

CICC Postdoctoral Fellowship 2017
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Part 1. Project Proposal

Reducing risk of violent reoffending: Priority questions in assessment and intervention with high-risk violent offenders.

1. Issue

In 2004, Polaschek and Collie concluded their survey of the impact of rehabilitation for violent offending with a call for well-designed programme evaluations, stating that there was “a striking paucity of studies meeting even minimal design standards” (pp. 331). The response in the succeeding literature suggests that there remain concerning shortcomings in the empirical basis underpinning forensic intervention with high-risk violent offenders. This is not an over-statement: To contextualize, violent crime, even when excluding homicide or attempted homicide, may be estimated to represent ten times the prevalence of sexual aggression in Canada (Ouimet, 2010). Yet, the theoretical advances and research developments in the evaluation of ‘what works’ in the assessment and treatment of sexual offenders far outweigh those in the domain of non-sexual violence. Accordingly, this proposal will briefly summarize what is currently known about violence risk intervention, and suggest the ways in which the field can advance.

A systematic review conducted in 2012 identified only ten studies reporting on outcomes in terms of psychometric measures and violent incidences following psychotherapeutic interventions for violence in prison or forensic psychiatric samples (Ross, Quayle, Newman, & Tansey, 2013). Some support for the effectiveness of psychotherapeutic interventions in reducing recurrence of violent behavior was found. However, there are serious limitations to the conclusions that may be drawn from the studies included in the review. Foremost, very little recidivism data was reported; typically outcome measures were limited to self-reported change or institutional behavior (e.g. staff observations of physical and verbal aggression). A subsequent meta-analysis focusing on cognitive behavioral therapy interventions targeting anger in violent offenders found that completion of anger management programmes may be effective in reducing risk, with promising results for violent recidivism; general recidivism risk reduction of 23% was demonstrated for CBT based anger management, compared to 28% risk reduction for violent recidivism (Henwood, Chou, & Browne, 2015). One clear caveat here, though, is that anger management is likely to represent only one component of successful multifactorial programmes (Polaschek, 2006). One more review of interventions and violence outcome research concluded that there was simply too much heterogeneity among studies for meaningful synthesis of the data presented, and as noted by the review authors, there is a lack the kind of robust evidence policy makers rely upon to allocate resources efficiently and

effectively (Hockenull et al., 2015). Relatedly, there is a need for a focus on high quality evaluations (those with minimal systematic bias). This is a specific area in which violence risk research can learn from the efforts that have been made to improve sex offending treatment evaluations (Collaborative Outcome Data Committee, 2007).

Returning to the extant violence intervention literature, treatment indicated to successfully target violent behavior typically focuses, sometimes exclusively, on anger management, but multifactorial programmes tend to involve emotion regulation more widely, as well as elements of cognitive restructuring, interpersonal skills training, and relapse prevention planning (Polaschek & Collie, 2004; Ross et al., 2013). Pre-post changes on psychometric measures provide an indication that treatment has at least a short-term effect on target attitudes, beliefs, or even behavior, but whether these changes are enduring, and specifically which factors result in reduction in risk remains unclear. In the same vein, although overall positive effects of treatment appear to exist in terms of reducing both general and violent recidivism at the group level, few studies have determined the impact of treatment at the individual level. For example, Klepfisz, O'Brien, and Daffern (2014) examined clinically significant change (i.e. the level of functioning following treatment is more aligned to the mean of the functional population than the dysfunctional population; Jacobson & Truax, 1991), finding no predictive relationships with violent recidivism. However, the measures used, which included the PICTS, a general measure of criminal thinking, may not be reliably associated to violence risk. On measures assessing anger, up to 61.9% of pre-treatment scores were already in the functional range. Also, no control group was used.

There is a need for further methodologically rigorous research examining the relationship between individual reliable change and relevant outcomes (Wakeling & Barnett, 2014). To reach this point, we must first fully understand the relative contribution of various dynamic risk factors in the reliable assessment, communication, and reduction of risk for violent reoffending. Indeed, establishing a common risk communication language has recently been highlighted as an important task in order to overcome the difficulties associated with differing quantifications of various descriptors, such as 'high-risk', or risk categories that differ depending on the assessment instrument used (Coligado & Hanson, 2015). That is, risk categories with scientifically credible meanings that are clear and practical for decision-makers to use in managing offenders are needed. This will come from elucidation of the latent psychological constructs that favor interpersonal violence, which may be achieved through examination of the static and dynamic indicators of the various risk factors assessed and targeted in relevant interventions. Advances in the field can be made by testing the relationships between clinically significant change and recidivism, and whether these correspond to the predictive validity of risk categories determined by structured violence risk assessments. Studies are needed focusing specifically on violent recidivism in clearly defined samples of violent offenders, and for

improved confidence in conclusions, such research should include an appropriate control sample.

Some steps have been taken towards assessing interventions for violent offenders that will improve the empirical knowledge base, when taken together with further studies still to be conducted, given the methodological considerations discussed. For example, initial evaluations of the Violence Prevention Program (VPP) in Canadian federal penitentiaries indicated a positive impact of treatment on recidivism (Cortoni, Nunes, & Latendresse, 2006), and in line with efforts to understand 'what works', for whom, under what conditions (Palmer, 1975), further analyses were carried out for a subgroup of Aboriginal participants. This work is important given the increasing over-representation of Aboriginal people managed by the Correctional Service Canada (Public Safety Canada, 2015), associated responsivity needs (ensuring that appropriate services are available), and legal implications of a lack of ethnically cognizant research to inform evidence-based practice with Aboriginal offenders (Oliver et al., 2016). However, at the time of reporting, Cortoni et al. (2006) had follow-up data available for a period of only one year. Therefore, further evaluation of the VPP is needed now that time has allowed for an extended follow-up period.

2. Objectives

The project will have three main objectives: (a) to produce a methodological paper establishing criteria for measuring treatment effectiveness specifically in the domain of violence risk reduction. This will be useful for those seeking to evaluate existing research, but will also aim to stimulate discussion and inspire further rigorously designed violence risk intervention research; (b) to analyze clinically significant change in a treatment program designed for incarcerated federal male offenders deemed to be persistently violent offenders, and to examine the extent to which treatment changes predict violent reoffending; (c) to evaluate the impact of the same program on both general and violent recidivism, based on long-term follow-up information for offenders who had completed the program and a non-treated matched comparison group, as well as a sub-group of Aboriginal offenders.

3. Methodology

Sample. Data has been collected in relation to male federal offenders who had participated in the Violence Prevention Program (VPP), and a comparison group of offenders who had not participated in the program, prior to October 31, 2004. The sample of VPP participants is comprised of 500 offenders. The comparison group is comprised of 466 offenders selected through propensity score-matching, which is a particular strength of the study as sampling bias is minimized so as to overcome one of the common limitations in previous research.

Measures. Clinically significant change will be examined using pre- and post-treatment scores on psychometric scales: the Novaco Anger Scale and Provocation Inventory (Novaco, 2003); the I7 measure of impulsivity (Eysenck, 1993); the Aggression Questionnaire (Buss & Perry, 1992); and Prochaska and DiClemente's (1983) stages of change applied to treatment readiness through structured risk assessment (the Violence Risk Scale; Wong & Gordon, 1998-2003).

Information from the Offender Management System (OMS) database, Correctional Service of Canada, and from Canadian Police Information Centre (CPIC) records has been coded for any (general, violent, and sexual offences), violent (only), or sexual (only) recidivism following the release of study participants for an 7 year average follow-up period.

Procedure. To assess pre- to post-treatment change occurring for each participant, the Reliable Change Index will be calculated using scores on each variable (Christensen & Mendoza, 1986). Clinically significant change will be calculated following Jacobson and Truax (1991), and RCI and CSC calculations will be combined to categorize participants into treatment change categories (e.g. 'improved'; 'unchanged'; 'deteriorated'). Logistic regression and Receiver-Operating Characteristic (ROC) analyses will be used to assess the predictive validity of the measures of change. Cox regression survival analysis will be used to determine the impact of the VPP on offenders by comparing outcomes among VPP program completers, non-completers, and the comparison group. Analyses will then be repeated to compare the respective subgroups of Aboriginal offenders.

4. Schedule

All data required to complete the project is held by Dr. Franca Cortoni. As such, it is anticipated that an extensive literature review will be the initial focus, and the first manuscript (theoretical article) should be produced by February 28, 2017. Data will be analyzed in March 2017 and the first empirical paper in preparation April 2017. A third manuscript (second empirical study) should be in preparation by June 2017. This will allow sufficient time for revisions in collaboration with co-authors prior to submitting for publication. Papers will be submitted to those academic journals likely to offer maximum relevant exposure and rigorous peer review, namely, *Assessment* (impact factor: 2.879); *Aggression and Violent Behavior* (impact factor: 1.912); *Journal of Interpersonal Violence* (impact factor: 1.579).

5. References

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6. Statement of motivations to carry out this project at the CICC

The research and clinical experience I have gained through my doctoral training has prepared me well for postdoctoral research and particularly this project, as I will elaborate upon here. My clinical training has allowed contextualization of knowledge of antisocial behavior (including violence) and understanding of risk and protective factors. I have facilitated group therapy and worked individually with male and female offenders in both high secure psychiatric hospital and prison environments. As a result, my research perspective is enhanced by what I have learned from those faced with complex mental health and psychosocial difficulties. Also, I have used a variety of actuarial and structured clinical tools in this work, including the HCR-20, PCL-R, and ERASOR, as well as a number of psychometric measures, and I have trained

other professionals including as the lead in HCR-20 training events. Extending my research activities to the domain of violence, risk assessment, and treatment would therefore naturally progress my personal development.

This postdoctoral research position is therefore particularly of interest to me in continuation of the development of my research career in the field of psychology and violent offending. The proposed project, using data owned by Dr. Cortoni, will be a unique opportunity to broaden the basis that I have gained thus far in the factors pertinent to risk and desistance for sexual offenders, and extend my knowledge in terms of violent behavior more widely than in relation to sexual homicide (the topic of my thesis) specifically. As such, this project maximizes possibilities for me to transfer knowledge gained through my doctoral studies, including research design and statistical analysis as well as clinical experience of violence risk assessment and treatment, for a successful postdoctoral fellowship. At the same time, working with Dr Cortoni will allow me to benefit from her expertise as an experienced clinician with the Correctional Service of Canada (specifically, the chance to compare and contrast international forensic practice in order to learn about differing organizational issues), and as an established researcher in the domain that I have examined in this proposal. This combination of factors (clinical background, research with violent offenders, and a dataset that is appropriate to explore the gaps in knowledge identified in this proposal, which I am submitting because it is in line with the direction I am seeking to develop my research interests) means that this postdoctoral fellowship may be mutually beneficial. That is, I believe that I am equipped to contribute to a productive project, and given Dr Cortoni's background working with the client group of interest and her many relevant publications, I will benefit from this particular collaboration as it will both challenge and enhance my own skills in applied research drawing on both clinical and research experience.

I also consider that as a competent scientist relative to my level of training, I would greatly benefit from advanced tutoring in research design and statistical analysis in order to actualize my goal to establish an independent research or academic career. With this in mind, several members of the CICC are internationally recognized experts in the fields of forensic psychology and criminology and as such, in my view the CICC provides an unparalleled environment for development as an early career researcher.