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Agency and outcome expectancies for crime desistance:

Measuring offenders' personal beliefs about change

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Abstract

While the majority of offenders eventually desist from crime, the internal psychological mechanisms hypothesized to drive the process of desistance and offender change have not been systematically measured. This study developed scales for assessing intention to change, or offenders' beliefs regarding their perceived ability to stay crime-free (agency) and expected outcomes for crime and desistance (expectancies). Incarcerated offenders ($N = 142$) endorsed these beliefs in a way that is consistent with theories of offender change. The structure of beliefs suggests offenders with positive expectancies for desistance and negative expectancies for crime also endorse a higher sense of personal agency to desist. Outcome expectancies for desistance were unrelated to static risk variables, suggesting these measures may be complementary to risk assessment. Overall, the scales developed for this research showed high internal consistency and evidence for concurrent and construct validity. Refining the measurement methods and assessing recidivism outcome post-release should further advance this avenue of research.

Keywords: crime desistance, offender change, agency, outcome expectancies, antisocial attitudes

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Our knowledge of the correlates and predictors of criminal behaviour provide a detailed profile of the active offender (Andrews & Bonta, 2006), but, by contrast, our construction of the offender exiting crime remains much less developed. Desistance is both an empirically observable and theoretically complex process involving steady reductions in the frequency of criminal activity until involvement is discontinued (Farrington, 2007). There is debate whether it is meaningful to understand desistance as only cessation of sustained criminal activity (i.e., at least two offences; Kazemian, LeBlanc, Farrington, & Pease, 2007; Maruna, 2001) or if a single criminal act can also be considered a criminal career (Farrington, 2007). However, a lack of standardized measurement with large samples has hampered development of our understanding of the desistance process. Comparing typical versus distinctive desistance processes will remain elusive until the elements of offender change are adequately measured and organized into an empirically informed framework.

In particular, internal mechanisms represent a critical but under-studied aspect of the desistance phenomenon. The main purpose of the present research is to develop self-report measures of psychological variables hypothesized as important for offender change within current desistance theory. The present paper also analyses whether beliefs associated with intention to change are inter-related in the way desistance theory would predict.

Criminal Careers and Desistance

One of the reasons desistance represents an important avenue of study is its widespread prevalence. Indeed, persistent criminal careers are not as typical as “unsuccessful” criminal careers (Kempf, 1989); most delinquent adolescents do not progress to become adult offenders (Chung, Hill, Hawkins, Gilchrist, & Nagin, 2002; Dembo, Wareham, & Schmeidler, 2007; D’Unger, Land, McCall, & Nagin, 1998) and the majority of offenders cease criminal activity in early adulthood (Blokland, Nagin, & Nieuwebeerta, 2005; Kazemian et al., 2007; Piquero et al., 2001; Piquero, Brame, & Moffitt, 2005; Stolzenberg & D’Alessio, 2008; Wiesner & Capaldi, 2003; Wiesner, Capaldi, & Kim, 2007). Criminal careers range from 4 to 30 years and tend to last, on average, between 15 to 17 years (Ezell, 2007a; Kazemian & Farrington, 2006; Kazemian et al., 2007; Piquero, Brame, & Lynam, 2004). Despite some exceptions (Prentky & Lee, 2007; Thornton, 2006), a majority of offenders follow a pattern of increasing criminal activity toward a late adolescent or early adulthood peak and then decline steadily thereafter (e.g., the age-crime curve; Piquero et al., 2001).

Criminal careers decline steadily with age for both high and low frequency offenders (Ezell, 2007a; Kazemian et al., 2007). With each successive conviction, an increased time lag is observed between offences, suggesting that criminal careers both begin to wane quickly after they begin and slow down before they completely stop (Ezell, 2007b; Haapanen, Britton, & Croisdale, 2007; Kazemian et al., 2007; Kurlychek, Brame, & Bushway, 2006). Offenders also begin to gravitate toward less serious crimes as they desist (Massoglia, 2006). Thus, it has been emphasized in desistance theory that offender change should be conceptualized as an ongoing, developing process, occurring progressively rather

than instantaneously (Burnett & McNeill, 2005; Farrington, 2007; Kazemian, 2007; Maruna, 2001).

Some prior desistance research has focused largely on key transition events in the lives of desisting offenders such as marriage (Farrington, 1995; Maume, Ousey, & Beaver, 2005; McGloin, Sullivan, Piquero, & Pratt, 2007; Sampson & Laub, 2005; Warr, 1998) and employment (Apel, Paternoster, Bushway, & Brame, 2006; Hepburn & Griffin, 2004; Lipsey, 1995; MacKenzie & Li, 2002; Morizot & Le Blanc, 2007; Sampson & Laub, 1990; Uggen, 1999; 2000; Wadsworth, 2006). However, these events are perhaps best characterized as external markers of a more complex internal change process underlying the visible life changes. For example, it is marital engagement and satisfaction that are particularly related to lower rates of offending rather than marital status itself (Blokland et al., 2005; Farrington, 1995; Giordano, Schroeder, & Cernkovich, 2007; Kruttschnitt, Uggen, & Shelton, 2000; MacKenzie & Li, 2002; Massoglia & Uggen, 2007; Maume et al., 2005; Sampson & Laub, 1990; Wadsworth, 2006). Similarly, the employment effect is not simply due to the benefits of receiving a salary, but is particularly tied to the subjective rewards of a fulfilling employment experience (Uggen, 1999; Wadsworth, 2006).

Thus, while employment and marriage are turning points (since they have distinct onsets), they are perhaps more accurately viewed as dynamic processes (Maruna, LeBel, Mitchell, & Naples, 2004; Sampson & Laub, 2005). For example, romantic relationships are unstable processes that require individuals to take time to commit to each other and adjust to each other's influence (Leverentz, 2006; Rhule-Louie & McMahon, 2007).

Researchers' conceptualization of offender change as an ongoing, emerging commitment to

staying crime-free is supported by the findings that the major desistance correlates are best described as processes (and, in particular, unstable, evolving processes).

Thus, while turning points represent changes in offenders' lives and social bonds, the psychological meaning attached to these changes is most important. Any turning point, or "hook for change" (Giordano, Cernkovich, & Rudolph, 2002, p. 992), will only be effective if the individual embraces it as meaningful, accessible, and subjectively desirable (Bracken, Deane, & Morrissette, 2009; Healy & O'Donnell, 2008; LeBel, Burnett, Maruna, & Bushway, 2008). The non-experimental nature of prior research makes it particularly difficult to separate propensities (internal orientation influencing the likelihood of committing criminal acts) from life events (external manifestations associated with differential likelihood toward crime; Gottfredson, 2005; Kazemian, 2007; LeBel et al., 2008). As such, measuring the cognitive variables that are suspected to moderate the desistance process is necessary for understanding the role of internal versus external factors within the desistance process.

Examining Internal Change Mechanisms

Unfortunately, a current weakness within the offender literature is its lack of focus upon cognition, attitudes and motivation in all stages of the criminal career (Maguire & Raynor, 2006). However, studies that have examined attitudes related to criminal behaviour demonstrate the key importance of cognitive variables. For example, while peers appear to be related to initiation into crime, neutralizing beliefs, or cognitive techniques for reducing the perceived repercussions of criminal activity, are related to crime maintenance (Butler & Maruna, 2009; Maruna & Copes, 2005). Given the intuitive link between crime-supportive attitudes and criminal behaviour, it may be that the observed treatment effect on

crime can be explained by a treatment-guided change in thinking processes. However, this hypothesis has not been adequately tested and will remain untestable until further focus is placed on measuring cognitive variables within the criminal career (Walters, 2006).¹

Antisocial attitudes have been the main focus of prior research examining offender cognition (Andrews & Bonta, 2006; Gendreau, Little, & Goggin, 1996; however, see Gannon, 2009, for an overview of specific cognitions associated with offending behaviour), but little research has dissected crime cognitions into appropriate sub-components. Cognitive representations that define the probable association between two concepts are considered beliefs (e.g., “Taking something that does not belong to me is theft”) while the subjective evaluation of this association is conceptualized as an attitude (e.g., “Theft is a good way to get the things I want”; Fishbein, 2008). Individuals may use numerous sources to construct these evaluations, including beliefs, emotions, or past behaviour (Zanna & Rempel, 2008). The present research is focused primarily upon the measurement of crime and desistance beliefs, but a minority of self-report items created for this research contain components of subjective evaluation and could be considered attitudes. In this paper, we prefer the term *beliefs* while recognizing the close association between these two constructs.

While a core purpose for measuring crime-related beliefs is to access constructs hypothesized to predict future crime behaviour, high attitude-behaviour consistency only occurs under certain conditions, such as when the attitude is accessible (Fazio & Williams, 2008), the attitude is specific (Ajzen & Fishbein, 1973) and the attitude is activated by contextual factors (Lord, Lepper, & Mackie, 2008), for example. While there is a large association between behaviour intention and actual behaviour, this relationship is imperfect

(Hagger, Chatzisarantis, & Biddle, 2002). Despite the limitations of the attitude-intention-behaviour relationship, research with offenders has shown antisocial attitudes are one of the best predictors of crime (Andrews & Bonta, 2006) and self-reported motivation to desist within small samples has shown some (but not a perfect) relation to future desistance (Burnett & Maruna, 2004; Maruna, 2001).

A recently formulated model of offender change posits that both a commitment to change and important intrapersonal moderators drive the transition between active criminal careers and desistance (Serin & Lloyd, 2009). These intrapersonal moderators are hypothesized to enhance motivation for change by sustaining existing motivation in the face of difficulty and increasing the likelihood that desistance-related behaviours will be attempted and repeated. Thus, the time period between active offending and engagement with desistance is characterized by pivotal adjustments in an offender's motivational and psychological disposition.

Agency

One proposed moderator is a sense of agency, or belief that one is capable of exerting influence upon one's self and environment (Bandura, 1989; France & Homel, 2006). Agency has been identified as an important area of future study within desistance research (Bottoms, Shapland, Costello, Holmes, & Muir, 2004; Laub & Sampson, 2001; Sampson & Laub, 2005; Vaughan, 2007; Weaver, 2009), but researchers are not unanimous in their definition of this concept (Healy & O'Donnell, 2008). As such, various related constructs have been discussed simultaneously in the literature, including self-efficacy and hope. Formally, however, self-efficacy is a specific sub-mechanism of agency (Bandura, 1989), whereas agency is a sub-component of the broader construct of hope (Snyder et al.,

1991). On the one hand, a sense of agency is expected to involve desire to change, the ability to change and ready access to change mechanisms (O'Connell, Enev, Martin, & Inciardi, 2007) whereas, on the other hand, agency is expected to involve active effort to obtain the resources necessary for change whether they are currently available or not (Moulden & Marshall, 2005). Situational action theory unites motivation (internal desire) and opportunity (external resources), proposing that agency occurs when individuals choose a single course of action among a number of possible alternatives based on personal beliefs regarding which behaviour will bring a desired outcome (Wikström & Treiber, 2009). Thus, agency is uniquely situated within contextual factors (specifically, the *interaction* between personal and contextual factors) because the external environment either prompts or constrains an individual's choices for behaviour alternatives.

It is hypothesized that increasing offenders' sense of hope regarding their ability to reach personal goals through prosocial means should reduce recidivism (Moulden & Marshall, 2005). Indeed, treatment providers' emphasis on hope in the rehabilitation process can be traced back to the late 1800s (Rowbotham, 2009). Ethnographic research suggests ex-prisoners often report feeling powerless about their ability to stay crime-free (Graffam, Shinkfield, Lavelle, & McPherson, 2004), but it is also typical for offenders to demonstrate an unrealistically positive outlook on their chances of successfully remaining in the community (Dhami, Mandel, Loewenstein, & Ayton, 2006). Thus, offenders' sense of agency may be fragile at the beginning of their attempts to stay crime-free such that strong agentic beliefs possibly emerge as a byproduct of desistance success rather than a precursor (Healy & O'Donnell, 2008).

Research supports the conclusion that sense of self-efficacy is an accurate predictor of future behaviour (Bandura, Adams, & Beyer, 1977; Hagger et al., 2002) and an important element for helping substance abusers achieve sobriety (Dennis, Foss, & Scott, 2007; Hasking & Oei, 2007; Tate et al., 2008). Similarly, in offender populations, perceived self-efficacy is correlated with greater motivation to change (McMurrin et al., 1998) and is related to reduced recidivism (Benda, 2001; 2005; Maruna, 2001). However, it remains unclear whether agentic offenders are more likely to desist or if desistance increases offenders' sense of agency. One unique test of the timing of self-efficacy in the desistance process suggests a sense of hope indirectly predicts post-release success by reducing the number of re-entry social problems the offenders must face (LeBel et al., 2008). These findings support the conceptualization of agency as involving both motivation for a goal and the ability to reach the goal (i.e., the "will and the ways"; Burnett & Maruna, 2004, p. 395).

A greater understanding of how personal agency may relate to treatment success and desistance from crime should evolve from more systematic measurement. While prior studies have investigated offenders' sense of agency for desistance, some have used measures not specifically intended for an offender population while others have examined offenders' richly detailed narratives in a way that is difficult to replicate. In addition, many of the prior studies have employed samples of limited size allowing for in-depth analysis of the role agency plays in offenders' lives, but restricting researchers' ability to examine the impact of agency in the context of other variables. The present research is designed to create a measure of perceived agency for desistance that can be easily administered to a sample of offenders.

Outcome Expectancies

In addition to personal agency beliefs, individuals store beliefs regarding the consequences of various behaviours (e.g., the reinforcement value of actions) that are then activated by environmental or psychological cues (Metrik, McCarthy, Frissell, MacPherson, & Brown, 2004; Palfai & Wood, 2001). These cues are hypothesized to initiate behaviour as long as self-efficacy and motivation are congruent with the nature of the behaviour and the expected consequences of the behaviour (e.g., outcome expectancies; Palfai & Wood, 2001). The objective accuracy of outcome expectancies is relatively or entirely unimportant; rather, it is the perceived strength of the association between the behaviour and the outcome that is expected to dictate engagement in the behaviour (Hayaki, Anderson, & Stein, 2008). It is also important to examine the full structure of outcome expectancy beliefs; the impact of a single positive expectancy will be outweighed by a host of negative expectancies (Ajzen & Fishbein, 1969; Harris, 1975). Positive and negative expectancies have independent effects and potentially interact in certain situations (Devine & Rosenberg, 2000; Jones & McMahon, 1994).

The probability of engaging in criminal behaviours or desistance behaviours should increase and decrease along with the expected value attached to them (Harris, 1975). Research supports the conclusion that negative expectancies for behaviours reduce their likelihood whereas positive expectancies increase their likelihood. For example, negative expectancies regarding smoking and substance abuse predict successful quitting (Flynn, Joe, Broome, Simpson, & Brown, 2003; Jones & McMahon, 1994; Palfai, 2002) whereas positive expectancies about drinking are related to alcohol consumption (Kelly, Halford, & Young, 2002). Expectations that legitimate employment will yield more salary than

criminal pursuits are linked to lower risk to re-offend (Shover & Thompson, 1992) and expectancies have also been related to changes in criminal behaviour in early adolescence (Ayers, Williams, Hawkins, Peterson, & Abbott, 1999). Positive outcome expectancies for crime are related to instrumental aggression rather than reactive aggression, confirming the importance of positive beliefs about crime and a planned and purposeful engagement in criminal behaviour (Walters, 2007). In terms of behaviour change, research suggests that when individuals anticipate more costs and fewer rewards for substance recovery, change is less likely to occur (Cunningham, Wild, Koski-Jännes, Cordingley, & Toneatto, 2002; Metrik et al., 2004).

Both negative and positive crime expectancies can be changed when targeted in rehabilitation programs, but it remains unclear how these changes relate to recidivism (Walters, 2004). Some early research suggested the perceived costs and benefits of crime evolve throughout the period of incarceration (Harris, 1975), but little is known regarding how the content of expectancies change or stabilize during desistance.

While measuring outcome expectancies for substance abuse behaviours is common within the literature, there have been few attempts to measure outcome expectancies in offender populations. Positive and negative crime expectancies have been examined, but it is worthwhile to simultaneously measure expectancies for desistance. Outcome expectancies are largely relevant for intended behaviours rather than reflexive or habitual behaviours (Ajzen & Fishbein, 1973). As a result, expectancies may more readily predict behaviours that involve building strengths for a crime-free life.² Offenders may form beliefs about offending quickly due to personality (impulsivity) or affective (poor anger management) factors, but desistance behaviours (i.e., attending substance abuse treatment

or forming prosocial connections) likely involve greater planning and consideration. It is also likely that cognitive networks of outcome expectancies are complex and potentially contain seemingly incongruent belief structures (i.e., positive expectancies for desistance, but also positive expectancies for crime). The purpose of the present research is to develop measures for assessing positive and negative crime and desistance outcome expectancies.

The Present Research

While the intrapersonal moderators discussed in the previous sections have been hypothesized to be of key importance in the process of offender desistance, this hypothesis remains untested due to lack of adequate measurement. These variables have not been actively adapted for use within the offender population. In the present research, new self-report measures were created for an offender population to assess beliefs regarding intention to desist from crime. In addition to the measures developed for this research, participants were also asked to complete previously published self-report scales in order to examine concurrent and construct validity. Finally, correlations were examined to investigate the structure of incarcerated offenders' desistance and crime beliefs.

Method

Participants

Male offenders were recruited within a Canadian minimum-security institution for participation in this study ($N = 142$). Participants were not excluded based on age, criminal history, or risk level in order to obtain a general, heterogeneous sample. Participants were excluded only if education level or mental illness impeded their ability to complete the questionnaires. Volunteers ranged in age from 20 to 71 years with a mean age of 41.4 ($SD = 12.2$) years. A majority of the offenders were Caucasian (71.8%) while the remaining

participants were Aboriginal (8.5%), Black (6.3%), Asian (2.8%), Latino (0.7%), multi-racial (0.7%), or listed as Other or missing (9.1%). Most participants self-reported that they were currently single, either never married (41.8%), divorced (32.6%), or widowed (4.3%) while 21.3% of the sample were currently married or in a common-law relationship. Slightly less than half of the sample were incarcerated for a non-sexual violent index offence, whether assault or murder (49.3%), while a greater percentage of the remaining half had non-violent index offences (31.9%) compared to sexual assault (18.8%).

While the sample skewed older with a large percentage of violent index offences, the sample was moderate risk to reoffend, on average ($M = 4.5$, $SD = 10.5$), as measured by the SIR-R1 (see description below). Approximately half of the sample had previously served a provincial sentence (less than two years in length; 53.5%), but the majority of the sample had no prior federal convictions (sentences two years or greater; 77.5%). This information suggests the sample was representative of federal offenders in Canada (Robinson, Porporino, Millson, Trevethan, & MacKillop, 1998). However, this study's results cannot be generalized without further research to samples primarily composed of young offenders, offenders with non-violent convictions or female offenders.

Materials

Personal Agency for Desistance Questionnaire.³ A ten-item questionnaire was written by the authors of the present research to assess perceived sense of agency for desistance; each item was carefully linked to desistance theory to reflect how agency has been discussed in prior literature. In particular, the qualitative findings from narrative research (Maruna, 2001) provided a detailed framework from which to draw items for inclusion in the questionnaire. Sample items include: "I'm smart enough to be able to learn

skills and anything else I need to learn to help me live a crime-free life” and “I feel helpless when I try to stop myself from committing crimes; the world always somehow forces me to keep going back to crime” (reverse coded). Participants are asked to rate each statement on a scale from *strongly disagree* (coded 1) to *strongly agree* (coded 5). Scores range from 10-50 with higher scores indicating greater perceptions of agency for maintaining a crime-free lifestyle.

Within the sample, this scale showed good internal consistency (Cronbach's $\alpha = .77$). On average, participants scored high on this scale ($M = 44.7$, $SD = 5.2$; $Median = 46$) with negative skew indicating high optimism toward staying crime-free.⁴

Hope Scale (Snyder et al., 1991). In order to assess the validity of the new Personal Agency for Desistance questionnaire, participants were also asked to complete two scales that measure hope. The Hope Scale uses twelve items arranged into two subscales to measure cognitive appraisal of goal-related capabilities as a dispositional trait (Snyder et al., 1991). Individuals scoring high on the *agency* subscale expect positive outcomes to occur. The *pathways* subscale represents efficacy; individuals are expected to experience hope only when they can envision specific means to reach their goals. In this sample, internal consistency for this scale was high ($\alpha = .81$).

State Hope Scale (Snyder et al., 1996). While the Hope Scale measures hope at a trait level, the State Hope Scale uses six items to measure perceptions of hope at a specific time (Snyder et al., 1996). The State Hope items are analogous to the Hope items except the wording is in the present tense. Both scales have been used in prior research with offenders (Moulden, Marshall, & Marshall, 2005).⁵ The social conditions within correctional institutions are expected to discourage sense of personal agency (Burnett &

Maruna, 2006) and the inclusion of both scales allowed us to explore whether perceived agency for post-incarceration desistance is more closely related to overall sense of hope (lifetime sense of agency) compared to present sense of hope (while incarcerated).

Although the Personal Agency for Desistance questionnaire was developed independently, it resembles the components of the Hope Scale. The Hope Scale applies widely to the general population while the Personal Agency for Desistance questionnaire focuses on agency for crime desistance. Otherwise, the scales appear to measure comparable concepts. In this sample, internal consistency for this scale was high ($\alpha = .82$).

Personal Outcome Expectancies for Crime Scale. The authors of the present research developed a 32-item questionnaire to assess the perceived benefits and costs of criminal activity (see Footnote 3). Items were generated by an offender sample through a free-response task in an unrelated study (Brown, 2002). Items were created from the open-ended responses provided by offenders who were asked: what things could happen to a person if they commit a crime? None of the offenders who provided the items for these scales participated in the present study.

The outcome expectancies were divided into 19 *negative crime* outcome expectancies (scores range from 19-95) and 13 *positive crime* outcome expectancies (scores range from 13-65). Sample items for negative outcomes include “You will get hurt or killed” and “You will lose respect from others”. Sample items for positive outcomes include “You will have a better life” and “You will feel a good thrill or excitement”. For all items, participants are asked to rate the likelihood of each outcome from *not at all likely* (coded 1) to *completely likely* (coded 5). Internal consistencies for the subscales were strong, for both the *negative* subscale ($\alpha = .90$) and the *positive* subscale ($\alpha = .89$).

Personal Outcome Expectancies for Desistance Scale. The authors of the present research also developed a questionnaire to assess the perceived benefits and costs of desistance using the same qualitative data source above (Brown, 2002; see Footnote 3). Thirty-seven items were taken from offenders' open-ended responses to the question: what things could happen to a person if they decide not to commit crimes?

The outcome expectancies were divided into three subscales. Seven items measured *negative desistance* outcomes (scores range from 7-35), including "You won't achieve your goals" and "You will live on lower income, at least for a while". One item was deleted from the *negative* subscale to obtain adequate internal consistency; the subscale was reduced to six items (scores range from 6-30). The remaining items showed good internal consistency ($\alpha = .71$). *Positive desistance* outcomes (17 items, scores range from 17-85; high internal consistency, $\alpha = .88$) include "You won't worry about arrest or prison again" and "You will have a healthier lifestyle". Twelve additional free response items did not seem to clearly fit along the positive/negative dimension, but appeared to assess perceptions regarding the amount of effort that would be required for desistance (e.g., *effort* expectancies). Sample items include "You won't be able to give up, even when things seem hopeless" and "You will have to put effort into getting out of feeling angry or upset when feeling that way". Alternatively, this component may be thought of as perceptions of behavioural control. Scores on this subscale range from 13-65 with high internal consistency ($\alpha = .83$).

Measures of Criminal Attitudes and Associates (MCAA; Mills & Kroner, 2001). To assess how crime and desistance outcome expectancies are related to general antisocial attitudes, participants were also asked to complete the Measures of Criminal Attitudes and

Associates (MCAA; Mills & Kroner, 2001). Part A of the MCAA asks offenders to think of the four adults with whom they spend most of their time when in the community. It assesses both the amount of time spent with each associate as well as each associates' involvement in crime. Scores range from 0–64 with higher scores indicating not only the presence of criminal friends but also a high percentage of self-reported free time spent with those friends.

Part B of the MCAA assesses attitudes toward antisocial associates and attitudes about the appropriateness of antisocial acts through four subscales: *attitudes toward associates*, *attitudes toward violence*, *attitudes toward entitlement* and *antisocial intent* (10-12 agree/disagree statements each). Total scores have good internal consistency ($\alpha = .90$) and test-retest reliability ($ICC = .81$; Mills, Kroner, & Forth, 2002). The individual subscales predict both general recidivism (AUC range = .58 to .65) and violent recidivism (AUC range = .59 to .70; Mills, Kroner, & Hemmati, 2004). Scores range from 0–46. Higher scores indicate greater endorsement of antisocial attitudes. In this sample, internal consistency for total scores was high ($\alpha = .91$).

The Statistical Information on Recidivism Scale (SIR-R1; Nuffield, 1989).

Measures of static risk factors are highly predictive of criminal behaviour (Hilton, Harris, & Rice, 2006). However, static risk variables have shown limited variance in their ability to predict later criminal careers (Kazemian & Le Blanc, 2007) and evidence suggests desistance is not directly tied to the extinction of the risk factors that led to one's initial involvement in crime (Kosterman et al., 2005; Laub, Nagin, & Sampson, 1998; Stouthamer-Loeber, Wei, Loeber, & Masten, 2004). In the present study, participants' risk scores were gathered from the correctional system's national database to explore the

relation between desistance beliefs and risk to re-offend. While level of risk to re-offend is measured in the present study, we do not offer *a priori* hypotheses about how risk relates to desistance beliefs.

The Statistical Information on Recidivism Scale (SIR-R1) was developed within Correctional Services Canada and combines 15 static risk factors to determine Canadian offenders' probability of recidivism within three years of release (Nuffield, 1989). A risk estimate is compiled from information about past offences, current offences and criminogenic needs. The SIR-R1 has good internal consistency ($\alpha = .77$) and good predictive validity for federally sentenced non-Aboriginal male offenders (AUC = .75; Nafekh & Motiuk, 2002). Scores range from -27 to +30 with higher, positive scores indicating lower risk to re-offend. Internal consistency could not be assessed for this sample because only total scores were collected from participants' files.

Demographic information. Additional variables were gathered from participants' correctional files and a brief questionnaire, including age, ethnicity, marital status, index offence and participation in institutional rehabilitation programs.

Procedure

The opportunity to participate in a study investigating personal perceptions of crime and staying crime-free was advertised to all offenders within the institution. Inmates interested in volunteering identified themselves to the research assistant. Recruitment continued until all time slots were filled. This approach to sampling allowed for an exploratory examination of offenders' desistance beliefs, but it remains unclear what percentage of the offenders in the institution were willing to participate in the study and what characteristics may have differentiated volunteers from non-volunteers.

Participants individually completed the questionnaires; these were organized in four arrangements to counteract poor completion rates of any one scale due to fatigue effects or unexpected order effects. Risk scores and demographic information were gathered at a later date through electronic files in an institution file review.

Results

Missing Data

Within the sample of 142 offenders, 20 offenders completed fewer than 90% of the questionnaire items. These participants' data were removed, leaving a remaining sample of 122 offenders. Compared to participants who completed at least 90% of the items, these offenders were similar in age, $N = 141$, $t(139) = 0.99$, $p = .32$, $d = 0.25$, SIR-R1 risk score, $N = 137$, $t(135) = 0.89$, $p = .38$, $d = 0.22$, and type of index crime, $\chi^2(2, N = 138) = 5.11$, $p = .08$, $\phi = 0.19$. However, participants with over 10% missing data participated in fewer rehabilitation programs ($M = 1.16$, $SD = 1.57$) compared to participants retained for analysis, $M = 2.83$, $SD = 2.58$; $N = 141$, $t(139) = 2.74$, $p = .007$, $d = 0.68$. Further analyses vary slightly in sample size due to missing data.

Concurrent Validity

Correlations between the Personal Agency for Desistance questionnaire and previously published measures of hope were examined to determine its concurrent validity. Results indicated small-to-moderate but positive correlations between the new measure of desistance-specific agency and the hope subscales. In particular, correlations with the *pathways* subscale ($r = .19$, $p = .04$, $n = 120$) and *agency* subscale ($r = .27$, $p = .003$, $n = 120$) of the Hope Scale were comparable but slightly smaller than the *pathways* subscale ($r = .22$, $p = .02$, $n = 121$) and *agency* subscale ($r = .30$, $p = .001$, $n = 121$) of the State Hope

Scale. Thus, the *agency* subscales particularly showed moderate associations with the Personal Agency for Desistance questionnaire, but the strength of correlations suggest a general sense of agency cannot be equated with a sense of agency for desistance. It is not clear from these data whether differences in the target (desistance versus other life goals) or the specificity of the target fully explain the strength of these correlations.

Construct Validity

While the MCAA assesses evaluative beliefs regarding antisocial behaviour, not crime and desistance outcome expectancies, these constructs were expected to be inter-related in a theoretically meaningful way. The Pearson product moment correlation coefficients in the top rows of Table 1 show significant moderate-to-large correlations between antisocial attitudes, expectancies and sense of agency, with one non-significant correlation in the hypothesized direction. Also, correlations indicate greater time spent with antisocial others was related to crime expectancies and sense of agency, but not significantly related to desistance expectancies, whether positive, negative or effort-related.

-- Table 1 inserted approximately here --

Correlations Among Belief Measures

As seen in the correlations displayed in the lower rows of Table 1, the measures were inter-related in a way that is consistent with the conclusion that desistance-supportive beliefs cluster separately from crime-supportive beliefs. The overall pattern suggests beliefs supportive of desistance are inversely related to beliefs supportive of crime. The pattern of correlations also indicates those who endorse belief in an ability to desist from crime also endorse positive beliefs about desistance. The *effort* expectancies subscale for desistance related to the other constructs in a way that mimicked *positive* outcome

expectancies for desistance, suggesting that these scales may be assessing the same or a highly similar construct.⁶ The lowest and non-significant correlations in Table 1 involved the *negative* subscale of desistance outcome expectancies, suggesting beliefs that attempting desistance will bring harmful outcomes may not be influenced by simultaneous beliefs about the consequences of criminal activity.

-- Figure 1 inserted approximately here --

Conceptual Model of Desistance Beliefs

A conceptual model of the simple bivariate correlation coefficients reported above is shown in Figure 1. This model displays how desistance agency and desistance outcome expectancies form cognitive support for desistance. By contrast, those offenders without these cognitive supports endorse the benefits of crime and are possibly poised for engaging in further criminal activity. If agency, as theory suggests, is of key importance for desisting from crime, this model suggests agency also augments, links with, or is enhanced by associated expectancy beliefs.

Risk, Rehabilitation and Demographic Variables

Greater risk to re-offend (as measured by static risk variables) was positively correlated with greater endorsement of *positive* outcome expectancies for crime ($r = -.20, p = .03, n = 119$), confirming that offenders with beliefs supportive of criminal activity are at higher risk for future crime.⁷ However, correlations with all other outcome expectancy measures were non-significant. This suggests beliefs about desistance may be orthogonal to our current conceptualization of static risk factors. Finally, risk to re-offend was significantly correlated with agency beliefs such that higher agency was related to lower risk to re-offend ($r = .27, p = .003, n = 119$).

It was of interest whether participation in institutional rehabilitation programs was related to desistance-supportive beliefs. The number of programs attended while incarcerated was summed for each participant (range 0-10; $M = 4.2$, $SD = 2.9$). The relationships between program attendance and all belief variables were examined, but the only significant correlation was between program attendance and *negative* outcome expectancies for crime ($r = .22$, $p = .02$, $n = 122$), suggesting program attendance was related to greater endorsement of beliefs that crime causes negative outcomes.

Further, demographic variables (age and marital status) were examined for potential relation to desistance beliefs. As suggested by prior research, it was hypothesized that older and married participants would be more likely to endorse desistance-supportive beliefs. Unfortunately, a measure of marital satisfaction was not available to include in the analysis, which would have provided a more rigorous test of the marriage-desistance relationship.

Correlations indicated that crime, but not desistance, outcome expectancies were related to age. Older age was related to greater endorsement of negative expectancies for crime ($r = .40$, $p < .001$, $n = 122$) and negatively correlated with endorsement of positive expectancies for crime ($r = -.23$, $p = .01$, $n = 122$). Married, common-law and widowed participants were grouped and compared to never married and divorced participants on the measures of desistance beliefs. One significant difference was found, but in the opposite direction as predicted: single offenders endorsed greater agency for desistance beliefs compared to married participants, $M = 45.3$, $SD = 4.9$ versus $M = 42.8$, $SD = 5.6$; $N = 122$, $t(120) = 2.28$, $p = .02$, $d = 0.49$.

Discussion

Despite the prominence of strengths-based intrapersonal mechanisms in theories of offender change, it is unfortunate that “specific measurements of positive attributes are rare in this literature” (Stouthamer-Loeber et al., 2004, p. 899). The present paper provides an initial step in a program of research toward developing self-report scales that measure desistance-specific beliefs about the process of offender change. As an initial examination of the scales’ utility and validity, these measures showed strong internal consistency (ranging from $\alpha = .71$ to $.90$), correlated largely as predicted with published scales of hope and antisocial attitudes, and clustered together in a theoretically meaningful way.

The present research also attempted to broaden our understanding of offenders’ beliefs about crime and desistance within the criminal career. Overall, results suggest personal belief structures about desistance are consistent and coherent. In general, beliefs supportive of desistance, unsupportive of crime and representing high desistance agency were endorsed together.

Desistance theory has focused on agency as a primary mechanism of offender change and these results lend support for this by demonstrating that agency beliefs emerge as the most central construct, showing moderate-to-strong correlations with all outcome expectancies. Agency beliefs are conceptually embedded within outcome expectancies in that agentic individuals must first visualize outcomes they have not personally experienced prior to extending effort toward these outcomes (Bandura, 1989). If agency beliefs predict future desistance as suggested by desistance theory, these results provide a rationale for enhancing offenders’ ability to stay crime-free by focusing both on their ability to visualize positive outcomes for desistance and their personal ability to attain these outcomes.

Results suggest offenders who value desistance are also highly aware of the behavioural control and effort necessary to obtain a crime-free life. As stated above, individuals who express high agency for desistance are also expected to have the ability to divide their broad goal into more immediate objectives. While these correlational results suggest a “will” and an understanding of the “ways” are associated, how these beliefs functionally interact with post-prison situations presents a challenge for future research.

While our current understanding of crime and rehabilitation has primarily emerged from a risk-focused perspective, assessing desistance beliefs may have additional value for guiding treatment-assisted offender change, detecting when an offender has made important treatment gains and anticipating which offenders are particularly poised for desistance. In this study, risk variables, antisocial attitudes and association with criminal friends were correlated with crime expectancies while remaining more weakly related or unrelated to desistance expectancies. If, as hypothesized, desistance beliefs are indeed related to treatment success and giving up crime, assessing these beliefs may complement our current understanding of risk and offender change. While personal beliefs about crime are tied to risk variables, beliefs about desistance seem to emerge separately (and likely emerge later in the criminal career).

However, while we hypothesized that age and program attendance would be related to beliefs supportive of desistance, these variables were only correlated with crime expectancies, particularly *negative* expectancies. While it is unclear how this finding applies to intra-individual change, it may be that compounding years of negative incidents or multiple incarceration periods make further crime less appealing to the individual. On the other hand, this association may reflect the influence of program content focusing on

crime avoidance, the influence of extended incarceration periods, or a higher likelihood that offenders with a negative view of crime will enroll in institutional programs. Increasing offenders' negative expectancies for crime is a typical treatment goal, especially within pre-treatment efforts to motivate enrolment in programs, but desistance theory suggests the effect of negative crime expectancies will be short-lived if additional beliefs do not sustain motivation for desistance over time. These results support the conceptualization of risk, risk-based treatment gains and crime beliefs as concurrent, but distinct, considerations from offenders' structure of desistance beliefs.

Participants in this sample reported high degrees of general hope and agency for crime desistance. Offenders' sense of agency may be unrealistic as shown in Dhimi and colleagues' (2006) research, but those endorsing a higher amount of personal agency were also lower risk to re-offend and had fewer antisocial friends, which may indicate that agentic beliefs are grounded in reality. Finally, higher agency was also associated with a non-marital state, whether single or divorced. It is possible offenders who are already married (and may have been married prior to incarceration) are more aware of the difficulty of desistance, or the quality of these particular marriages fails to fully influence desistance. Much of the literature on the marriage-desistance effect examines single offenders who both get married and give up crime, but fewer studies have explored how current relationships impact active criminal careers.

Future Directions, Implications and Limitations

The model of desistance beliefs (Figure 1) is valuable for providing a framework for replication in future empirical research. In addition, the present paper provides methods for measuring these core constructs. The interconnection between agency and outcome

expectancies is particularly of value when considering efforts to improve agency for desistance in offenders or targeting low agency/pro-crime offenders in aftercare programs. It remains to be seen, however, whether this model will replicate within other offender samples or reliably relate to recidivism as predicted. Future research with larger samples should employ path analyses to formally test which constructs mediate impact on critical outcomes. However, the unanimity within the literature about the importance of agency and desistance beliefs encourages its future exploration. In particular, this research implies the assessment and application of these constructs may enhance rehabilitation and aftercare efforts as well as complement our understanding of risk factors and criminogenic needs.

The scales developed for this research emerge from prior theoretical considerations and show good internal consistency, but the psychometric properties have not been extensively tested. Further testing is warranted as the present analyses are limited by a small sample size.

The measures could also be refined in several ways. The items created for this study were constructed to relate to crime in general rather than specific types of crime. While this allowed participants to imagine whatever criminal activity is most salient to them when completing the measures, in some cases participants may have interpreted items to be irrelevant if they felt these items were asking about crimes they were not tempted to commit. Various versions of the scales could be developed for different types of offenders. In addition, assessing the subjective value participants place on each outcome could extend the breadth and complexity of the outcome expectancy scales rather than assuming outcome expectancies fall along a simple positive versus negative dimension (i.e., “How

satisfied/dissatisfied would you be if this outcome happened to you?"; Brown, 2002; Jones & McMahon, 1994).

Attitudes toward behaviours best predict outcome when the attitudes are measured in a short time frame before the behaviour is enacted (Ajzen & Fishbein, 1969). In our sample, many of the participants will be incarcerated for an extended period of time which may have influenced their perceptions of crime and desistance. As Harris (1975) demonstrated, outcome expectancies for crime vary throughout the prison term, with offenders adjusting their beliefs depending upon whether they can anticipate living in prison or in the community. Thus, variation in outcome expectancy beliefs may be due to time until release rather than individual differences. While future research examining the effects of outcome expectancies on behaviour should account for the proximity to parole eligibility, it is also of interest whether changes in beliefs before and after release are important for prediction.

In conclusion, this research attempts to prepare the way for future exploration of the psychological transitions associated with desistance. The measures used in this study show promise for contributing to our understanding of crime and desistance beliefs, specifically during the waning stages of the criminal career, but more research is necessary to unravel to what extent beliefs about desistance play a meaningful role in the desistance process.

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Footnotes

¹Offender treatment targeting cognition through cognitive-behavioural techniques is effective for reducing recidivism among treatment completers (e.g., McGuire et al., 2008), but there is scant research effectively demonstrating that changes in cognitive variables drive the observed reduction in risk.

²However, in addition to building strengths, crime desistance requires utilizing self-control in situations where criminal actions would achieve immediate goals. Indeed, individuals do not always behave with rational regard for the consequences of their behaviour, especially long-term consequences (Brezina, 2002; Burnett & Maruna, 2004).

³We invite all readers interested in viewing the items developed for this research to contact the first author for copies of the questionnaires.

⁴All analyses were conducted after transforming the variables to correct for skew. However, results did not appreciably differ when compared to analyses using untransformed variables; thus, the results reported in this paper employ the untransformed variables.

⁵Moulden, Marshall and Marshall (2005) found that a preparatory rehabilitation program for sex offenders significantly increased their sense of agency, as measured by both the Hope and State Hope scales. This study provides normative data on the scales for a specific offender population. Participants scored an average of 12.2 out of 16 points on the *pathways* subscale of the Hope Scale and 9.5 out of 16 points on the *agency* subscale (Moulden et al., 2005). On the State Hope Scale, participants scored an average of 30.0 points pre-treatment and 34.5 points post-treatment (with possible scores ranging 8-64; Moulden et al., 2005). In this study, average scores on the State Hope Scale were

higher compared to the sex offender sample ($M = 39.6$, $SD = 7.5$). Average scores on the Hope Scale in this sample were similar, but higher on the *pathways* subscale ($M = 13.1$, $SD = 2.2$) and especially higher on the *agency* subscale ($M = 12.4$, $SD = 2.4$).

⁶Testing whether these items form a single factor using principal components analysis would require a larger sample size than what is available in this study.

⁷We present simple bivariate correlations in this section due to low statistical power for analyses using more complex statistical models.

Table 1

Inter-correlations among Antisocial Attitudes, Agency and Outcome Expectancy Measures

Scales	Agency	(C-)	(C+)	(D-)	(D+)	(DE)
Antisocial Attitudes (MCAA)	-.37***	-.42***	.51***	.14	-.38***	-.34***
Criminal Friend Index (MCAA) ^a	-.24**	-.22*	.24*	-.07	-.11	-.06
Personal Agency for Desistance	-	.35***	-.28**	-.28**	.48***	.48***
Personal Outcome Expectancies for Crime						
Negative Expectancies (C-)		-	-.55***	.03	.32***	.33***
Positive Expectancies (C+)			-	.15	-.22*	-.25**
Personal Outcome Expectancies for Desistance						
Negative Expectancies (D-)				-	-.27**	-.16
Positive Expectancies (D+)					-	.80***

Note. (DE) = Effort expectancies subscale for desistance^a*n* = 114 for correlations in this row, *n* = 122 for all other rows* *p* < .05; ** *p* < .01; *** *p* < .001

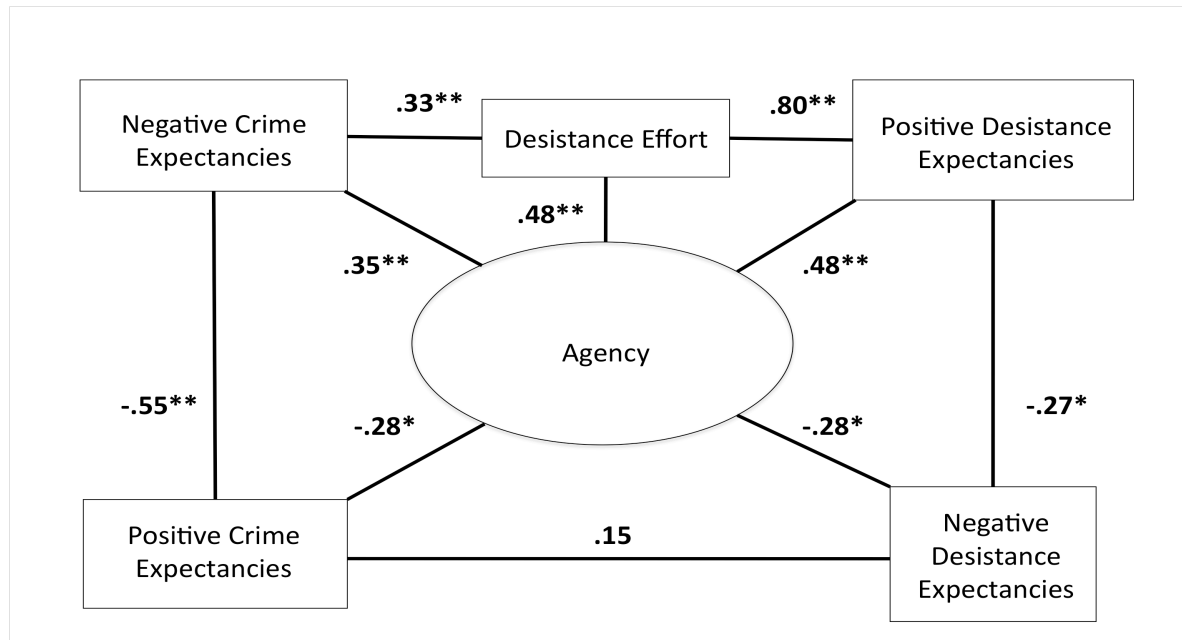


Figure 1. A conceptual model of the relationships between desistance beliefs. Note that the values displayed in the figure are simple bivariate correlations.

* $p < .01$; ** $p < .001$