to note that these studies do not consider cases of victim death. Reid and Beauregard (2017) found that where victims were female and offender coercion was present, the likelihood of victim resistance increased, which in turn elevated the likelihood of victim injury directly or indirectly. The risk of victim death was found to increase with victim age, offender alcohol use and offender weapon possession (Reid & Beauregard, 2017).

Recent studies that incorporated the offender in their analyses discovered further nuances. Although the effectiveness of victim resistance did not tend to vary across different

situations (Clay-Warner, 2002), it seemed that the level of victim resistance may vary according to the offender-victim relationship, as women attacked by intimate partners were less likely to adopt physical resistance (Clay-Warner, 2003). Offender reaction to resistance was found to greatly vary for women versus child victims (Balemba & Beauregard, 2012), emphasising the need for crime-specific findings. The risk of subsequent victim injury may also be related to other offender factors. For example, one study found that the offender was more likely to react violently to victim resistance if the offender used a weapon, resorted to humiliation and spent over 30 minutes with the victim (Balemba, Beauregard & Mieczkowski, 2012). This suggests that in examining the efficacy of victim self-protective behaviour, more insight may be gained by incorporating contexts, perceptions and decision-making relating to the offender.

Crime Prevention Through Environmental Design (CPTED)

Modifying the physical environment in ways that inhibit crime is a fundamental approach common across the five basic SCP strategies (increasing effort, increasing risks, reducing rewards, reducing provocations and removing excuses). Many specific techniques for operationalizing this approach were derived from crime prevention through environmental design (CPTED) (Cozens, 2008). CPTED comprises measures such as increasing natural surveillance, territorial reinforcement to encourage a sense of ownership amongst users of the space, natural access control, activity support through design or signage in public spaces, space management and target hardening efforts such as alarms, locks and security (Cozens, 2008). The effectiveness of various CPTED strategies has been well established in crimes such as theft (Hayes, Johns, Scicchitano & Downs, 2011). For example, one randomised controlled trial found that anti-theft procedures and fixtures reduced retail store losses by up to 58% (Hayes, Downs & Blackwood, 2012), and an evaluation that controlled for long term trends found a 13% overall reduction in crime after the introduction of CCTV (Ratcliffe,

Taniguchi & Taylor, 2009). However, despite the promising potential of CPTED to prevent crimes, to our knowledge, there have been no empirical studies on the perceived effectiveness of CPTED in sexual offenses. This has been a largely neglected subject in both victim- and offender-based studies. While CPTED measures such as CCTV and emergency contact devices are generally assumed to be effective by way of common sense, to our knowledge there have been no empirical studies testing the actual efficacy of CPTED measures in sexual offenses, or whether some measures are perceived to be more effective than others by offenders. This is a major gap in knowledge that we aim to address, and the use of offender-based hypothetical scenarios uniquely facilitates this exploration.

The Current Study

Potential offenders are seen to make purposive decisions to commit crime, shaped by the immediate situational environment and both the opportunities and constraints presented within it (Cornish & Clarke, 1986, 2008). Despite evidence that various SCP methods directly impact offender decision-making and crime outcomes, little is known regarding the perceived effectiveness of SCP in sexual offenses against women, and whether the perceived effectiveness varies across different contexts and methods (i.e. guardianship, victim self-protective behaviour and CPTED). The nuances of how offender decision-making interacts with different situations and environments have not been thoroughly explored. Our study aims to provide a preliminary understanding of these gaps by asking convicted sex offenders to rate the perceived effectiveness of different SCP methods in a series of hypothetical scenarios. Self-report questionnaires were adopted detailing different scenarios involving both stranger and known victims, as well as public and private settings. The goal is to: a) develop a better understanding of offender decision-making in different contexts; and b) compare the perceived effectiveness of SCP methods relating to guardianship, victim self-protective behaviour and CPTED; and c) compare the perceived effectiveness of individual

techniques. Based on previous literature, it is anticipated that guardianship and CPTED will be effective overall but may vary in different contexts, and forceful victim behaviours will be more effective than non-forceful verbal resistance. The ultimate objective is to accumulate evidence-based knowledge on what works, what doesn't and what could be promising for preventing sexual offenses against women.

Method

Participants

This study was a part of a broader project funded by the Australian Research Council examining the effectiveness of situational prevention for sexual offending. Voluntary selfreport data were collected between 2014 to 2017 from 363 adult males convicted of sexual offenses against a woman or child incarcerated in Queensland, Victoria or Northern Territory. To be eligible for recruitment, participants must have engaged (or had the intention to engage) in contact sexual behaviour. This excludes non-contact acts such as exhibitionism, voyeurism and distribution or possession of child exploitation material. For this study, all offenders who offended against women (16 years and over) were included in the analysis (n =145), including offenders that reported offending against both women and children. Of these, five respondents were removed due to missing information, or in some instances refused to fill out this part of the survey. The final sample consisted of 140 participants. The offenders were on average 29 years old at the age of their most recent sexual offense (M = 29.0 years, SD = 12.9) (range 16 to 78 years old) and offended against adult female victims (M = 27.0years, SD = 10.6) (16 to 60 years old). The majority of participants identified as an Australian-born Aboriginal (48.6%), followed by Australian-born non-Aboriginal (27.9%), Torres Strait Islander (10.7%), European (5.7%) and Asian (1.4%). Most offenders did not progress past secondary school (79.9%), and over half of the offenders reported having children (54.3%) and were employed (65%) at the time of the offense. Most offenders selfreported a single sexual offense only (84.3%), with 7.9% offenders also reported ever committing a sexual offense against a child. The offenders reported either a disrupted offense only (43.6%), completed offense only (52.1%) or both disrupted and completed offenses (2.1%).

Materials

The self-reported data collected for the broader study included responses to hypothetical scenarios, characteristics regarding the participant's most recent completed and attempted sexual offense, and what may have discouraged the offenses. To our knowledge, the selfreport questionnaires developed in this research are the first instruments to ask offenders regarding the perceived effectiveness of prevention strategies specifically for SCP purposes. Only the hypothetical scenarios section is used in this study. In the hypothetical section of the questionnaire, the participants were given three different scenarios involving potential sexual offenses, where a man wished to proceed with sexual contact but the woman did not. Scenario 1 involved a man who met a new female acquaintance at a club, who then proceeded to the man's home. Scenario 2 described an intimate partner relationship at the man's home. Scenario 3 describe a man encountering a stranger in a public alley at night. The full written scenarios are presented in Appendix A. Following each scenario, the participants were asked to put themselves in the perspective of the man in the scenario and consider "how effective might the following factors be in stopping or discouraging you from continuing with the sexual contact?". Participants were then asked to rate the perceived effectiveness of a range of potential SCP strategies relating to three methods: guardianship (potential arrival or nearby presence of a third party), victim self-protective behaviour (victim-related factors) and CPTED (security measures embedded in the environment). The responses were based on a five-point Likert scale ranging from (1) very ineffective to (5) very effective. At the end of each scenario, the participants were asked to rate how realistic they thought the scenario was

generally, as well as personally, on a five-point Likert scale ranging from (1) not at all to (5) extremely. Overall, participants reported the scenarios were realistic generally (average score 3.5), where on average (across all scenarios) 52.3% of participants rating scenarios as 'very' or 'extremely' realistic and 31% rating scenarios as 'somewhat' realistic. However, participants were comparatively less likely to view the scenarios as realistic for themselves (average score 2.1). It is noted that this latter result may relate to the participants' prior sexual offending experience, where most offenders were convicted only for a single offense, and may also be impacted by social desirability bias.

Procedure

Once eligible participants were identified, offenders who were participating in therapeutic programs were approached during one of their weekly group sessions, whereas offenders not participating in a program were approached individually to maintain their confidentiality. A self-report questionnaire was then provided to consenting participants in the presence of at least one of the research team members and was checked to ensure there were no misinterpretations or omissions. This practice assisted in minimising missing fields in the data and gave participants the opportunity to voice any questions or concerns regarding the questionnaire. Each participant was assigned a unique identification number to maintain privacy, ensuring that no identifying particulars were recorded.

Results

In order to explore how offenders rated SCP strategies in different contexts, the results for each hypothetical scenario will be discussed. Table 1 shows the means and standard deviations for offender ratings of different prevention measures across all three scenarios.

INSERT TABLE 1

New Acquaintance Rape at the Offender's Home

Scenario 1 detailed a potential rape involving a man who initially met a new female acquaintance at a club, then proceeded together to the man's home. Of the SCP methods, victim self-protective behaviour was rated as the most effective overall, although some reactions were seen as more effective than others. The reactions rated as more effective included yelling for help, threatening to report the incident to police, carrying pepper spray, fighting back and attempting to run away. Strategies that were rated slightly less effective in comparison included the victim being sober, saying "no", having a whistle and asking the offender to stop. Although guardianship was also rated quite highly, the perceived effectiveness of guardianship seemed to differ in terms of intensity and the type of guardian. Nearby guardians (where others were at the location) were generally considered more effective than potential guardians (where others might arrive at the location). Interestingly, the type of guardians perceived as the most effective in the offender's home setting was a housemate's female friend, a female housemate, followed by a male housemate respectively. CPTED strategies were considered relatively effective by over half of the participants; however, in comparison to victim self-protective behaviour and guardianship, it was not perceived to be as effective in a private setting.

Partner Rape at the Offender's Home

Scenario 2 involved a potential partner rape in the man's home, which examined whether offender ratings of SCP strategies changed based on the offender-victim relationship. Similar patterns were found in the offender ratings for SCP methods in Scenario 2, where victim self-protective behaviour and guardianship tended to be rated as more effective compared to CPTED in private settings. Despite the different offender-victim relationship, forceful victim self-protective behaviour was again perceived amongst the most effective strategies, followed by guardianship and CPTED. In this scenario, slightly different guardianship types were explored, and the most effective type of guardians were ranked as firstly a child (the

offender's nephew), then a female housemate, followed by a male housemate. However, this response may be limited by the personal circumstances of respondents – for example, offenders with families may be more likely to have children in the home than housemates and thus view these questions differently. The respondents consistently rated female guardians as more effective than male guardians by a slight margin, which indicates that the gender and age of the guardian may impact offender perceptions and decision-making.

Stranger Rape in a Public Alley

In contrast to the previous contexts, Scenario 3 was based on a public setting involving a potential stranger rape in an alley. In a public setting, the most highly rated SCP methods by offenders were guardianship (in the form of a patrolling security guard) and CPTED strategies rather than victim self-protective behaviour. The CPTED strategies rated as the most effective among offenders included: motion-sensitive lights, visibility from the footpath and main road, emergency contact device and having nearby open businesses and apartments. Consistent with the previous scenarios, active and forceful forms of victim self-protective behaviour were seen as more effective. Some measures were rated slightly more ineffective by a portion of the offenders, for example, the victim has not been drinking enough to be drunk and the victim continued to say "no" in a public stranger-victim situation.

Which SCP Strategies Were Considered Most Effective by Offenders Overall?

After examining how offenders rated prevention strategies within each scenario, it was of interest to determine which SCP strategies were considered to be most effective overall. To determine the overall efficacy, the percentage of offenders that rated SCP strategies scored as effective (versus neutral or ineffective) were tabulated. Table 2 shows the average percentage of offenders that found SCP strategy effective. To simplify the results, several variables were collapsed for victim self-protective behaviour, where results were again averaged, including: *Non-forceful verbal resistance* - continues to say "no", asks the offender to stop and says it is

rape; Forceful verbal resistance - threatens to report to police and yells for help; Self-protection devices - pepper spray, personal alarm and whistle. For CPTED, the following categories were combined: Visibility - visibility from the footpath, main road and the street; Nearby residents/businesses - businesses open nearby and apartments nearby; Security programs - Neighbourhood Watch, rewarding public reporting and posters about intervening.

INSERT TABLE 2

Averaged across all scenarios, offenders perceived the most effective guardianship factors to be an adult nearby in a public location (rated by 92.9% of offenders as effective), a security officer patrolling nearby in a public location (91.4%) and a child relative nearby (or may potentially appear) in a private setting (84.3%). Victim self-protective behaviours perceived as being more effective included forceful verbal resistance (87.3%), speaking on the phone (85%) and fighting back (84.5%). CPTED measures perceived as effective included motion-sensitive lights (85.8%), emergency contact device (81.4%), nearby residents/businesses (79.7%) and visibility (78.6%), all of which appear to be linked to the perception of immediate guardianship.

Were There Significant Differences Between Guardianship, Victim Self-Protective Behaviour and CPTED?

To investigate whether there were significant differences between guardianship, victim self-protective behaviour and CPTED, these SCP methods (independent variable) were compared using ANOVA in different contexts. In order to determine mean offender ratings, scales were developed by averaging individual responses for each SCP category overall, as well as across each scenario (dependent variable). One-way repeated measures ANOVA was performed, with Bonferroni post hoc comparisons. The results are shown in Table 3.

INSERT TABLE 3

Overall, comparisons of SCP methods across all scenarios did not show significant

differences. However, if guardianship was broken down further by intensity to nearby guardianship (where people were present at the crime location without a direct line of sight) and potential guardianship (where people might arrive), significant differences were found. Nearby guardianship was considered the most effective, whereas potential guardianship was considered the least effective. Significant differences were found, Wilks' Lambda = .836, F (3, 126) = 8.24, p < .001, $\eta p2$ = .164. Pairwise comparisons show significant differences in nearby guardianship and potential guardianship (p < .01), as well as victim self-protective behaviour and potential guardianship (p < .001).

When broken down according to each scenario, significant variations were also identified regarding the location of the crime and whether it was committed in a private (Scenario 1 and 2) or public (Scenario 3) location. If the location was in a private setting, victim self-protective behaviour was rated to be significantly more effective than guardianship overall. In Scenario 1 (acquaintance rape in the offender's home), a significant effect was found between victim self-protective behaviour and CPTED (p < .01), Wilks' Lambda = .905, F (2,130) = 6.85, p < .01, $\eta p2$ = .095. In Scenario 2 (partner rape in the offender's home), a significant effect was found between guardianship and victim self-protective behaviour (p < .05), as well as victim self-protective behaviour and CPTED (p < .01), Wilks' Lambda = .893, F (2,130) = 7.83, p < .01, $\eta p2$ = .107. In comparison, for Scenario 3 (stranger rape in alley) where the location of the crime was in a public setting, although victim self-protective behaviour rating remained relatively consistent, guardianship (p < .001) and CPTED (p < .001) was perceived as being significantly more effective than victim self-protective behaviour, Wilks' Lambda = .855, F (2,136) = 11.55, p < .001, $\eta p2$ = .145.

Do SCP Methods Vary Across Different Contexts?

Building on the previous results, it was of interest to determine whether the SCP methods were perceived to vary based on contexts involving private settings with known victims (i.e. the offender's home) and public settings with stranger victims (i.e. public alley). Again, using the SCP methods (guardianship, victim self-protective behaviour and CPTED) as the independent variables, and offender ratings as the independent variable, One-way repeated measures ANOVA with Bonferroni post hoc comparisons were conducted. The mean offender responses and standard deviations for each method are summarised in Table 4.

INSERT TABLE 4

The perceived effectiveness of victim self-protective behaviour in deterring sexual offenses did not show any significant differences depending on these contexts; however, guardianship (p < .001) and CPTED (p < .05) were seen to be significantly more effective in public settings with a stranger victim compared to private settings with a known victim, Wilks' Lambda = .698, F(5,124) = 10.74 p < .001, $\eta p = .302$.

Discussion

Generally, all SCP strategies were considered relatively effective overall, as they were rated as effective by over half of the offenders. However, variations were found regarding different potential interventions. Results indicated that SCP techniques relating to guardianship, victim self-protective behaviour and CPTED varied under different contexts and circumstances, such as the location (private or public), guardianship type (child, woman or man) and offender-victim relationship (known or stranger). Key differences were identified based on the context, particularly the crime location.

In Scenarios 1 and 2, where offenses occurred in the offender's home with a known victim, victim self-protective behaviour was seen as most effective, followed by guardianship and CPTED. It is possible that when the offender is familiar with the environment and feels in control, this enhances knowledge of how to evade or overcome most guardianship and

CPTED techniques. In these situations, more forceful forms of victim self-protective behaviour were perceived to be effective, including for example, yelling for help, threatening to report the incident to the police and running away. One potential interpretation is that these more forceful forms of victim self-protective behaviour may incite guardianship from others outside the offender's home, such as police, neighbours and bystanders. Another possibility is that due to the lack of guardianship and CPTED prevention in domestic settings, victim self-protective behaviours may be seen as a last resort by the victim. However, as the underlying victim motivations for adopting self-protective behaviours cannot be inferred, these interpretations cannot be confirmed with the data from this study.

In Scenario 3, where the offense occurred in a public location with a stranger victim, although the perceived effectiveness of victim self-protective behaviour remained constant, guardianship and CPTED were seen as significantly more effective. This suggests that offenders may have higher perceptions of risk in public settings where they have less control over the environment. In a public setting, the most highly rated prevention strategies by offenders included guardianship, in the form of a patrolling security guard, and CPTED strategies such as motion-sensitive lights, visibility from the footpath and main road, emergency contact device and nearby open businesses or apartments. These CPTED measures seem to relate to either immediate guardianship or the illusion of immediate guardianship, such as someone turning on the light, persons of authority that can arrive soon, or members of the general public or nearby residents that may arrive at any moment. Taken together, it may be interpreted that one of the key motivators for offenders to stop the offense is related to being caught, which is most strongly associated with immediate guardianship. Following this interpretation, for offenses occurring in the offender's home, the greatest risk may be associated with forceful victim self-protective behaviour inciting the attention of

guardians outside the home, whereas in a public setting additional risk is associated with proximity to others and perceived visibility.

Variations were also identified regarding the perceived effectiveness of different strategies within each SCP method. Within the context of guardianship, once the level of guardianship was broken down by intensity to nearby guardianship (where another person was present near the location) and potential guardianship (another person may arrive at the location), the perceived effectiveness rating varied, with nearby guardianship persistently ranked as more effective. One unexpected finding was the perceived effectiveness of guardianship was seen to vary for private domestic settings, with the most effective guardians identified as firstly a child, a woman and then a man. The reason for this is unclear. Although a few offenders had committed sexual offenses against both women and children in this sample (7.9%), the vast majority of offenders in this sample committed an offense against a woman only. A possible explanation for this phenomenon is that if a child was in the house, they were perhaps more likely to run around and disrupt the offender in the course of their activities. Alternatively, another tentative explanation may indicate a level of consciousness or guilt exists, where offenders may be less likely to proceed with a sexual offense against a woman around the presence of other known children and women when compared to other men. However, this answer is potentially limited by the offenders' personal family circumstances. This result requires further investigation before any conclusions can be drawn. However, it is also of note that regardless of the result, capable guardianship is central to effective intervention (e.g. Reynald, 2011) and due to innate vulnerabilities, children do not have the same opportunities for guardianship and, therefore, they are unlikely to supervise, disclose or intervene in an offense.

For victim self-protective behaviour, more active and aggressive types of reactions were seen as more effective (i.e. yelling for help, fighting back, running away) compared to

crying, saying "no", the use of self-protection devices and knowing self-defense. This finding is consistent with prior literature regarding victim resistance in rape (e.g. Ullman & Knight, 1992), and indicates that forceful forms of resistance that may incite a nearby immediate guardian were perceived to be more effective. This pattern did not change across the three scenarios, which also supports findings that the perceived effectiveness of victim resistance did not tend to vary across different situations (Clay-Warner, 2002). Interestingly, slight variations in responses suggest that for some offenders, some victim self-protective behaviours were seen as more effective based on the offender-victim relationship. For example, the perceived effectiveness of victim crying was perceived as slightly more effective for new acquaintances and partners compared to strangers. The same pattern is seen for the victim saying "no". This suggests that on an emotional or psychological level, some offenders perceive reactions differently for known victims compared to stranger victims. This trend in offender data relates to previous studies that found the level of victim resistance varies according to the offender-victim relationship, with women being less likely to use physical resistance against intimate partners (Clay-Warner, 2003), indicating the offendervictim relationship affects the reactive behaviours of both parties.

While CPTED strategies were generally seen as being more effective in public settings, certain strategies were viewed as more effective than others. Motion-sensitive lights, CCTV, emergency contact device, nearby residents/businesses and visibility were rated as more effective than signage, neighbourhood watch programs, proximity to closed businesses, lack of isolation and the presence of locked gates/barriers. This indicates that in public spaces, CPTED strategies that enhance the perception of immediate guardianship and possibility of capture (i.e. natural surveillance) were seen to be more effective for sexual offenses than other CPTED measures relating to access control and territorial reinforcement. These

findings are only the first glimpse into the perceived effectiveness of CPTED measures for sexual offenses, and this is an aspect that is critical for future research to explore.

Implications for the findings in the current research include considerations for the prioritisation of resources for preventing sexual assaults (e.g. in public spaces). The findings also highlight the importance of considerations of context in SCP for developing effective strategies, rather than incorporating blanket solutions in different locations. Finally, there are further nuances in the analysis of victim resistance that cannot be fully understood superficially, without taking into account other factors such as offender-victim relationship.

In order to build on these findings, it is important to expand on offender-based research and shed further light on offender decision-making and perceptions. To date, there have been no other studies in literature directly asking offenders what they believe could prevent sexual offenses committed against women. Most studies involving hypothetical scenarios in sexual offenses were predominantly based on college student samples (e.g. Bachman et al., 1992). Therefore, this study represents the first of its kind in gaining an understanding of offenders' perception of preventing sexual offenses based on hypothetical events. The findings of this study indicate that offender perceptions vary depending on nuances such as the SCP method used, the specific strategy adopted, location, type of guardianship and offender-victim relationship. With further study and replication, this may have future implications for sexual crime prevention.

Limitations

While the current study necessarily adopted self-report data due to the focus on offender perceptions of prevention strategies, there are several inherent limitations in using this type of data. Firstly, like in any research, participants may falsify or conceal information in an attempt to deliberately mislead the researcher. Due to the voluntary nature of the research, this helped to screen out respondents whose interests did not align with those of the

researchers. Similarly, the data may have been affected by social desirability bias, where participants may adjust responses to elicit approval based on perceived social expectations. To reduce the extent to which participants may feel embarrassed or ashamed by their answers, they were provided with the opportunity to fill out their own questionnaire. Offenders were also asked to rate the perceived effectiveness of what may influence an offender in hypothetical scenarios rather than what they have done or would do personally, which further mitigates potential limitations from embarrassment and social desirability bias. It was also emphasized to all participants that involvement in the study was voluntary and anonymous, independent from policing and correctional organizations. Explanations of the study were framed in a way to appeal to the value of the participant's contribution to answering as honestly as possible.

Another potential limitation of self-report questionnaires is the participant's ability to understand questions, for example, where a concept may be interpreted differently. Therefore, the language used in the questionnaire was clear and simple, with examples provided for further context where necessary. The questions were also administered in face-to-face settings, where participants were able to ask the research team members questions or even have the questionnaire read aloud to them if there were literacy issues. Moreover, the collection of data from incarcerated offenders presents another potential limitation. Aboriginal and Torres Strait Islander adults are more likely to be overrepresented in Australian prisons (ABS, 2017). The percentage of participants identifying as Aboriginal and Torres Strait Islander in the sample is higher than the national average, which comprises around 2.8% of the population (ABS, 2017). Research also indicates that acquaintance rape tends to be underreported (Allen, 2007), which means that the incarcerated offender population might be slightly biased toward stranger offenses. Therefore, the findings of the study might not represent the broader population of sex offenders in Australia, thus impacting

the generalizability of the findings. However, as serious ethical concerns would arise from collecting self-report data from an active sexual offender sample, recruitment from incarcerated offenders was necessary. While these representations are reflective of the difficulty in collecting data from a sensitive population and the regions where participants were recruited, the results should be interpreted with these constraints in mind.

Finally, vignette studies are sometimes criticised for producing unrealistic results that are not directly comparable to real life (e.g. Faia, 1979). However, while no research tool can truly reflect people's real life experiences, vignettes can be used to provide an interpretation of the real world that provides people with a situated context to respond in a way that makes a useful contribution (Hughes, 1998). Vignettes represent highly selected parts of the real world that help unpackage the participants' perceptions, beliefs and attitudes to a range of situations – instead of mirroring the 'real world' it is designed to clarify the judgement principles employed (Rossi & Alves, 1979). In this study, vignettes were used to unpack the potential decision-making processes of convicted sex offenders and offer insights regarding how they perceive different contexts and SCP measures, regardless of the participants' previous offending experience. Furthermore, vignettes provide a degree of uniformity and control over the stimulus that approximates experimental designs (Nosanchuk, 1972; Rossi, Simpson & Bose, 1974), which allows this study to present potential sexual assaults situations under a range of environments to study the attitudes towards different SCP mechanisms.

Conclusion

In summary, the study findings reveal broader differences in the perceived effectiveness of different SCP methods (i.e. guardianship, victim self-protective behaviour and CPTED) across different contexts and circumstances. Nuanced differences were found regarding strategies relating to the location, guardianship type and offender-victim relationship. These

findings support the underlying theoretical framework of rational choice perspective and routine activity theory by highlighting how offender decision-making interacts with each element in the convergence of the offender, victim and setting. To our knowledge, this study offers several new contributions to the understanding of sexual offending: it gives a unique, in-depth view of how offenders' perceptions change under different contexts and circumstances. It is also among the first to ask offenders directly regarding the perceived effectiveness of different types of prevention strategies. It examines CPTED in detail, which has been heretofore largely overlooked in sexual offending research. It is also the first to explore the differences in offender perceptions of SCP methods relating to guardianship, victim self-protective behaviour and CPTED based on empirical data. Finally, it is the first empirical study to incorporate hypothetical scenarios as a tool to measure sex offender perspectives on crime prevention. Building on this initial exploration, there is potential in this area for future research to build evidence-based knowledge on what works, what doesn't and what could be promising to prevent sexual offenses against women. Similar exploration based on the offender's real offenses rather than hypothetical scenarios may also shed new light on this topic. Further study is required to fill the current gaps in the literature, particularly in guardianship and CPTED. This will assist in the development of evidencebased prevention strategies for sexual offenses and shift the academic focus toward prevention rather than victim resistance. For example, this study only examined scenarios regarding whether a guardian was nearby or likely to return, but did not examine the perceived effectiveness of different guardian or bystander interventions. This is an area that could also be further explored from offender, victim and bystander perspectives.

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Table 1. Offender ratings of potential SCP measures for sexual offending across scenarios (n = 140)

	ures Scenario 1: Scenario 2: Scenario New Partner Rape Stranger Acquaintance in Offender's Rape in Rape (from Home Public A Club) in Offender's		in				
		Home M	SD	M	SD	M	SD
There is a security guard patrolling the alley and	G	-	-	-	-	4.66	0.82
surrounding streets							
An adult is nearby	G	-	-	-	-	4.63	0.77
Victim yells for help	VS-PB	4.49	0.95	4.57	0.88	4.42	1.00
There are CCTV cameras monitoring the alley, the	CPTED	-	-	-	-	4.47	1.02
entrance/exit points and nearby streets Victim threatens to report the incident to the police if the	VS-PB	4.55	0.88	4.49	1.00	4.30	1.18
offender does not stop	v 3-r b	4.55	0.00	4.49	1.00	4.30	1.10
Victim is carrying pepper spray	VS-PB	4.39	1.06	_	_	4.45	1.02
The alley is clearly visible from the main road	CPTED	-	-	-	-	4.39	0.94
There is an emergency contact device installed in the	CPTED	-	_	_	_	4.39	.99
alley	CITED					1.57	.,,
Γhe alley is clearly visible from a pedestrian path	CPTED	_	_	_	_	4.38	1.01
Γhe alley has motion-sensitive lights	CPTED	_	_	_	_	4.38	1.04
Offender's 13-year-old nephew, who he often looks after,	G	-	-	4.38	1.02	-	-
night arrive home anytime soon without warning							
Victim physically fights back	VS-PB	4.33	1.03	4.54	0.88	4.23	1.05
Offender's 13-year-old nephew, who he often looks after,	G	-	-	4.34	1.05	-	-
s at home in another room							
The victim starts speaking to someone on her mobile	VS-PB	-	-	-	-	4.33	1.05
phone							
Victim is carrying a personal alarm	VS-PB	4.29	1.09	-	-	4.34	1.12
There are nearby business that are still open	CPTED	-	-	-		4.30	1.03
Victim tells offender that if he continues with sexual	VS-PB	4.29	1.23	4.44	1.05	4.18	1.24
contact it will be considered 'rape'	MG DD	4.24	1.04	4.00	1.00	4.20	1 10
Victim attempts to run away	VS-PB	4.34	1.04	4.32	1.08	4.20	1.13
An adult might arrive anytime soon without warning Residential apartments are located on the alley	G	-	-	-	-	4.26	1.18 1.08
A locked gate/barrier prevents people walking into the	CPTED CPTED	-	-	-	-	4.25 4.25	1.08
alley at night, and the victim remained on the main street	CFIED	-	-	-	-	4.23	1.10
Housemate's female friend is at home in another room	G	4.23	1.16	_	_	_	_
A sign indicates a Neighbourhood Watch Program is	CPTED		-	_	_	4.23	1.21
operating in the area	CITED					1.23	1.21
Ordinary citizens are rewarded by police if they report or	CPTED	_	_	_	_	4.20	1.16
nterfere during a sexual offense							
Victim cries	VS-PB	4.26	1.08	4.33	1.04	4.10	1.25
Female housemate is at home in another room	G	4.14	1.20	4.21	1.10	-	-
Victim knows self-defence techniques	VS-PB	4.16	1.16	4.18	1.20	4.17	1.15
There are CCTV cameras monitoring the streets	CPTED	4.04	1.39	4.19	1.25	-	-
surrounding the home							
Posters indicating a step-by-step process of how people	CPTED	-	-	-	-	4.09	1.19
could intervene to prevent sexual violence are displayed							
n the alley							
Victim is carrying a whistle	VS-PB	4.01	1.21	-	-	4.16	1.22
Female housemate might arrive home anytime soon	G	4.11	1.22	4.07	1.17	-	-
without warning	a	204					
Male housemate is at home in another room	G	3.94	1.25	4.15	1.17	-	-
Γhe home is clearly visible from the street	CPTED	4.01	1.21	4.04	1.25	2 0 1	- 1 / 1
Victim continues to say "no"	VS-PB	3.95	1.35	4.24	1.14	3.84	1.41
Victim asks offender to stop	VS-PB	3.98	1.26	-	-	- 2 07	- 1 25
Businesses (e.g. cafes) operate in the alley during the day	CPTED	- 3 01	1 28	-	-	3.97	1.25
Housemate's female friend might arrive anytime soon There are no isolated places in the home/alley where the	G CPTED	3.91	1.28		1 24	3.90	1.34
offender can take the victim for sexual contact	CLIED	3.75	1.35	3.94	1.24	5.90	1.34
Male housemate might arrive home anytime soon without	G	3.79	1.37	3.91	1.23	_	_
warning	J	3.17	1.37	3.71	1.43	-	-
Victim has not been drinking enough to be drunk	VS-PB	3.69	1.29	_	_	_	_

G = Guardianship, VS-PB = Victim self-protective behaviour, CPTED = Crime prevention through environmental design

Table 2. Collapsed average scores for SCP strategies considered effective by offenders (versus neutral or ineffective) across all scenarios (N = 140)

Guard	<u>ianship</u>		
Potential	Nearby	Victim Self-Protective Behaviour	CPTED
Child relative 84.3% Adult in public location 80% Known female 77.8% Stranger female 75% Known male 69.6%	Adult in public location 92.9% Security officer in public location 91.4% Child relative 84.3% Stranger female 79.3% Known female 78.6%	Forceful verbal resistance 87.3% Speaks on phone 85% Fights back 84.5% Tries to run away 83.1% Cries 79.7% Self-protection devices 79.5% Knows self-defence 75.9% Non-forceful verbal resistance 75.1% Sober 58.5%	Motion-sensitive lights 85.8% Emergency contact device 81.4% Nearby residents/businesses 79.7% Visibility 78.6% CCTV 76.9% Public security programs 76.1% Businesses nearby (closed) 69.9% No isolated places 64.5%

 $\label{thm:continuous} Table~3.~Mean~offender~ratings~for~potential~SCP~methods~for~sexual~offenses,~One-Way~Repeated~Measures~ANOVA$

Interven	tion	N	Mean	SD	df	F
Overall						
	Victim Self-Protective Behaviour	129	4.24	.78	2, 127	2.29
	Guardianship	129	4.16	.75		
	CPTED	129	4.16	.85		
	Nearby Guardianship (at offense location)	129	4.28	.75	3, 126	8.24**
	Victim Self-Protective Behaviour	129	4.24	.78		
	CPTED	129	4.16	.85		
	Potential Guardianship (might arrive)	129	4.02	.89		
New Acq	uaintance at Offender's Home from Bar (Scer	ario 1)				
•	Victim Self-Protective Behaviour	132	4.19	.82	2, 130	6.85*
	Guardianship	132	4.00	.92		
	CPTED	132	3.93	1.11		
Partner a	at Offender's Home (Scenario 2)					
	Victim Self-Protective Behaviour	132	4.36	.79	2, 130	7.83*
	Guardianship	132	4.13	.90		
	CPTED	132	4.09	1.11		
Stranger	in Outdoor Public Alley (Scenario 3)					
O	Guardianship	138	4.52	.79	2, 136	11.55**
	CPTED	138	4.25	.82	, -	
	Victim Self-Protective Behaviour	138	4.24	.90		

Note: * *p* < .05; ** *p* < .001

Table 4. Mean responses and standard deviations for offender ratings of SCP methods across locations, One-Way Repeated Measures ANOVA

	Offender's Home	Public Location		
	(Known Victim)	(Stranger Victim)		
Victim Self-Protective	4.26 (.77)	4.21 (.91)		
Behaviour				
Guardianship	4.08 (.82)	4.49 (.81)**		
CPTED	4.00 (1.06)	4.23 (.84)*		

Note: * *p* < .05; ** *p* < .001

APPENDIX A.

Scenario 1: Toby has organized with some friends to go for Saturday night drinks at a popular nightclub. When Toby arrives at the club, he notices a woman across the room, Lisa, who he met once at a party. Toby approaches Lisa to strike up a conversation and discovers that she remembers meeting him also. Toby then asks Lisa and her friends if they would like to come over and join him at the VIP booth he has booked for the evening. Lisa and her friends accept the offer. Over the next few hours the club becomes extremely busy and Toby suggests to Lisa that they share a cab back to his home where it will be much quieter. When they arrive, Toby grabs two beers and he and Lisa sit down on the couch. As they are talking, Toby becomes sexually aroused and leans forward to kiss Lisa. She quickly pulls away and says she is not interested in having sex.

Scenario 2: Reece has been in a relationship with his girlfriend, Vanessa, for almost 12 months. They do not live together however Vanessa often spends the night at Reece's home. One evening, Reece invites Vanessa over to watch a movie. As they are watching the movie, Reece becomes sexually aroused and leans over to kiss Vanessa. Vanessa gently pushes Reece away and says that she has an early start the following morning, and is not in the mood for sex.

Scenario 3: Sean is walking along the street one evening when he sees an attractive young woman leave a building up ahead and turn to walk in his direction. The woman is alone. Sean becomes sexually aroused and decides to follow the woman. The woman notices that she is being followed and keeps walking. Sean sees her turn down a side alley. Sean wants to have sexual contact with her.