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**Violent Extremists in Federal  
Institutions:  
Estimating Radicalization and  
Susceptibility to Radicalization  
in the Federal Offender Population**

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**Violent Extremists in Federal Institutions:  
Estimating Radicalization and Susceptibility to Radicalization  
in the Federal Offender Population**

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## Executive Summary

**Key words:** *radicalization, violent extremists, security threat group, terrorism.*

There is a growing recognition of the need to understand and address violent extremist threats in Western countries. Given that the majority of research in this area has been conducted on non-offender populations outside of Canada, there is a need to better understand the scope, nature, and process of radicalization in Canada. In recognition of the fact that the Correctional Service of Canada (CSC) is in a position to contribute to addressing this gap, Public Safety Canada entered into a Letter of Agreement with the CSC to produce a report focused on CSC's data holdings on and estimation of violent extremism. This report summarizes the data holdings and gaps in the area, as well as the results of three studies focused on the examination and estimation of radicalization and susceptibility to radicalization of offenders under CSC's jurisdiction.

The first study was a qualitative examination of the unique characteristics of offenders who are radicalized and who are susceptible to radicalization, from the perspective of operational staff. Based on data collected at a total of 10 focus groups involving institutional and community security and front-line staff from each of CSC's five regions, a number of themes emerged. Participants recognized the complex, multi-faceted nature of radicalization, and identified a wide range of behaviours indicative of radicalization or susceptibility to radicalization. In most cases, responses (e.g., vocalization of shared grievance, changes in religion) were consistent with the literature, though staff also suggested unique responses. Staff also drew attention to areas of possible improvement.

The second study was a quantitative examination of differences between radicalized and non-radicalized offenders. Informed by literature and by the results of study 1, radicalized and non-radicalized offenders were compared on a wide variety of variables which could be measured using administrative data. There were many areas where radicalized offenders were found to differ from other offenders, including ethnicity and citizenship, education and employment, substance abuse history, previous contact with the criminal justice system, and characteristics of their offence(s). The data suggested that, in some ways, radicalized offenders may be more similar to radicalized individuals in the community than to other offenders.

The third study involved a theory-driven attempt to identify constructs associated with susceptibility to radicalization. Based on a literature and data review, frequency analysis of variables, and principle component analysis, nine constructs were identified and explored. Though considerable additional work is required to confirm the role and nature of these constructs in influencing susceptibility, this study represents an important first step in this endeavour.

Together, the three studies have allowed the CSC to contribute to the evidence base surrounding violent extremism in Canada. The results of these studies may also inform institutional operations and policies at CSC. They consistently demonstrate the need for additional research focused on population management for radicalized offenders, with a particular need for research focused on effective interventions for this group.





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## **Introduction**

There is growing recognition of the need to understand and address violent extremist threats in Western countries (Bakker, 2006; Kebbell & Porter, 2012; Silber & Bhatt, 2007). Canada is considered to be among the countries with the most active terrorist organizations (Canadian Security Intelligence Service, 2012), with their focus on fundraising and recruiting (Chalk & Rosenau, 2004), due to Canada's proximity to the United States, tolerance of religions, and respect for human rights. While not enduring as many recent threats of violence as other regions of the world (Crelinsten, 2012), Canadians have been victim to acts or threats of violent extremism from a variety of groups who hold ideologies involving religious, political, and revolutionary doctrine (Crelinsten, 2012). Further, Canadians have not only suffered from threats by those outside the country, but also by Canadian home-grown violent extremists, such as members of the Front de libération du Québec (FLQ), white supremacists, neo-Nazis, extreme animal activists, and most recently, Islamist extremists (Leman-Langlois, & Brodeur, 2005; Pressman, 2009).

The Government of Canada recognizes the threat posed to the Canadian public by extremists as "serious and persistent" (Public Safety Canada, 2011a, p. 6) and has proposed a strategy to manage this threat. However, in order to be successful, there is a need to better understand the process of radicalization in Canada (Wilner, 2010). This requirement calls for more quantitatively driven empirical research (Borum, 2011) as well as collaboration and information sharing between government agencies (Public Safety Canada, 2011a) in order to build an evidence-based conceptualization of what defines a Canadian violent extremist or radicalized individual.

### **Defining the Terms**

A clarification of the terminology used throughout this report is appropriate due to the sensitive nature of the material and to avoid inadvertently categorizing or discriminating against certain groups (RCMP, 2008). The term terrorism has no established definition in international law (Levy & Sidel, 2007), with many different aspects included in the construct (Schmid & Jongman, 1988; Weinberg, Pedahzur, & Hirsch-Hoefler, 2004). In Canada, terrorism is defined in section 83.01 of the Criminal Code and is summarized as:

... an act committed “in whole or in part for a political, religious or ideological purpose, objective or cause” with the intention of intimidating the public “...with regard to its security, including its economic security, or compelling a person, a government or a domestic or an international organization to do or to refrain from doing any act.” (Egbo, 2009, p. 11).

As this is one definition among many used, Krueger (2007) has suggested to stop using the term terrorism altogether and replace it with more behaviourally-specific terms, for example, politically motivated violence.

A research report by Public Safety Canada defines extremism as “any political theory that holds to uncompromising and rigid policies or ideology” (Pressman, 2009, p. 5). *Extremist* is often used interchangeably with the term *radical*, which has been defined by the Royal Canadian Mounted Police as “a person who wishes to effect fundamental political, economic, or social change, or change (*sic*) from the ground up” (RCMP, 2009, p. 1). They also emphasize, as others have, that being an extremist or radical is not necessarily problematic unless it involves using violence to express dissent or achieve the ideological goals.

The focus in the security literature is understandably on those whose radical ideology promotes the use of violence. Violent extremist groups are typically categorized by the focus of their ideology, including a focus on religion, politics, animal rights/environmental issues, or superiority of their race. To capture the development process of violent extremists, the term *violent radicalization* is used and has been defined as “the process or processes whereby individuals or groups come to approve of and ultimately participate in the use of violence for political aims” (Neumann, 2010, p. 12), and “a process of adopting an extremist belief system and the willingness to use, support, or facilitate violence and fear, as a method of effecting changes in society” (Precht, 2007, p.16). Thus an individual would undergo the process of violent radicalization to become a violent extremist.

Correctional Service Canada applies the term *radicalized offender* to refer to a federally incarcerated violent extremist, defining a radicalized offender as: “an ideologically motivated offender, who commits, aspires or conspires to commit, or promotes violent acts in order to achieve ideological objectives” (Correctional Service Canada, 2012f). Thus this paper will use violent extremist and radicalized offender interchangeably, depending on the context.

## **Characteristics of Violent Extremists**

Research surrounding the characteristics of violent extremists has met with the same challenges as the efforts to establish a universal definition of the construct. Examinations of the pathways leading to radicalization have been attempted through many disciplinary lenses (e.g., psychological, sociological, and political; Helmus, 2009) via varied methodologies (e.g., open source documents, interviews with family members, and interviews with violent extremists; Asal, Fair, & Shellman, 2008; Bakker, 2006; Barrett, 2011; King, Noor, & Taylor, 2011). While a small number of more recent studies used more advanced statistics, including network analysis and singular value decomposition, to examine radicalization and violent extremism (e.g., Helfstein, 2012; Skillicorn, Leuprecht, & Winn, 2012), the methodology of the majority of existing literature is considered poor (Mullins, 2009). Based on a review of the literature between 1995 and 1999, Silke (2001) concluded that 80% of research is based on data gathered from secondary sources, with just over 3% including inferential statistics (in contrast to 81% for forensic psychology and 32.5% for criminology literature). Similarly, a review of essentially all terrorism literature found only 3-4% of articles including some form of empirical analysis, leaving the authors to conclude that the literature on terrorism is largely "... thought pieces, theoretical discussions, or opinions." (Lum, Kennedy, & Sherley, 2006, p. 492).

**Demographic factors.** Demographic characteristics related to violent extremism have been the most widely reported due to the availability of sources used to obtain the information (e.g., open source material). Among the samples and case studies examined, violent extremists are typically male and are between the ages of 20-30 (Bakker, 2006; Porter & Kebbell, 2011; Sageman, 2004). Males are the focus in the literature, however, several papers have highlighted the role of women within different organizations (Berko, Erez, & Globokar, 2010; Bloom, Gill, & Horgan, 2012) and have compared them to males involved in terrorism (Jacques & Taylor, 2012).

The age of the extremist is important to consider as older age has been associated with successful suicide bombings, as well as to being assigned to bomb more important targets (Benmelech & Berrebi, 2007). It should be noted that most studies examine individuals who have progressed to the point of attempting or planning to engage in violence, thus it could be that individuals actually join an extremist group or begin the development of the ideology at a younger age. This coincides with research stating that people join a terrorist group in their late

teens/early twenties (Silke, 2008).

The role of socio-economic status (SES) and poverty have also received considerable attention, with the literature generally concluding that individuals involved in violent extremist activities are usually found within the middle class and not particularly deprived (Monahan, 2012). While Bakker's (2006) analysis provides some support for the association between lower class and violent extremism (with 54% belonging to the lower class), Sageman's (2004) analysis of the Salafi jihadist sample found that 27% of the sample were labelled as lower class and 55% labelled middleclass, contradicting the "myth" that violent extremists are from lower-class origins (Von Hippel, 2002). Similarly, of 21 Australians convicted of terrorism, only two were considered to have experienced financial hardship (Porter & Kebbell, 2011). There have also been comparisons made to the general population as Krueger (2008) concluded that 63 home-grown Islamic terrorists in the United States identified between 2002 and 2005 were no different in socio-economic status than a representative sample of over 1000 Muslims living in the United States.

Several studies have found that most individuals involved with violent extremism are fairly well educated (Bakker, 2006; Sageman, 2004). Compared to the average American Muslim, home-grown terrorists were found to have slightly more education (Krueger, 2008). Similarly, compared to Italian census data, the 2,333 individuals arrested for terrorism between 1970 and 2011 were also better educated, with 17% having a post secondary degree (compared to 4% of general population) and 45% having a high school degree (compared to 17% of general population; Orsini, 2012). Females involved in violent extremism are also generally better educated than the general population (Jacques & Taylor, 2012). It is believed that higher education exposes individuals to new perspectives, potentially making them more susceptible to subscribe to radical beliefs (Krueger, 2007). In a comparison between violent extremists and non-violent radicals, non-violent radicals typically had studied arts and humanities while the violent extremists had studied hard sciences including medicine and engineering (Bartlett, Birdwell, & King, 2010). The finding of engineers being over-represented in violent Islamist groups has also been found elsewhere (Gambetta & Hertog, 2007).

In a review of the literature on Al-Qa'ida inspired violent extremism, Munton and colleagues (2011) suggested that involvement in violent extremism may in part be due to frustration with economic opportunities, as several studies demonstrate a disproportionate



number of highly skilled and educated violent extremists being unemployed. It is unclear, however, whether these individuals were not employed because of already being involved in extremist activities, or perhaps that the time demands of being involved in violent extremism prevented individuals from also being employed.

Information on criminal history, a risk factor commonly relied upon for predicting criminal behaviour, has also been collected in studies on violent extremists. Several studies have found that roughly a quarter of their samples possess a criminal history (Bakker, 2006; Clutterbuck & Warnes, 2011; Porter & Kebbell, 2011). In contrast, another study found only 5 of 491 cases had been arrested for previous criminal activity, leaving the authors to conclude there was “little evidence of the anticipated connection between the two” (Jacques & Taylor, 2012, p. 7). Similarly, Silber and Bhatt conclude that their case studies of home-grown terrorists had “little, if any criminal history” (Silber & Bhatt, 2007, p. 23).

**Psychological factors.** One of the most common findings within the literature reviewing characteristics of violent extremists is the lack of evidence supporting mental illness or personality traits as a common explanation for involvement with terrorist activities (Monahan, 2012; Silke, 1998). For example, some have concluded that the characteristics of psychopathy, including low empathy, manipulateness, impulsivity, and lacking guilt, are not common in violent extremists (Pressman, 2009).

Research has, however, identified psychological characteristics which may be prevalent among violent extremists. For example, in a review of the literature and consultations with experts, Pressman (2009) identified several “attitude/mental perspective items” which appear to characterize violent extremists, such as: internalized martyrdom to die for cause, rejection of society and values/alienation, high level of anger/frustration/persecution, need for group bonding, identity problems, and low empathy for outsiders. In a review of psychological theories that may apply to the development of violent extremists, Victoroff (2005) identified a number of possible psychological characteristics including: temperament (e.g., novelty seeking, identity seeking, affectively atypical, sensitive to humiliation, vengeful, vulnerable to charismatic influence), cognitive capacity (e.g., executive function impairment, impulse control impairment), and cognitive style (e.g., intolerance of ambiguity, low vs. high complexity). Horgan (2008) suggests emotional vulnerability could also be a factor to consider. This vulnerability encompasses several feelings such as anger, alienation from culture and community, and

disenfranchisement.

**Beliefs and perceptions.**

**Religion.** Some debate exists around the role religion plays in violent radicalization and to what extent it acts as a driver for those involved in religious violent extremism. Some conclude that religion itself plays a much lesser role than believed (Aly & Striegher, 2012) and thus policy makers should move beyond “religious doctrine” to better understand the drivers of violent extremism (Silke, 2008). Others have emphasized the importance of considering religion (Precht, 2007; Silber & Bhatt, 2007), especially those with apocalyptic tones (Dawson, 2010). Similarities have been drawn between violent extremism and new religious movements (also referred to as cults or charismatic groups) that engage in mass violence (Dawson, 2010) which may provide some insight into how religion could lead to violent extremism.

**Grievances.** Grievances and perceived injustices are considered to be a common characteristic of violent extremists (Silke, 2008). The grievance can be due to a real or a perceived injustice and can be directly experienced by the individual or experienced by a group with which the violent extremist identifies or empathizes. Violent extremists are expected to have certain perceptions of procedural justice (Moghaddam, 2005), that the current system is not amenable to change and is corrupt, or that they will at least not be able to invoke change with their current conventional activity (Horgan, 2008). They are often morally engaged with a cause they are fighting for (Moghaddam, 2005) and are often mistrustful of the established order (Slootman & Tillie, 2006) and reject society and its values (Pressman, 2009). Often a driving force is a desire for change, whether it be religious, political, or environmental (Helmus, 2009). There is also a perceived possibility for them to be able to improve the current situation if they act in a violent, goal-directed manner (Moghaddam, 2005).

**Social network and peers.** Having an association with other violent extremists is considered a good indicator of involvement with violent extremist groups (Horgan, 2008; Monahan, 2012; Pressman, 2009; Sageman, 2004). Furthermore, having few anti-radical friends has also been found within violent extremist samples (Kebbell & Porter, 2011; McCauley & Moskalenko, 2011). Social alienation is also considered a contributing factor to involvement with violent extremism (Helmus, 2009). While not specifically studying violent extremists, Goli and Rezaei (2011) found that participants with more extreme beliefs were more likely than participants with few extreme beliefs to be close friends with immigrants. Family support in

participating in violent extremist activities has been shown to be associated with being affiliated with violent extremist groups (King, Noor, & Taylor, 2011). Interestingly, one study showed that the number of extremist associates changed over time, as the individuals (according to the authors) radicalized to violent extremism (Helfstein, 2012). The authors report that the number of extremist associates was lower at the beginning of the process and peaked as the individual was incorporated into the group. The number of associates then decreased as they continued through the radicalization process and prepared for their own violent activities (Helfstein, 2012).

**Behavioural indicators.** Other overt behaviours which have been found to be, or are theorized to be common among violent extremists include the possession of violent extremist literature (Kebbell & Porter, 2012; Pressman, 2009), providing financial support to violent extremist groups (Kebbell & Porter, 2012), operational capability for violent acts such as access to weapons and ability to use them (Kebbell & Porter, 2012), previous attempt at, or actual participation in, political or religious conflict (McCauley & Moskalenko, 2011), and fighting/military training (Pressman, 2009). There is evidence to also suggest that a change or intensification in beliefs occurs prior to engaging in extremist violence (see Munton et al., 2011). Within the correctional system, change in religion has been considered a concern by correctional officials, but it actually may be a positive experience for the offender given that it has been associated with perceived well being and reduced stress (for a discussion on Islam in prison, see Hamm, 2009).

### **Using the Characteristics to Make Sense of Radicalization and Violent Extremism**

While identifying individual, possibly relevant, characteristics is an important first step, simply knowing the characteristics provides little utility. On the surface, the information obtained may provide information that could be targeted by policy and programs, however, without understanding how and under which circumstances the characteristics contribute to radicalization, these policies and programs would likely be futile (Newman, 2006). Social science theory can help explain the mechanisms possibly at play in the radicalization process. Better yet, models based on these characteristics can help explain the role the contributing factors play in the radicalization process.

**Creating typologies and profiles.** While no profile has been found to date to accurately capture violent extremists as one entity (Horgan, 2008), a few academics have identified profiles or typologies within the heterogeneous violent extremist population through interviews and open

source documents (Barrett, 2011; Nesser, 2005). At an individual level, a few profiles have been presented to differentiate between types of violent extremists. Based on qualitative analysis of jihadist terrorists in Europe, Nesser (2005) identified four profiles: the entrepreneur, the impressionable whiz kid, the misfit, and the drifter. Speaking with violent extremists in Nigeria, Barrett (2011) identified six profiles, including the follower, the pragmatist, the criminal, the soldier, the basic needs, and the ideologue. Others have argued it is important to distinguish the role of the individual within the organization, such as being a suicide bomber (Gill & Young, 2012). Based on right wing extremists in Scandinavia, Bjørjo (2011) provides a typology based on dimensions which includes the ideological activist, the drifter and followers, and socially frustrated youth.

There has been an effort to move research efforts away from profiling violent extremists for a number of reasons (Horgan, 2008). First, it is pointed out that no profile could capture all types of violent extremists (Gill & Young, 2012). Further, profiled extremist organizations could easily change to no longer fit the assigned/designated profile (Gill & Young, 2012). Additionally, profiles do not provide information on the dynamics of radicalization. Despite these limitations, profiles and typologies can play a role in the understanding of violent radicalization. While caution should be used in applying these typologies and profiles to identify violent extremists, they could suggest that different radicalization processes occur and warrant further investigation.

**Assessments to tap into violent extremism.** There have also been attempts to incorporate the research-based characteristics into risk assessment tools built specifically to identify violent extremists. A number of people have recommended taking a risk assessment approach, similar to that used in the interpersonal violence field, to understand, assess, and manage the risk posed by violent extremists (Kebbell & Porter, 2012; Monahan, 2012; Roberts & Horgan, 2008). A research report by Public Safety Canada compared commonly used violence risk assessment tools to one created for violent extremists, and found that the characteristics of radicalized or extremist offenders are different from those of a “typical” violent offender (Pressman, 2009). Others have confirmed this finding, noting that the risk factors typically associated with criminal behaviour do not appear to be applicable to violent extremists, and recommending that criminal justice professionals working with radicalized offenders should use tools designed specifically for that type of violence (Monahan, 2012). Despite this, few tools

have been developed to help practitioners make sense and use of the possible contributing factors to identify violent extremists (Monahan, 2012).

More flexible than static profiles, these tools acknowledge that no violent extremist is exactly alike, but instead that there are some characteristics which may be indicative of violent extremist activity. For example, the Violent Extremism Risk Assessment (VERA), a structured professional judgement tool, was developed through a literature review and input from experienced professionals in the field (Pressman, 2009). The 31 item tool includes five domains: beliefs and attitudes, context and intent, history and capability, commitment and motivation, and protective items<sup>1</sup>.

The Home Office in the UK has developed an instrument as part of the *Prevent strategy* to assess for vulnerability to radicalization. The Extremism Risk Guide 22+ (Home Office, 2012) includes three dimensions: engagement, intent, and capability. The guidelines emphasize that having the characteristics does not necessarily indicate individuals are a violent extremist, but the needs should be addressed to reduce the risk. It should be noted that a literature search found no published validation study for either the VERA or the Extremism Risk Guide 22+, although as discussed by Monahan (2012), a prospective evaluation of risk assessments for violent extremism is difficult because the crime is rare.

**From a static to dynamic understanding.** While efforts to investigate individual risk factors continue, there has been a call to shift the focus to an examination of the dynamic process by which an individual joins and participates in terrorist activity. That is, instead of examining who is involved in violent extremism, the question of why and how they become involved should be the focus (Horgan, 2008). Understanding radicalization as a process may help to reconcile contradictions in characteristics found in the literature. For example, as mentioned previously, Helfstein (2012) found that the importance of having radical Islamist social networks changes as the individual becomes increasingly involved. Thus, depending on when in the radicalization process the profile or typology is created, social networks could or could not be considered important.

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<sup>1</sup> Other tools have been created that assess various aspects of violent extremists including the Belief Diversity Scale (Loza, 2007) to measure beliefs related to the Middle East, a tool to measure a militant extremist mind-set (Stankov, Saucier, & Knežević, 2010) and a tool to evaluate the level of Islamist radicalism in prison (Trujillo, Jordan, Gutierrez, & Gonzalez-Cabrera, 2009).

It is for this reason that we must attempt to understand radicalization as a dynamic process, which begins with susceptibility to violent extremism, and progresses to the point of engagement. Unfortunately there has been very little empirical longitudinal research to assess changes in characteristics, leaving researchers to theorize about possible models that could exist and how the radicalization process works. As the process of radicalization stretches slightly beyond the scope of the current project, this report includes only a brief overview of the various models.<sup>2</sup>

One common element among almost all models is the existence of an injustice or crisis that is occurring (e.g., Borum 2003; Helmus, 2009; Moghaddam, 2005; Silber & Bhatt, 2007). This can include economic, social/cultural, political, and personal issues (Wiktorowicz, 2004) which can cultivate a ‘cognitive opening’ to radical ideologies. This, as acknowledged by many models, requires the issue to be perceived as negative by the individual, but does not necessarily have to directly impact the individual. Individuals may attempt to rectify the issue if possible, but fail to do so (Moghaddam, 2005), all while attempting to attribute the cause of the issue to another group (Borum, 2003). Through failures to rectify the issue they are led to a more extreme ideology as they believe there are few options available (Moghaddam, 2005). They begin to develop friendships with others who share this extreme ideology (Silber & Bhatt, 2007) and group processes, such as groupthink (McCauley, 1989), start to occur to further radicalize their ideology (Moghaddam, 2005).

Borum (2011) and others (Veldhuis & Staun, 2009) caution against only using the linear models described, as the models that view radicalization as linear discrete stages, rather than a fluid pathway or process, and often do not incorporate various levels of influence (e.g., micro individual/social levels and macro societal levels). Less linear models have also been proposed which focus more on contributing factors and how they interact to lead to violent extremism. Taylor and Horgan (2006) provide a conceptual model with three critical components (setting events, personal factors, and social/political/organizational context) that contain a variety of factors that interact with each other and demonstrate possible pathways in and out of terrorist involvement. Similarly, Helmus (2009) has proposed a factor tree demonstrating how factors come together and lead to an individual’s willingness to engage in terrorism. It combines the

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<sup>2</sup> Borum (2011) provides an excellent overview of various theories and models and should be referred to for more information.

multiple avenues by which social groups can influence the radicalization process (e.g., recruitment from the organization, gradual association through kin or friendships) as well as proposing multiple pathways due to motivation from grievances (e.g., political, religious, environmental) and the perceived need to respond and perceived rewards from responding. It also allows the role of the individual's current context (e.g., social, economic, political) to be taken into account, which can influence the social and grievance components. It unfortunately does not explicitly demonstrate how the social groups can influence perceived grievances and vice versa.

### **Role of Prison in the Process of Radicalization**

There have been calls for more research to occur to understand radicalization within prisons in order to develop appropriate management strategies in anticipation of a possible increased threat of radicalization (Pluchinsky, 2008; Wilner & Crowley, 2011). While the threat of radicalization in the prison system has historically been low, there has been a slow increase in violent extremist incarcerations since 2005 (Wilner, 2010). Incarceration may incapacitate these individuals physically, but may also provide them an opportunity to plan and recruit for the future (Wilner, 2010). Among the many objectives assigned to correctional facilities, they are also trusted with the objective to prevent the spread of violent extremist beliefs (Veldhuis & Lindenberg, 2012).

Relative to the amount of literature on violent extremism and terrorism, there has not been much research within correctional systems. Theoretically, prisons are expected to enhance the vulnerability of individuals (Hannah, Clutterbuck, & Rubin, 2008), acting as “incubators” for radicalization (Silber & Bhatt, 2007). Wilner (2010) suggests three factors that can increase susceptibility to prison radicalization: alienation and prison gangs, religious and ideological conversions, and prison policy and inmate grievances. For example, the restrictions imposed on offenders, both socially and materially, can push and pull an individual to join prison gangs, including ones run by violent extremists. Violent extremists often act like gangs in prison; for example, convicted terrorists in Indonesia suggested they group together to pool resources and provide other inmates with contraband (Ungerer, 2011). Based on interviews with American correctional staff and two case studies, Hamm found that while recruitment was rare, radicalization of individuals was more frequent in higher security prisons due to the limited number of programs available, higher levels of prison crowding, and more gang issues found at

this level of security (Hamm, 2007).

There is also an expectation that violent extremists will capitalize on the frustration, marginalization, and discrimination sometimes experienced by the general offender population (Fighel, 2007). Interviews with correctional staff and offenders in the UK reflected the fear of radicalization to religious violent extremism, with the offenders suggesting that “charismatic Muslim key-players” would take advantage of the fear and need to find an identity experienced by offenders (Liebling & Straub, 2012). One report examined radicalization and de-radicalization in prison in 15 countries, and concluded, as the other studies had, that “radicalisation is driven by behaviours and conditions that are typical of the prison environment – especially religious seeking, defiance, and the need for protection...” (Neumann, 2010, p. 25).

Some researchers have sought to identify the characteristics common to conventional offenders and violent extremists as a means of informing correctional operations (e.g., if the programs currently available are suitable for radicalized offenders). Interviews with female Palestinian security violators were compared to interviews with those of conventional offences, finding the security violators had a more stable family history and they were motivated by beliefs in bringing honour to their country and family, while the conventional offenders were engaged in criminal behaviour to deal with difficult circumstances (Berko et al., 2010). Results from interviews with 35 Middle-Eastern terrorists showed that over 70% of them had no family members involved in the organization when they joined (Post, Sprinzak, & Denny, 2003). Similarly less than 30% of the sample suggested their family was a central influence in them joining. For this sample, peer group was much more influential in joining a terrorist organization. The majority also found their experience in prison brought them closer to other members and increased their commitment to the cause.

Some (Austin, 2009) have pointed out that it is unclear if radicalized offenders enter prison already radicalized or if they radicalize while in prison. Despite the furore surrounding radicalization in prison, there is actually little evidence available to the public that suggests this is occurring (Hannah, Clutterbuck, & Rubin, 2008). Much of the evidence only points to a handful of case studies of individuals who have radicalized in prison (see Austin, 2009). The lack of clarity on whether or not violent radicalization in prison is increasing in Canadian prisons should not preclude empirical investigations to better understand this population and the process of radicalization.



## **Rationale and Purpose for the Current Study**

The review of the literature outlines much information that is known about violent extremists, yet raises many questions. The majority of the research is focused on international populations and is based on qualitative data. Correctional Service Canada is in a position to add to the existing evidence surrounding violent extremists and contribute to correctional operations and policies while specifically focusing on a Canadian sample of individuals and using both qualitative and quantitative information. Recognizing the value such an examination would add to the empirical knowledge surrounding violent extremists in general and the radicalized offender population specifically, Public Safety (PS) Canada entered into a Letter of Agreement (LOA) with Correctional Service Canada to undertake the following:

1. Identify the location and nature of information regarding radicalized offenders held by CSC;
2. Identify methodologies to uncover patterns and indicators in the data holdings; and,
3. Attempt to apply certain methodologies in order to further the knowledge of radicalized offenders and those susceptible to radicalization.

In the context of the current study, the first area comprised preliminary investigations. The subsequent sections represent the primary thrust of this report and are presented in three separate studies, which focus in turn on a qualitative examination of the unique characteristics of offenders who are radicalized and who are susceptible to radicalization, from the perspective of operational staff; on a quantitative examination of differences between radicalized and non-radicalized offenders; and on a theory-driven attempt to identify constructs associated with, and potential estimators of, susceptibility to radicalization. Each of the three studies includes:

1. an identification and explanation of the methodology chosen;
2. the results of the applied methodology; and,
3. a discussion of the results in the contexts of the violent extremist literature as well as the Canadian correctional environment.

## **Preliminary Investigation: Examination of Data Holdings and Gaps**

As a primary step, it was essential to first identify and understand the types of information that CSC holds on its radicalized offenders and where and in what format it can be found. In so doing, it was also possible to identify gaps in the information or information collection processes. Four sources of information on violent extremist federal offenders were identified: the Offender Management System (OMS), Security Branch data holdings, site (institutional) level data holdings, and open-source information. Together, these four data sources represent all sources of data on radicalization available, and all four were reviewed in order to ensure as comprehensive an understanding of CSC's data holdings as possible. While in some cases, the data available from multiple sources overlapped, each source also provided unique information.

*Offender Management System (OMS).* Implemented in 1992, the OMS is computerized case file management system used by the Correctional Service of Canada, the Parole Board of Canada, and other criminal justice partners, to manage information on federal offenders (CSC, 2011). Data within the OMS can be accessed in two ways: as aggregate-level databases (summarizing many offenders), and individually for each offender (which allows for consultation of reports and other written documentation specific to each individual).

First, examinations focused on the aggregate-level databases for information pertaining to criminal group affiliation, criminal offence, and other areas of interest (offenders who's files included the words: "terrorism", "high profile offender", etc.) to identify a preliminary list of potentially radicalized offenders. A team of research staff reviewed a specified sub-sample of documents within OMS for each of these offenders, including criminal profiles, correctional plan updates, assessments for release decisions, and, in some cases, psychological activity reports and incident reports. After this comprehensive examination of individual-level OMS information by Research Branch staff and review by Strategic Intelligence Analysis and Assessment (SIAA) unit staff, the initial list was reduced by approximately one-third. Of the radicalized offenders identified in OMS, slightly more than half were still under CSC jurisdiction as of August 2012 while the remainder had reached the end of their sentence, been deported, or passed away.

The information available in the OMS for these offenders – as well as for those identified through other means – varied considerably based on a number of factors, including the date the

offenders' sentence commenced, the point they had reached in their sentence at the time the data were verified, the offence of which they were convicted, and the staff assigned to the file.

***Security branch data holdings.*** Security Branch data holdings were also reviewed. The Security Branch, National Headquarters (NHQ) is in receipt of unique information that may or may not be available through other sources via communications with institutional, community, and regional Security Intelligence Officers, other security and institutional staff, and external partners. Consultations with the SIAA unit of the Security Branch indicated that they are aware of individuals considered radicalized.

***Institution-level data holdings.*** The creation and sharing of security information at CSC is governed by several policy documents (i.e. CD 568-1, CD 568-2, and CD 568-3; CSC, 2012a, 2012b, and 2012c) which stipulate which forms and reports should be completed by staff in order to document inmate behaviour or incidents. Forms and the information contained in them could be entered in the OMS, in a Preventive Security File, and/or held in paper form at site level, depending on the information and the related reporting requirements. Information may also be communicated through a secure, protected network or a protected Outlook email system (SIAA analysts, personal communication, August 9, 2012).

In order to better understand how these policies, reports, and forms are operationally implemented at the site level, focus groups were held at select federal correctional institutions to provide more specific details on the recording and communication of information on violent extremists<sup>3</sup>. Staff members in all regions reported being aware of and/or using the relevant documents to report information regarding, or to facilitate communication around, radicalized offenders. Furthermore, staff members in all regions indicate that relevant information is also reported in an informal manner, via e-mail or verbal communications. While staff members mostly feel that the current policies and procedures for reporting behaviours associated with radicalization are clear and effective, there were some concerns expressed about the information reporting process and how it might lead to gaps in radicalized offender information. Opportunities for the exchange of radicalized offender information between CSC and other Public Safety agencies and partners were generally regarded as positive and fruitful.

Many staff members offered suggestions to improve the quality of data holdings across

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<sup>3</sup> See Study 1 for a comprehensive description of the institutional focus groups and a complete summary and discussion of the results.

all levels of CSC. Staff members noted that additional training, a more specialized set of policies with regards to radicalized offenders, more resources for security-level staff, and improvements to forms would both improve the data available as well as facilitate information sharing within CSC and between CSC and other agencies.

***Public domain information.*** In order to be certain that all radicalized offenders under CSC’s supervision (including those that were not convicted of terrorism offences) were captured in the review of data holdings, a review of open source or public domain information was also undertaken. Searches of Google and of Wikipedia undertaken using the “Terrorism in Canada”, “Domestic Terrorist”, “Political Activist,” and “Political Motivated Criminal” resulted in the identification of individuals who had committed extremist acts in Canada and Canadians involved in extremist acts domestically or abroad. Of those thereby identified, slightly less than a third were found to have been convicted with a federal sentence. In turn, of these, about half were offenders not previously identified in OMS or through the Security Branch data holdings described previously; that is, these were additional cases that had not already been identified using these two data sources.<sup>4</sup> Further examination found that all of these offenders possessed OMS records, and so the data holdings specific to these offenders paralleled that outlined in the OMS data holdings section. However the public domain information was useful in that it often provided additional context for interpreting the information found in official CSC records.

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<sup>4</sup> The majority were historical, sentence-complete cases with limited OMS data.

## **Study 1: Qualitative Estimation of Possibly Radicalized Offenders**

The purpose of an initial qualitative study of radicalized offenders was twofold. First, given the lack of research on the Canadian radicalized offender population and the relatively small size of a radicalized offender sample, it was important to examine, using qualitative methods, the unique characteristics of offenders who are radicalized as well as those who are susceptible to radicalization, from the institutional staff perspective. Second, the information gleaned from the qualitative approach could then be used to inform the quantitative estimation methodologies to follow, as well as to inform institutional policy and practice surrounding the recording and communication of radicalized offender information. As such, the following outlines the qualitative estimation methodology employed, details the results of the investigation, and discusses the implications of the results as they pertain to literature surrounding violent extremists, correctional operations, and impacts on quantitative methodologies.

### **Methods**

**Sample.** In considering the depth and availability of information in radicalized offenders' files, it was deemed more appropriate to conduct institutional-level focus groups in an effort to gain first-hand qualitative information on this particular population. Using the locations of the potentially radicalized offenders that were identified in the data holdings and gaps exercise, a list of 20 institutions of particular relevance for focus groups was generated. This list of institutions was then shared with project partners in the Security Branch, NHQ, with the goal of selecting five institutions (one in each CSC region; Pacific, Prairie, Ontario, Quebec, and Atlantic) in which to conduct focus groups.

Two focus groups were held at each of the five selected institutions: one for security staff members, including institutional and community Security Intelligence Officers (SIOs), Coordinators of Correctional Operations (CCOs), and Assistant Deputy Warden of Operations (ADWOs), and one for front-line staff members, including Parole Officers (POs), Visits and Correspondence (V&C) staff members, Admission and Discharge (A&D) officers, Correctional Officers (CX-II), and Correctional Programs Officers (CPOs). In addition, institutional SIOs from the 15 relevant sites which were not selected for on-site focus groups were invited to participate in the security staff focus group in their region. Finally, regional Security Intelligence Analysts (SIA's) were also invited to participate in the security staff focus group taking place in

their region. In total, participants in the 10 focus groups represented ten different federal institutions, all five of the Regional Headquarters (RHQs), two community (parole) offices, and one external partner agency<sup>5</sup>.

**Procedure.** Focus groups were held between October 1 and October 12, 2012. Project teams comprised of three individuals (two Research Branch staff members and one Security Branch staff member) travelled to each site to conduct the focus groups<sup>6</sup>. As the audio-recording of focus groups was not permitted for this project, it was necessary for two team members to take extensive notes of the proceedings while the third team member (a Research Branch staff member) facilitated the focus group discussions. While anticipated to run approximately one hour in duration, focus groups lasted anywhere from 45 minutes to two hours in duration.

Focus group participants were asked to comment on two main areas of interest regarding radicalized offenders, specifically the types of behaviours or indicators staff members observe, record and communicate about offenders that they suspect or know to be radicalized, and the way in which this information is recorded, managed, and communicated. These areas were addressed using 12 questions divided into three main categories: defining “radicalized offender”, identifying radicalized offenders, and susceptible offenders<sup>7</sup>. These specific areas of interest were selected to address the goals of the qualitative research methodology, and were formulated in collaboration with team members from the Security Branch to ensure operational relevance.

## **Results**

Due to the complexity of this topic, the majority of focus group questions resulted in extensive discussion and generated many responses. The reader is reminded that the purpose of qualitative focus group consultations is to identify as many responses or ideas as possible from the experienced participants. As such, even though the responses are often presented in a numerical or proportional manner, the relative importance or significance of a particular theme is not necessarily reflected in the number of times it is mentioned across the focus groups. A particular response may be especially pertinent to the population at the site at which it was mentioned, even though it would only be reflected as coming up once in the list of responses.

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<sup>5</sup> The focus group protocol was also separately conducted with a Chaplaincy representative. The responses from that interview were integrated into the responses from the front-line staff focus group conducted in the chaplain’s home region.

<sup>6</sup> An additional Security Branch staff member attended the focus groups in the Ontario region, bringing the total number of team members who attended those sessions to four.

<sup>7</sup> See Appendix A for the complete Focus Group Protocol.

However, as it would be impossible to discuss each unique response, the following results highlight some of the most common or interesting themes, and a complete list of responses for each question can be found in Appendix B<sup>8</sup>.

**Defining “Radicalized Offender”.** In order to contextualize the responses of the participants, it was important to first understand how they defined an individual as being “radicalized”, and how they came to this definition. As such, participants were asked to describe the key words or ideas that came to mind when faced with the term “radicalized offender”. While a wide range of key words were identified, those most commonly noted included “extreme/extremism”, “terrorist/terrorism”, and “religious/religion”. Participants also frequently noted that radicalized offenders were likely to be ideologically motivated, have a political or anti-government agenda, and have rigid, uncompromising belief systems. While some described radicalized offenders as being violent, others noted that the existence of violence was not always necessary.

The propensity to include the words “terrorism” and “religion” when listing key words to describe radicalized offenders may be linked to the sources of information on which these personal definitions are based. When asked to describe how they came to their understanding of radicalization, participants in all focus groups noted the media and the news as being a source of their information. Many also mentioned personal and work experience as being a source of information, with participants in half of the focus groups indicating that external training facilitated through CSC was among their sources of information regarding radicalized offenders. Others came to their definitions of radicalized offenders through meetings and briefings with partner agencies, or through personal research of the violent extremist literature, including journal articles, reports, and books.

Finally, participants were read the CSC definition of “radicalized offender”<sup>9</sup>, and were asked whether they agreed or disagreed with the definition. Responses to the definition were largely mixed, both within and among the focus groups. Most staff members agreed with the definition, noting that it was broad enough to allow for flexibility and interpretation and agreeing

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<sup>8</sup> For operational context and information, participants were also asked to speak about the policies and procedures in place for reporting behaviours suspected to be related to radicalization at the site, regional, and national levels, as well as being asked to comment on the information sharing opportunities with external Public Safety partners. Results for these questions can be found in Appendix B.

<sup>9</sup> CSC defines a radicalized offender as an “ideologically motivated offender, who commits, aspires or conspires to commit, or promotes violent acts in order to achieve ideological objectives”.

with the inclusion of violence and ideology in the terminology. Some disagreed with the definition, expressing that it was too flexible and broad, which increases the risk of mislabelling offenders that are not radicalized. Others disagreed with the use of the word “violent”, since this is difficult to define, and pointed out the discrepancy between the CSC definition and other definitions used by partner agencies. Overall, participants thought that the definition was suitable, but should also include clarification of certain terms (i.e., “ideology”) and include particular elements and key indicators of radicalization, such as the element of recruitment, the differences in motivation compared to a “typical” offender, and religious/political specifications.

**Identifying Radicalized Offenders.** Among the key areas of interest, for the qualitative component of this study on violent extremists in federal institutions, was the isolation of behaviours that could aid in the identification of an offender as being radicalized, both for operational purposes and to inform the quantitative estimation methodology. To this end, participants were asked to identify the inmate behaviours that they had witnessed (or that have been reported to them) that indicated to them that an offender may be radicalized.

Table 1 outlines the behaviours that were mentioned in at least half (five of ten) of the focus groups (see Appendix B for a full list of behaviours noted). The most frequently mentioned indicators included having certain books or materials in their cell, exhibiting a change in institutional associations, having ideological arguments with staff members or other inmates, and congregating in specific areas or participating in informal prayer sessions. Less often noted, but of interest, were behaviours indicative of attempts to recruit new members, increases in the filing of formal grievances, and changes in physical appearance, including changes in facial hair, changes in length of hair, and changes in manner of dress.



Table 1

*Most frequently noted behaviours indicative of radicalization.*

Unique Responses	Respondents	
	<i>n</i>	%
Certain books or material in cell/conducting research on beliefs	9	90
Change in institutional associations	9	90
Begin having ideological arguments with staff or other inmates	7	70
Congregating in specific areas/praying together in informal prayer sessions	7	70
Certain drawings/art/hobby craft	6	60
Certain tattoos	6	60
Changes in external communications (calls and letters)	6	60
Religious conversion/sudden interest in religion	6	60
Attitude toward other inmates or people	5	50
Begin verbalizing changes of ideology	5	50
Ranting and/or preaching behaviour	5	50

Note. *n* represents number of focus groups that noted the response. Total number of focus groups = 10.

Next, participants were asked if there were specific behaviours that they had been instructed to monitor for and flag as potentially problematic as it pertains to radicalized offenders. While the majority of participants noted that there had been no formal direction given specifically for the radicalized offender population, many were aware of the types of behaviours that they were expected to report. Staff specified that they had been advised to report certain art, hobby craft, paraphernalia, and certain books and materials in cells, specific tattoos, and specific behaviours such as verbalizing ideological thoughts and arguing over ideology.

**Susceptible Offenders.** Similar to the goals outlined in regards to identifying radicalized offenders, the qualitative examination of violent extremists included a component which sought to understand more about those offenders that may be susceptible to being radicalized in an institutional environment, both for operational purposes and to inform the quantitative estimation of susceptibility to follow. As such, focus group participants were asked to describe the types of offenders that are typically targeted for radicalization. Table 2 outlines the characteristics that were mentioned in at least half (five of ten) of the focus groups (see Appendix B for a full list of characteristics noted). The most frequently mentioned characteristics linked to susceptibility

included offenders who were looking to belong or for status, those who were weak and vulnerable, and those who were easily influenced.

Table 2

*Most frequently noted characteristics indicative of susceptibility to radicalization.*

Unique Responses	Respondents	
	<i>n</i>	%
Those looking to belong/looking for status	9	90
Weak vulnerable offenders	9	90
Those who are easily influenced	8	80
Loners	7	70
Marginalized/disenfranchised offenders	7	70
Those convicted/capable of violent offences	7	70
Younger offenders	7	70
First time in federal institution	5	50
Misfits	5	50
Those with disrupted/disorderly lives	5	50
Those with high levels of moral emotions (e.g. anger)	5	50
Those who are angry at “the system”/ “the man”	5	50

Note. *n* represents number of focus groups that noted the response. Total number of focus groups = 10.

Interestingly, the behaviours listed as indicative of an offender who could be susceptible to radicalization were often opposite to one another. For example, susceptible offenders were described as being lower functioning and as having a low education level, but also as having obtained a higher education level and possessing specific, sometimes professional skills. Some staff members felt that those susceptible to radicalization would have no connections or associations and no underlying belief system, while others felt susceptible offenders would include those with established connections and those with an existing belief system or political leaning.

Upon investigating this further, focus group participants often described two distinct subsets of susceptible offenders: vulnerable, unattached, and unskilled offenders who would be recruited to conduct the day to day “dirty work” of the group, and more connected, educated and

skilled susceptible offenders, who would be recruited for their specific skills and abilities. Skills and abilities which were highlighted as being particularly attractive included skills in bomb-making, forging and counterfeiting of documents, and computer programming. Offenders who formerly worked in a professional capacity were also viewed as skilled, and included former lawyers and police officers.

Aside from typology and personal characteristics, there are also external factors which could possibly influence an offender's susceptibility to radicalization. When staff members were asked to comment on the external or environmental factors that could make offenders susceptible to radicalization, several community and institutionally-based factors emerged. Several noted that susceptibility could be influenced by the occurrence of events that transpire locally (in the community or in the family) or internationally and vulnerabilities that result from these events, as well as by cultural norms and practices in certain geographical areas. Institutionally-based factors such as being recruited early in their sentence, perceived "perks" of conversion (such as improved meal options and increased opportunities for offender movement), and threats and pressure to radicalize by other offenders were noted as contributing factors by focus group participants.

Finally, focus group participants were asked to discuss the security-related impacts of radicalization and the recruitment of susceptible offenders in the institution, looking towards the impacts on the institution as well as on society in general. The vast majority of staff noted their concern that an increased radicalized offender population could potentially pose a threat to the safety of institutional staff and ultimately could result in an increase in threats to public safety. Staff specifically outlined population management concerns related to an increase in a radicalized offender population, and noted a potential need for more staff and resources to manage a potentially more violent and incompatible offender population. Staff speculated that an increased radicalized offender population could lead to an increase in segregations and transfers, an increase in criminogenic "skill" sharing among offenders, and an increase in conflict between offenders.

## **Discussion**

**Defining "Radicalized Offender".** The responses given by focus group participants to questions related to the definition of a radicalized offender highlight several areas for discussion. As illustrated in the breadth of key words listed as being associated with the term radicalized, the

focus group participants demonstrate their understanding that radicalization is a complex, multi-faceted issue. They note several of the characteristics listed in the literature as being universal among all violent extremists, such as ideological motivation and having a shared grievance (Moghaddam, 2005; Horgan, 2008), but also illustrate knowledge that radicalization is not limited to one type of group (Hannah, Clutterbuck, & Rubin, 2008), specifically referencing environmental, right-wing, and religious extremists. This awareness is also reflected in comments surrounding the CSC definition of radicalization, which many praised for its ability to capture many types of radicalized offender groups.

The wide variety of definitional elements being reported may be a reflection of the variety of sources of information being consulted in regards to violent extremism. Sources of information ranged from formal (training sessions provided by CSC or partner agencies) to more informal (internal meetings and staff discussions) to personal (personal research of literature, personal experience). Depending on the source of information, information quality could influence the key ideas expressed. For example, the focus in the mass media on religion as a driver for violent extremism could explain staff perceptions that religion (particularly Islam) is a key word that is indicative of radicalization, despite this idea being contested in the literature (Aly & Striegher, 2012). As staff at all focus groups either reported consuming news media or searching for literature regarding radicalized offenders, there appears to be an appetite for more information pertaining to this group of offenders among correctional staff. This presents an excellent opportunity for CSC to provide staff members with evidence-based information regarding violent extremism while debunking common myths and misconceptions surrounding the construct.

Focus group discussions surrounding the CSC definition of radicalization parallel similar definitional debates occurring in the violent extremism literature, highlighting the difficulty inherent in defining this paradigm. The frequent mention by focus group participants of the terms “extremist” and “terrorist” as being key ideas related to radicalization illustrate how these terms, along with “radical” are often used interchangeably (Bartlett, Birdwell, & King, 2010). While most staff members agreed with the CSC definition of radicalization, many recommended additions or modifications to the definition that would clarify the construct further from an operational perspective. For instance, staff commented on the need to operationally define the terms “ideology” and “violent”, and requested that easily identifiable indicators, such as

recruitment behaviours and motivational indicators, be added to the definition.

**Identifying Radicalized Offenders.** Staff members identified a wide range of behaviours that they had observed, reported, or been instructed to report in regards to radicalized offenders. While some of these items were physical indicators that are not normally discussed in the violent extremist literature (having certain tattoos, use of certain symbols), most behaviours were *changes* in behaviour. For instance, changes in associations, changes in attitudes as evidenced by verbalizing certain beliefs and having ideological arguments with staff and other offenders, changes in level of interest in religion, and changes in compliance were often noted by staff members.

Changes in behaviour that are unique to an institutional environment were also frequently noted. Staff members mentioned an increase in congregating behaviour for the purposes of informal prayer sessions, as well as changes in their external communications (via calls and letters) and changes in their visits or visitors. Changes in institutional roles, and an increase in the filing of formal grievances and requests for dietary changes were also frequently noted by focus group participants. Other responses indicated changes in physical appearance, including changes in facial hair, changes in length of hair, and changes in manner of dress. While specific to an institutional environment, the majority of these behaviours are clearly movements toward membership in a particular group, mainly, the Islam faith group. It should be noted that while similar trends in religious conversion have been observed in the United States, the reported impact of these conversions is mixed, with some reporting a link between conversion to Islam and improvements to offender rehabilitation (Barringer, 1998; Jenkins, 2003).

The focus on changes in behaviour by staff members is interesting, as it would imply that offenders are entering the correctional system “un-radicalized” and then becoming radicalized (and thus the resulting change in behaviour) or that radicalized offenders who are entering the institutions are waiting until later in their sentence to exhibit the behaviours that might be indicative of radicalization. Either way, the majority of the behaviours suggesting that these offenders would be shifting towards radicalization are supported in the literature as being characteristic of violent extremism. For instance, Precht (2007) and Silber and Bhatt (2007) have discussed the importance of considering changes in religion and the role of religion in violent extremism, and Moghaddam (2005) and Horgan (2008) have discussed the presence and vocalization of a shared grievance among violent extremists. The focus on associations (in

person with other inmates, through external communication, or via visits) has also been supported by the literature, which stresses the importance that the influence of social networks and peers can have on facilitating violent extremist thoughts and actions (Horgan, 2008; Monahan, 2012; Pressman, 2009; Sageman, 2004). However, some other characteristics which were noted, such as the presence of mental health issues, have limited (or conflicting) support in the literature (Monahan, 2012; Silke, 1998).

In discussing the direction given for identifying, recording, and reporting behaviours associated with radicalization, staff often mentioned a lack of guidance or information. Many noted that there was no formal direction given in terms of specific behaviours to flag as potentially problematic, that there were no specific forms or policies for radicalized offenders, that the radicalized offender policies and framework required improvement, and that additional training was required for all staff in order to better understand the problem of radicalization. However, when asked to identify behaviours indicative of radicalization and to explain the processes and procedures for recording and reporting information, focus group participants were able to conduct well-rounded and informed discussions around these topics, mentioning many evidence-based characteristics and noting relevant forms, processes, and policies for conveying information.

It is possible that staff members' comments regarding a lack of information (and need for additional information) is partly a function of the lack of concrete information regarding violent extremists in general, and radicalized offenders specifically. As noted in Mullins (2009) and Silke (2001), the majority of information on this construct is second hand or qualitative in nature, thus the quantity and quality of information that CSC is able to provide its staff is limited. Coupled with the sensitive nature of the offender file material, which is often only shared with institutional staff on a limited "need to know" basis, the topic of violent extremism is one on which it is difficult to fully brief staff. This being said, there is a definite desire among staff to be more fully informed on this area. Providing additional information, through formal training or informal information sharing practices, would surely boost staff confidence in identifying and reporting behaviours associated with radicalization while tempering staff apprehension surrounding mistakenly mislabelling an offender as radicalized.

**Susceptible Offenders.** The discussions surrounding susceptibility of offenders to radicalization was especially interesting, highlighting the range of characteristics that could make

an individual likely to join or be recruited for a radicalized group and illustrating that this is viewed by staff members as both a general process and also a process that may be amplified in a prison setting. Staff members mentioned many of the characteristics of violent extremists delineated in the literature in their description of someone who may become radicalized. They remarked that younger, first time offenders searching for a connection within the prison could be particularly vulnerable, a finding that has been supported in the literature (Benmelech & Berrebi, 2007; Silber & Batt, 2007; Silke, 2008; Jacques & Taylor, 2012). Staff members also felt that those who had obtained a higher education level and possessed a certain skill set would be more likely to be targeted for recruitment, which is consistent with several studies which have identified that violent extremists are generally better educated than the general population (Krueger, 2008; Orsini, 2012).

The contradictory nature of many of the characteristics mentioned illustrate the cognitive shift to a more “profile” or “process” oriented view of violent extremism. Seemingly contradictory characteristics such as being educated and uneducated, being a loner and having certain associations and connections, and being without a belief system and holding beliefs similar to those of an extremist organization illustrate the different roles and profiles inherent in many of the systems outlined in the review of the literature (Barrett, 2011; Helmus, 2009; Horgan, 2008; Nesser, 2005). The fact that staff members were able to identify that all of these characteristics could exist in individuals susceptible to being recruited to a radicalized organization once again speaks to the advanced understanding of CSC staff in regards to the complexities of how an individual comes to be a violent extremist.

Many of the most prominent characteristics noted by focus group participants were qualities which were exceptional in, or made more obvious by, the prison environment. They felt that those who were most likely to join a radicalized group were weak, vulnerable, and easily influenced marginalized loners who were looking to belong and for a sense of status. As Neumann (2010) points out, the prison environment, more than any other, produces individuals looking for belonging and protection. One might say then, that most individuals in the prison environment are susceptible, solely as a function of being in prison (Hannah, Clutterbuck, & Rubin, 2008). In fact, it was noted in several focus groups that any offender could be susceptible to radicalization. However, it was more prominently discussed that, in the prison environment, there seemed to be two distinct “streams” of recruitment to radicalized groups: a recruitment of

the weak and vulnerable offenders for the completion of the groups' "dirty work" in the prison, and a more targeted recruitment of educated, skilled individuals for "true", long-term membership.

Of particular interest was the recurring link (or lack of link) between radicalized offenders and gang members. In some areas of the focus group interviews, radicalized offenders were noted as being similar to offenders who were gang members, while in other parts of the discussion, a distinction between the two groups was often drawn. While Ungerer (2011) explains that violent extremists often act like gangs in prison, the focus group discussions regarding susceptibility to radicalization clarified this discrepancy somewhat. Many participants noted that the weak and vulnerable loners who enter the prison environment looking for a group to belong to could just as easily join a gang as a radicalized group. That is, they are susceptible in general, and depending on institutional dynamics or the presence of a powerful and charismatic leader, they could join either group. Operationally, this is an important distinction for CSC. As these offenders are often recruited by powerful groups for the completion of the "dirty work", they are the most likely to pose a threat to the safety and security of the daily operations of the institution. Focusing on identifying and diverting these susceptible offenders could act as a key population management tool for ensuring the safety of institutional inmates and staff members alike.

In fact, discussions with focus group participants about how an increased radicalized offender population could impact institutional safety centred mainly on population management issues. Participants mentioned the possible increased threats and/or attacks on institutional staff members, the possible increase in violent or dangerous offenders, and the possible increase in conflicts among offenders which could result from a larger radicalized offender population. They speculated that such increases could result in the increased use of segregation or offender transfers, and ultimately in the need for more intelligence staff and resources to manage the population issues and concerns. These concerns highlight the need for increased attention on the management of a radicalized population, including considerations for institutional placement options and examinations of the applicability of current correctional programming offerings and requirements for these offenders, in an effort to mitigate the risk they pose on the institution and the community.

In considering the results of the qualitative study, it is important to keep several



limitations in mind. While extreme care was taken to conduct focus group consultations in the most relevant and informative sites possible, it is important to remember that not all institutions were represented in the participant sample. In addition, the relative novelty of radicalized offender populations in Canadian federal institutions coupled with the sensitivity of the information surrounding these inmates could have resulted in less plentiful information than would have been gathered on another topic. Finally, the inability to audio record the sessions could be seen as a detriment to the quality of the qualitative data, as it was necessary to depend entirely on written records of the conversations for the purposes of result interpretation. For these reasons, future qualitative research should consider a different sample of institutions at which to conduct focus groups, and should utilize audio recording technology to ensure the highest possible data quality.

### **Next Steps**

The results of the qualitative examination of radicalized offenders provide direction for operational and research-related recommendations. Operationally, the results would suggest that while many CSC staff members are well informed about issues related to radicalization, there is a general thirst for more knowledge in this area. Therefore, the provision of additional training and information pertaining to radicalization could be beneficial. Further, as staff members are looking for more guidance by means of formalized definitions, indicators, and policies specific to radicalized offenders, the development of a formal radicalization framework could be of value. From a research perspective, the results of the qualitative study both replicated information that was found in the literature and revealed new ideas and characteristics to be examined. As such, the results of this study will be considered in the quantitative examinations of radicalized offenders and those susceptible to radicalization to follow, to identify if the characteristics and behaviours reported by staff members are supported in the available quantitative data.

As the depth of the research on radicalized offenders in Canada is extremely limited, there are many avenues for future research. Particularly interesting would be an intensive examination of radicalized offenders' social networks, both within and outside the prisons, in order to understand how the "work" of radicalized offenders continues despite their incarceration. However the most pertinent, from an operational perspective, would be an examination of effective population management strategies for these offenders, particularly the

applicability of existing correctional programming and interventions to radicalized offenders, and research examining effective disengagement and de-radicalization strategies.

## Study 2: Quantitative Estimation of Possibly Radicalized Offenders

The preceding study is amongst the first to be conducted with a focus on correctional staff members' perceptions of the factors that characterize radicalized offenders (c.f., Liebling & Straub, 2012). Similarly, very little quantitative research has been conducted regarding differences between radicalized offenders and their non-radicalized counterparts (see Mullins, 2009). In recognition of this fact, an exploratory approach was undertaken for the quantitative examination of radicalized offenders. The approach was two-pronged and involved (1) an examination of whether the indicators of radicalization previously reported in scholarly and government literature or identified in focus groups were present in the current sample of radicalized offenders, and (2) an exploratory examination of any other possible indicators which might differentiate the current sample of radicalized offenders from other offenders.

It is important to remember that, given the limited amount of literature specific to radicalized offenders, the possible indicators of radicalization which were examined in the first component of this research were largely derived from literature on radicalized individuals in the community and on differences between these persons and other community members. However, this study involved the comparison of radicalized offenders to other offenders rather than community members, and results must be interpreted accordingly.

### Methods

**Sample.** The sample of interest was defined as offenders identified through OMS, the SIAA division of the Security Branch, NHQ, or public domain data reviews as being radicalized, as described in the *Preliminary Investigations* section of this report.<sup>10</sup> These offenders were compared to the full population of Canadian federally-sentenced inmates who were in custody at one of CSC's institutions as of November 13, 2012.<sup>11 12</sup>

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<sup>10</sup> For security reasons, the exact number of offenders identified through this process is omitted from this report, however it is possible to report that the number is less than 100.

<sup>11</sup> A second approach, comparing radicalized offenders to a matched comparison group, was also considered but ultimately rejected. Because so little empirical research exists regarding the differences between radicalized offenders and non-radicalized offenders, and most of it was not conducted in the Canadian correctional context, the factors to use in matching were not immediately clear. Using inappropriate matching variables or failing to include relevant factors when matching can, at the least, fail to eliminate selection bias – at worst, it can produce a comparison group more dissimilar to the study group than would be the case without matching (Shadish, Cook, & Campbell, 2002). For these reasons, the relatively simple approach of comparing a sample to the full population was the one pursued.

<sup>12</sup> Strictly speaking, in comparing a sample to a population, the sample should be fully contained within the

**Procedure.** Two sets of comparisons were conducted. First, an attempt was made to compare radicalized offenders to the full population of incarcerated offenders on variables previously identified as important in the literature on radicalization and cited as important by focus group participants within the context of the qualitative data collection. Variables thereby identified were matched, where possible, to indicators within the OMS, CSC's computerized offender information management database (see Appendix C). The purpose of these analyses was to examine whether the patterns of differences between radicalized offenders and their non-radicalized counterparts hypothesized in the literature and by focus group respondents were actually present in this sample. Second, radicalized offenders were compared to the full population of offenders on a variety of additional variables. These analyses were exploratory in nature and no hypotheses were formulated. Variables were selected based simply on their availability within OMS and their face validity.

**Analyses.** Radicalized offenders were compared to the full population of offenders using z-tests (for continuous data) and z-tests for population proportions (for categorical data). These tests allow for a determination of whether the value (either an average or a proportion) found for the sample of radicalized offenders was significantly different than that of the full population. Where no significant difference existed, this means that any apparent difference was likely attributable to chance rather than representing a true difference.

It is important to acknowledge that typically, when many statistical tests are conducted, a correction is made to the significance level used in analyses (e.g., Howell, 1997). This correction accounts for the fact that a certain percentage of statistical tests are expected to produce a significant result due to chance rather than to a true difference. Such a correction was not employed in the present analyses given the exploratory nature of analyses. It must be recalled, however, in interpreting results, that it is quite likely that a small number of tests reported as demonstrating statistically significant differences between radicalized offenders and the full population of inmates are merely statistical artifacts. However, if results present a consistent pattern, this strengthens the likelihood that these are true results rather than artifacts.

**Data.** As mentioned, the analyzed data were obtained from the OMS, CSC's

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population. Because some radicalized offenders in the sample were supervised in the community or had reached warrant expiry by the time of analyses, they no longer comprised part of the population of offenders under CSC's jurisdiction and should not actually have been retained in the comparison sample. However, given the limited number of radicalized offenders available for analysis, it was decided to retain these offenders nonetheless.

computerized offender information management database. Data were drawn from these areas: demographic information (e.g., gender, race), risk and need data, results of assessment scales (e.g., Dynamic Factor Identification and Analysis [DFIA] results), active alerts and flags on file (e.g., offender considered emotionally unstable or violent), visitation history, segregation history, grievances, involvement in incidents, and receipt of institutional charges.

Much of the data was drawn from the Offender Intake Assessment, a broad assessment completed for each offender upon admission to a federal penitentiary (CSC, 2012d, 2012e). The Offender Intake Assessment includes criminal history risk, criminogenic need, motivation, and reintegration potential, all of which are assessed as low, moderate, or high. Criminal history risk is based on criminal history, sex offence history, and offence severity. Criminogenic need, which is measured through the DFIA, is an overall assessment of need in seven specific areas – employment, marital / family, associates / social interactions, substance abuse, community functioning, personal / emotional orientation, and attitudes. Motivation reflects staff members' professional judgment of the extent to which the offender is motivated to address identified need areas and to engage in his or her correctional plan. Finally, reintegration potential is computed automatically by the OMS based on the criminal history risk rating, the criminogenic need rating (for women and Aboriginal offenders only), scores on a security classification measure (the Custody Rating Scale), and scores on a measure of risk of recidivism (the Statistical Information on Recidivism – Revised 1; for male non-Aboriginal offenders only). Though all four of these measures are updated throughout the sentence, the first assessment on file was used in these analyses.

In addition to the assessments in each of the seven domains (described above), the DFIA includes individual items or indicators that are scored as present or absent. Given modifications to the measure in September 2009 (which resulted in the replacement of the DFIA with a new measure, the Dynamic Factor Identification and Analysis – Revised [DFIA-R]), indicator data obtained prior to this point were analyzed separately from that obtained after September 2009.

A number of additional variables reflected offenders' history within the institution (e.g., visitation, segregation, grievances, incidents, charges). Given that the length of offenders' periods of incarceration can vary widely, for each of these, data corresponding to the period from November 1, 2011, to November 1, 2012 were retained. (For those few radicalized offenders who were no longer in custody, data were retained for the last year prior to release).

For each institutional history variable, any offender for whom a full year of data was not available was omitted from analyses. Similarly, for some offenders, various other data points were missing; where this was the case, the offenders were omitted from corresponding analyses. By far, this occurred most often as a result of the transition from the pre-2009 DFIA to the DFIA-R. Offenders had data from one measure but not both; as such, all offenders had missing data for one set of indicators.

**A Note on Interpretation.** As mentioned, in September 2009, the DFIA and its indicators was updated and replaced with the DFIA-R. Therefore, data from prior to 2009 were analyzed separately from those after 2009. In some cases, however, the patterns of findings relating to similar – or even identical – indicators from the two instruments differed. The reasons for this are unknown. It is possible that there were changes over time in the way the measures were completed, but it is also possible that the differences are due to dissimilarities in the offenders admitted at the times when each version was in effect. For instance, Leman-Langlois and Brodeur (2005) have argued that the objectives and justifications provided for terrorist incidents in Canada have shifted considerably over time, and primarily within the last decade. In particular, these authors argue that there exists a “new terrorism” that has emerged in Canada to replace “conventional terrorism” and which differs in many respects (e.g., the role and extent of violence and of information communication). It may therefore be that differences in the types of radicalized offenders to whom the two versions of the DFIA were applied contribute to different patterns for similarly worded indicators (i.e., the sample to whom the DFIA was administered includes predominantly “conventional” radicalized offenders while the post-2009 DFIA-R group includes predominantly “new” radicalized offenders).

The available data do not allow the testing of this possibility. Regardless, the differences in patterns from the two instruments and time periods underscore the challenges in reaching conclusions based on these analyses. Though the limited number of radicalized offenders available for analysis prevents any alternative, analyzing these offenders as a single group likely masks heterogeneity within the sample. This issue must be considered in interpretations and will be revisited in this section’s discussion.

## **Results**

**Hypothesized differences.** A first series of examinations focused on examining indicators of radicalization identified in the literature or by focus group respondents in Study 1.

Appendix C provides a full summary of the results of comparisons of radicalized offenders to the full population of incarcerated offenders on each of the hypothesized indicators for which an operationalization using OMS data was possible. The subsequent section summarizes these results thematically.

***Socio-demographic and childhood history indicators.*** While some have found that radicalized individuals are more likely than non-radicalized individuals to be male (e.g., Bakker, 2006; Clutterbuck & Warnes, 2011), similar proportions of radicalized offenders and non-radicalized offenders were male. In other words, the over-representation of the male gender in general offender populations (Public Safety, 2011b) appears amongst radicalized offenders as well.

Compared to the full population of inmates, radicalized offenders were less likely to be Canadian citizens (86% vs. 95%), more likely to be from a visible minority (i.e., other than White, Black, or Aboriginal; 26% vs. 8%) and less likely to be Aboriginal (4% vs. 23%), and more likely to have a language other than French or English as their home language (26% vs. 7%). Radicalized offenders did not differ from other inmates in terms of their marital status or in terms of whether they had parenting responsibilities, though both offender groups were slightly less likely to be married or living common-law at admission than expected based on figures for the overall Canadian population (43% and 40% for radicalized offenders and all inmates respectively, as compared to 48% in the Canadian population; Statistics Canada, 2012). Radicalized offenders' were significantly younger at sentencing than the full population of inmates (*Median* = 27 years vs. *Median* = 31 years; *M* = 31 years [*SD* = 11.4] vs. *M* = 34 years [*SD* = 11.4]). They also were less likely to have previously served a federal sentence (18% vs. 35%). Although these two differences may be related, it is unlikely that the age difference would be sufficient to explain the difference in serious criminal history.

Analyses based on DFIA and DFIA-R indicators resulted in somewhat unclear findings. Based on the DFIA indicators (i.e., those in use prior to September 2009), there were no differences in the childhood experiences of radicalized offenders and of the full population of offenders in terms of whether they witnessed spousal abuse as children or lacked ties to or had negative relations with family members. The analyses based on post-2009 DFIA-R indicators, however, suggested otherwise: radicalized offenders were less likely to have witnessed family violence during childhood (8% vs. 35%), to have been abused during childhood (8% vs. 32%), or

to have negative relations with a parental figure during childhood (15% vs. 47%). This suggests that the radicalized offenders incarcerated prior to 2009 and after 2009 differ.

Differences also emerged with respect to employment and education. While the DFIA data indicated that radicalized offenders were similar to other offenders on these indicators, analyses using DFIA-R indicators revealed certain differences. According to these latter analyses, radicalized offenders were more likely to be employed at the time of arrest (69% vs. 26%). Analyses involving indicators from both time points were consistent in demonstrating that radicalized offenders and the full population of incarcerated offenders were equally likely to have marketable job skills and to have used social assistance. While only the DFIA-R data indicated that radicalized offenders were more likely to have their high school diploma or equivalent (58% vs. 26%), data from both time points demonstrated that radicalized offenders were more likely to have completed grade 10 (DFIA: 72% vs. 53% ; DFIA-R: 77% vs. 45%). Overall, then, it appears that, on average, radicalized offenders are at least somewhat more educated than most offenders. They may also be less likely to be unemployed at arrest.

*Associates.* The next set of analyses related to associates. In many ways – namely, family members’ involvement in crime and prosocial support from friends, family, and intimate partners – radicalized offenders did not differ from other offenders. According to analyses based on the DFIA indicators (but not the DFIA-R indicators), radicalized offenders were more likely to be assessed as having many criminal acquaintances (83% vs. 66%), though they were equally likely to have mostly criminal friends.

Interestingly, radicalized offenders were more likely than other inmates to be assessed as being affiliated with a gang or as being a gang member. However, it seems likely that this assessment reflected affiliation with terrorist organizations rather than membership in the groups commonly referred to by that term, such as street gangs. This interpretation would be supported by the fact that radicalized offenders were more likely to be identified as affiliated with a terrorist group (20% vs. 0%). The percentage identified as such, however, was lower than expected. While many of the offenders identified as radicalized were not convicted of terrorism-related offences (89%), it was expected that the percentage identified as affiliated with terrorist groups would be much higher than the percentage convicted of terrorist offences given the relatively new nature of this legislation. This expectation was not borne out.

Finally, in contrast to expectations (Helmus, 2009; Pressman, 2009), radicalized



offenders were found to be less socially isolated than other offenders (8% vs. 27%). This finding is in-line with that of Goli and Rezael (2011), who also failed to find radicalized offenders to be more isolated; they found no difference in rates of feeling that one did not fit in between radicalized and non-radicalized youth in Denmark. According to analyses based on DFIA-R indicators, radicalized offenders were also less likely to have limited community attachment (21% vs. 50%). Visitation data in the most recent year revealed that radicalized offenders were as likely to receive visits as their non-radicalized counterparts, though more likely to receive visits from clergy (1% vs. 0%). In sum, then, radicalized offenders differed from non-radicalized offenders primarily in terms of their acquaintances, likely due in at least some cases to affiliation with criminal organizations. In keeping with this, they were also less likely to be isolated from their communities.

***Beliefs and attitudes.*** In terms of religious beliefs, radicalized offenders were more likely than the population of inmates to be Muslim (35% vs. 6%) and less likely to be Christian (28% vs. 57%). Radicalized offenders were more likely to submit formal grievances relating to religious or spiritual activities within the last year (2% vs. 0%) and to be assessed as being intolerant of other religions (19% vs. 1%) and having problematic religion (14% vs. 2%; these latter two items existed in the original DFIA only and no definitions of their meaning were available). Radicalized offenders were also more likely to be affiliated with a White supremacist or extremist racial organization (4% vs. 0%) and to be assessed as being ethnically intolerant (16% vs. 5%). No differences emerged between radicalized offenders and other offenders' assessed tolerance of persons with a disability and perception of gender roles.

Again, analyses based on DFIA and DFIA-R indicators revealed somewhat different findings with respect to attitudes toward the criminal justice system. While analyses using the DFIA indicators suggested that greater proportions of radicalized offenders had negative attitudes toward the law (90% vs. 64%), the police (66% vs. 49%), the courts (68% vs. 48%) and corrections (57% vs. 36%), no such differences emerged from analyses using DFIA-R indicators. The opposite pattern emerged with respect to attitudes towards violence. While the pre-2009 DFIA indicators did not differ for radicalized offenders and the full population of inmates, post-2009, greater proportions of radicalized offenders were assessed as having attitudes supportive of instrumental or goal-oriented violence (79% vs. 50%).

***Behavioural indicators.*** Brandon (2009), Neumann (2010), Trujillo and Jordan (2009),

and Wilner (2010) have argued that a need for personal security while in custody, among other conditions, can push an offender towards or intensify radicalization in prison. Histories of protective custody and of protective custody requests were examined as a means of assessing this claim. In this sample, radicalized offenders did not differ from other inmates in terms of protective custody. However, it may very well be that radicalized offenders and other inmates differ in the nature of their need for personal security and protective custody, rather than in its presence.

When behaviours within the last year were examined, similar proportions of radicalized offenders and of other inmates were involved in assaultive and threatening incidents and were found guilty of serious charges. However, fewer radicalized offenders were found guilty of minor charges (21% vs. 39%). Similarly, fewer radicalized offenders were involved in incidents related to contraband (6% vs. 17%) and to possession of unauthorized items (6% vs. 16%).

Finally, comparisons using DFIA assessments were again inconsistent. While analyses using original DFIA data revealed that radicalized offenders were less likely to be assessed as incapable of understanding others' feelings (30% vs. 51%), DFIA-R empathy skill assessments were similar for the two groups. Conversely, the earlier data suggested that radicalized offenders and other inmates were similar in terms of their aggressiveness, hostility, and whether their relations were predatory, but in analyses of the DFIA-R data, radicalized offenders were less likely to be assessed as frequently behaving in an aggressive manner (14% vs. 42%).

*Psychological indicators.* A number of indicators which can be characterized as representing psychological constructs were present in the two versions of the DFIA. In all the comparisons undertaken to assess differences identified in the literature or focus groups in this domain, in contrast to expectations based on the literature, radicalized offenders were either similar to other inmates or were less likely to exhibit problematic behaviour. For instance, fewer radicalized offenders were assessed as impulsive (DFIA: 62% vs. 79%; DFIA-R: 31% vs. 75%), as coping poorly with stress (DFIA: 37% vs. 76%; DFIA-R: 29% vs. 64%), as having poor conflict resolution skills (indicator present only in DFIA; 71% vs. 83%), or as being often victimized in social relations<sup>13</sup> (indicator present only in DFIA; 0% vs. 14%). The two groups of offenders did not differ in terms of their frustration tolerance, their assertiveness, their

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<sup>13</sup> This indicator is included in this section rather than in associates given it is a proxy measure of the psychological measure of alienation.

manipulativeness, their thrill-seeking behaviours, or the extent to which they can be influenced by others.

Prior to the change in 2009, the DFIA included indicators relating to whether an offender had a mental health diagnosis and was prescribed psychotropic medication at admission. These variables were of particular interest given that both Victoroff (2005) and focus group participants theorized that mental health concerns – and particularly depression and anxiety – may be more common in radicalized individuals and offenders. In contrast to this hypothesis, no differences emerged in the rates of mental health diagnosis; indeed, radicalized offenders were significantly less likely than the full population of incarcerated offenders to be prescribed psychotropic medication (11% vs. 24%).

**Other.** Overall, radicalized offenders were as likely as the full population of inmates to have submitted a formal grievance in the last year. When grievances were broken down by subject, radicalized offenders were found to be more likely to submit grievances related to religious or spiritual programs (2% vs. 0%) and to food and/or diet (6% vs. 2%) but equally likely to submit grievances related to social and cultural activities and to discrimination.

Other comparisons revealed that greater proportions of radicalized offenders were identified as having weapons or explosives capabilities (14% vs. 0%), smaller proportions as having a tattoo (27% vs. 59%), and equal proportions as having used an alias.

**Exploratory examinations.** In addition to the variables analyzed as part of the examinations relating to differences previously identified in the literature or by focus groups, over 400 further variables were also examined to identify differences between radicalized offenders and the full population of incarcerated offenders. Highlights of these analyses are presented thematically in the following paragraphs.

**Criminal record, offence, and sentence characteristics.** The first series of analyses was related to offenders' criminal history, offence, and sentence. As can be seen in Table 3, compared to the full population of incarcerated offenders, fewer radicalized offenders had previously had contact with the criminal justice system, and of those who had previously received a sanction of community-based supervision, fewer radicalized offenders failed.

Table 3

*Criminal Record Variables: Comparisons between Radicalized Offenders and the Full Population of Inmates*

Indicator	Percentage		z
	Radicalized offenders	All inmates	
First federal sentence	82.1	65.2	3.27***
Previous offences in adult court	64.2	80.8	-3.07***
Previous failure during community-based supervision	43.4	59.4	-2.37*
Less than 6 months since last incarceration	15.1	22.8	-1.34
No crime-free period of one year or more	17.0	18.6	-0.30

*Note.* All indicators except “first federal sentence” are from the Offender Intake Assessment and are self-reported. \* $p < .05$ . \*\*\* $p < .001$ .

Overall, radicalized offenders were more likely than the full population of offenders to be convicted of terrorism-related offences (as expected), homicide offences, and “other” violent offences (a category which includes, for example, explosives-related offences). They were less likely to be convicted of sexual offences (see Table 4). Statistically equivalent proportions of radicalized offenders and of the full population of inmates received determinate sentences (i.e., sentences of fixed length). The average sentence length for determinately-sentenced radicalized offenders, however, was considerably longer than was that of the full population of offenders ( $M = 9.5$  years [ $SD = 7.7$ ] vs.  $M = 5.4$  years [ $SD = 4.8$ ]).

Table 4

*Offence and Sentence Variables: Comparisons between Radicalized Offenders and the Full Population of Inmates*

Indicator	Percentage		z
	Radicalized offenders	All inmates	
Indeterminate sentence	29.8	23.8	1.29
Violent offence	70.5	71.3	-0.16
Non-violent offence	29.5	28.7	0.16
Offence type			
Terrorism	10.7	0.1	30.77***
Provide property/ service for terrorism offence	1.2	0.0	10.82***
Homicide	37.2	25.6	2.35*
Sexual offence	1.3	13.6	-3.17**
Robbery	11.5	15.4	-0.95
Assault	5.1	10.0	-1.44
Other violent offence	15.4	6.6	3.13**
Property offence	2.6	8.9	-1.95
Drug offence	7.7	12.9	-1.37

*Note.* Offence categories are not mutually exclusive.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

***Risk and need.*** As can be seen in Table 5, similar proportions of radicalized offenders and of the full population of incarcerated offenders were assessed at intake at each level of criminal history risk. They also were not assessed differently in terms of their motivation. Fewer radicalized offenders, however, were assessed as presenting high levels of criminogenic need (and more as presenting moderate levels of criminogenic need). Similarly, relative to the full population of inmates, more radicalized offenders were assessed as having a high potential of community reintegration (and fewer were assessed as having a moderate potential).

Table 5

*Risk-related Variables (At Admission): Comparisons between Radicalized Offenders and the Full Population of Inmates*

Indicator	Percentage		z
	Radicalized offenders	All inmates	
<b>Criminal history risk</b>			
Low	3.3	5.5	-0.98
Moderate	26.7	28.3	-0.17
High	70.0	66.2	0.65
<b>Criminogenic need</b>			
Low	5.1	2.3	0.90
Moderate	40.7	23.4	3.29**
High	54.2	73.9	-3.50***
<b>Reintegration potential</b>			
Low	43.3	44.3	-0.16
Moderate	26.7	41.6	-2.35*
High	30.0	14.1	3.57***
<b>Motivation</b>			
Low	21.7	18.6	0.59
Moderate	50.0	62.3	-1.92
High	28.3	19.2	1.78

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

**Additional DFIA indicators.** Both the DFIA and the DFIA-R include more indicators than it is practical to report here (197 and 100 respectively). That said, all of the indicators were included in comparisons, and the highlights thereof are presented in Table 6. The vast majority of the indicators not reported here or in the preceding section as part of the examination of indicators reflecting literature or focus group responses were not found to differ significantly for radicalized offenders and the full population of offenders. As can be seen, however, differences emerged regarding offenders' relationships, thinking, and substance use. It appeared that

radicalized offenders were less likely to have problems with their intimate relations, exhibited more narrow and rigid thinking (though only post-2009), and exhibited less problematic patterns of both alcohol and drug use, especially as relates to offending.

Table 6

*Selected DFIA Indicators: Comparisons between Radicalized Offenders and the Full Population of Inmates*

Indicator	Percentage		z
	Radicalized offenders	All inmates	
	DFIA		
Communication problems affect the relationship (s)	27.8	46.4	-2.24*
Unable to generate choices	48.7	67.8	-2.49*
Narrow and rigid thinking	64.9	58.9	0.74
Drinks on a regular basis	37.8	41.5	-0.46
Has a history of drinking binges	25.0	44.0	-2.30*
Abuses alcohol	43.2	56.7	-1.66
Drinking interferes with marital / family relations	21.6	34.3	-1.63
Drinking interferes with social relations	16.2	30.2	-1.85
Drinking has resulted in law violations	25.0	44.6	-2.37*
Uses drugs on a regular basis	41.7	52.6	-1.31
Has gone on drug-taking sprees	21.6	45.7	-2.94**
Has combined the use of alcohol and drugs	27.0	45.5	-2.26*
Has combined the use of different drugs	24.3	44.9	-2.52*
Abuses drugs (solvents, prescription drugs, etc.)	54.1	66.2	-1.56
Drug use interferes with marital/family relations	17.7	40.5	-2.71**
Drug use interferes with social relations	8.8	36.3	-3.33***
Drug use has resulted in law violations	20.0	49.9	-3.54***
	DFIA-R		
Intimate relationship (s) have been problematic	8.3	55.5	-3.29**
Displays narrow and rigid thinking	85.7	50.3	2.65**
Frequently engages in binge drinking	7.1	38.2	-2.39*
Alcohol use interferes with interpersonal relationships	7.1	38.6	-2.42*

...continues on next page



Alcohol use interferes with physical or emotional well-being	0.0	36.9	-2.76**
Excessive alcohol use is part of the offender's lifestyle	7.1	39.1	-2.45*
Has gone on drug-taking bouts or binges	23.1	48.6	-1.84
Has combined the use of alcohol and drugs	23.1	55.6	-2.36*
Has combined the use of different drugs	30.8	49.3	-1.33
Drug use interferes with interpersonal relationships	28.6	48.2	-1.47
Drug use interferes with physical or emotional well-being	15.4	48.0	-2.35*
Regular drug use is part of the offender's lifestyle	28.6	56.2	-2.08*
Alcohol or drug use has resulted in law violations	42.9	71.2	-2.34*
Becomes violent when drinking or using drugs	7.7	48.6	-2.95**
Alcohol and/or drug use is part of the offence cycle	21.4	64.3	-3.35***

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

***Institutional Indicators.*** A number of indicators relating to the offenders' behaviour and experiences within the institution in the last year were also examined. As can be seen in Table 7, radicalized offenders were less likely to be placed in administrative segregation involuntarily and were equally likely to be the victim of an assaultive incident by another offender. Their rate of submission of formal grievances was statistically equivalent to the full population of offenders overall, but differences emerged when specific types of grievances were examined. Specifically, they were more likely to submit grievances relating to case management, transfers, and "other" subjects, which includes, for example, the grievance process itself and official languages.

Table 7

*Institutional Indicators (Within the Last Year): Comparisons between Radicalized Offenders and the Full Population of Inmates*

Indicator	Percentage		z
	Radicalized offenders	All inmates	
Segregation admissions			
Voluntary admin. segregation	2.6	4.9	-0.94
Involuntary admin. segregation	12.8	22.3	-2.02*
Victim of assault incident	5.0	5.1	-0.04
Grievances	29.8	21.6	1.81
Discrimination	0.0	0.0	0.00
Case management	4.8	1.4	2.59**
Health	3.6	1.6	1.46
Security	8.3	4.5	1.72
Interaction	8.3	4.5	1.72
Conditions/routine	10.7	7.4	1.15
Transfer	8.3	3.4	2.49*
Programs/ pay	7.1	3.5	1.80
Visits/leisure	6.0	4.2	0.83
Other subjects	6.0	2.0	2.62**

\* $p < .05$ . \*\* $p < .01$ .

**Other.** Table 8 presents a selection of the remaining variables explored. These represent “flags” or “alerts” on offenders’ files that are placed there for staff members’ information. Not surprisingly given their offences, the proportion of radicalized offenders identified as being high profile was greater than that identified as such in the full population of incarcerated offenders. They were more likely to be flagged as actively inciting or influencing other offenders, though the overall number flagged as such remained quite low. Radicalized offenders were also more likely to be identified as violent, but equally likely to be identified as emotionally unstable. They were also equally likely to be considered at risk of suicide or self-injury, and less likely to have a

history of these behaviours. Compared to other incarcerated offenders, radicalized offenders were equally likely to be considered an escape risk.

Table 8

*Other Variables: Comparisons between Radicalized Offenders and the Full Population of Inmates*

Indicator	Percentage		z
	Radicalized offenders	All inmates	
High profile offender	35.7	5.3	12.44***
Violent	10.7	4.7	2.60**
Emotionally unstable	0.0	2.2	-1.35
Sentence/conviction under appeal	7.1	4.1	1.39
Outstanding charges	2.4	10.2	-2.36*
Escape risk or escape history	6.0	5.3	0.29
Leader/organizer/inciter	3.6	0.4	4.65***
Possible deportation	0.0	0.1	-0.29
Suicide/self injury history	6.0	15.6	-2.42*
Current risk of suicide/self injury	0.0	2.2	-1.37

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

## Discussion

This study's goal was to compare radicalized offenders to the full population of incarcerated federal offenders in Canada. The approach involved both examinations focused on possible indicators of radicalization identified in the literature and by focus group respondents and on other possible indicators available from CSC's administrative data records. Given the very limited body of empirical research conducted on radicalized offenders (Berko, Erez, & Globokar, 2010; Gottschalk & Gottschalk, 2004; Lyons & Harbinson, 1986; Orsini, 2012; Post, Sprinzak, & Denny, 2003; Ungerer, 2011) – especially in the Canadian context – this study represents an early step in increasing knowledge in this realm.

Overall, there were numerous areas where radicalized offenders were found to differ

from other offenders, which is consistent with other authors' conclusions (e.g., Silke, 2008). Additionally, in some areas where they were similar to other offenders, both offender groups differed from other Canadians. For example, analyses did not demonstrate differences in the distribution of gender or marital status of radicalized offenders and other offenders. As was expected based on previous descriptions of offender populations (Public Safety, 2011b) and violent extremists (Bakker, 2006; Porter & Kebbell, 2011; Sageman, 2004), men were vastly over-represented in both groups. Both offender groups were also less likely than expected based on Canadian population norms to be married or living common-law (Statistics Canada, 2012).

As compared to other offenders, however, radicalized offenders were younger, less likely to be Canadian citizens, more likely to be of a visible minority, better educated, and possibly had better employment histories (the latter is unclear due to inconsistent results). It seems that compared to the general offender population, which is generally marked by educational and employment needs (Andrews & Bonta, 2010; Delveaux, Blanchette, & Wickett, 2005; Stys, 2010), radicalized offenders may be more similar to non-offenders. This is consistent with others' findings that violent extremists in general are fairly well-educated (e.g., Bakker, 2006; Sageman, 2004) and are frequently not of low socio-economic status (e.g., Krueger, 2008; Porter & Kebbell, 2011; Sageman, 2004). Results also suggested that radicalized offenders may have had less problematic upbringings and had fewer problems in their intimate relationships as adults; again, these are areas frequently problematic for the general offender population (Berko et al., 2010; Gendreau, Little, & Goggin, 1996; Stys, 2010).

It appears that overall, radicalized offenders may exhibit better adjustment than non-radicalized offenders in terms of mental health and previous involvement with the criminal justice system. They were less likely to have been prescribed psychotropic medications (and equally likely to have a mental health diagnosis) at admission. They were less likely to have previous contact with the criminal justice system, though their rate was nonetheless higher than that of the general Canadian population. (For example, 18% of radicalized offenders had served a previous federal sentence, while only about one in ten Canadians, overall, has a criminal record [RCMP, 2003, cited in Ruddell & Winfree, 2006] – which includes both provincial and federal convictions). Radicalized offenders also had fewer problems relating to substance abuse than do other offenders. Within the most recent year of their incarceration, radicalized offenders were also less likely to be placed in involuntary administrative segregation or to be convicted of

serious institutional charges. Overall, they were less likely to be assessed as having high levels of criminogenic need or as having a low potential of successful community reintegration.

Another group of differences between radicalized and other offenders was related to the offences themselves, as well as to the ideologies and beliefs assumed to underlie them. While of course, radicalized offenders were more likely to be convicted of terrorism-related offences, they were also more likely to be convicted of homicide and of “other” violent offences. They were also more likely to be considered high profile offenders, to be considered violent, to have been identified as having a specialized weapons or explosives capability, or to be identified as inciting or organizing other offenders within the institution.

Radicalized offenders were also more likely than both other offenders and Canadians overall (Statistics Canada, 2005) to be Muslim. In the most recent year of their incarceration, they were also more likely to receive visits from clergy members and to file grievances relating to religious and/or spiritual activities or to food and/or diet, the latter of which could be due to the dietary stipulations associated with the Muslim faith. They were also more likely to be assessed as having problematic religion and as being religiously intolerant.

Underscoring the heterogeneity within the overall group of radicalized offenders, these offenders were also more likely to be affiliated with a White supremacist or racial extremist organization, as well as to be assessed as ethnically intolerant.

Overall, then, it seems that there were many ways in which Canadian federally-sentenced radicalized offenders were unlike their non-radicalized counterparts. Indeed, though more research is required to be confident in this interpretation, they may resemble non-offender members of the Canadian population more than they do other offenders. This is consistent with certain authors’ contentions that violent extremists are marked, if in any way, by their normalcy (Bakker, 2006; Kruglanski & Fishman, 2009; Pressman, 2009; Silke, 1998). It is important to temper this conclusion, however, by acknowledging that many of the areas of theoretical, empirical, and operational interest with regards to radicalized individuals generally and, in particular, to radicalized offenders, were not assessed in the present examination. Specifically, the reliance on data available in CSC’s OMS limited the variables that could be investigated. Of the possible indicators identified in the literature and within the focus groups conducted with staff, over a third could not be operationalized using the OMS’s data. Indeed, even amongst those that were, the quality of these operationalizations varied considerably. For example, while

focus group respondents indicated that radicalized offenders may be distinguishable by specific tattoos, it was only possible to ascertain, from OMS, whether or not they had a tattoo, regardless of its design.

Some of the areas of particular interest in research on violent extremists, including those related to perceptions, beliefs, and motivations, were amongst those not fully investigated due to the lack of appropriate variables in the OMS. This is particularly important given that it has been posited that it is precisely in these areas that radicalized offenders will differ most from their non-radicalized counterparts (Mullins, 2009). As such, more research relating to perceptions, beliefs, and motivations is clearly required for a full understanding of the differences and similarities between radicalized and non-radicalized offenders.

This need is further supported by the existence of additional limitations of the current study. Despite not measuring all variables of interest, this study was marked by the inclusion of an extremely large number of variables. Though this research was exploratory, and therefore few other options were available, it is important to reiterate that the statistical examination of large numbers of variables is expected to result in some “false positives” or results suggesting that a difference exists when, in fact, it does not. It is therefore very likely that a small number of the results in this study are incorrect, though the presence of patterns amongst findings suggests confidence in results is appropriate. More targeted and rigorous replication of this research will be necessary to increase confidence in the present results. Such additional research will also likely contribute to a better understanding of those areas where results stemming from analyses of corresponding DFIA and DFIA-R indicators were inconsistent.

That said, results clearly show that radicalized offenders differ from non-radicalized offenders. This may have important implications with respect to the interventions used with offenders. CSC offers a variety of correctional programs (CSC Reintegration Programs Division, 2009) and interventions, many of which are appropriate for a variety of treatment targets. Nonetheless, it seems clear that some of the most common intervention targets in the general offender population – for example, substance abuse, education, and employment – may be inappropriate targets for this group. Indeed, certain other jurisdictions have developed or are developing interventions specific to radicalized offenders (see Horgan & Braddock, 2010; Neumann, 2010, Veldhuis, 2012); this may be an area CSC should consider.

### **Next steps**

As mentioned, the exploratory nature of this study meant that it was deliberately broad. Additional studies of narrower scope are now required to follow up on these preliminary findings. There is a particular need for research comparing the perceptions, motivations, and beliefs of both radicalized and non-radicalized offenders. It may also be useful to conduct further examinations using specific sub-types of non-radicalized offenders in comparisons as opposed to the full population. For example, Mullins (2009) noted certain similarities between radicalized offenders and organized criminals as well as low-level criminals – limiting comparisons to these specific sub-types of offenders may reveal informative patterns of similarities and differences. More focused comparisons might also be possible by narrowing the sample of radicalized offenders. In the current context, the very low number of radicalized offenders available for analysis prevented dividing this group into smaller groups with similar offences, backgrounds, or ideologies. However, including all radicalized offenders in a single group likely masked differences within the group; research on specific subgroups would reveal whether this was the case, as well as whether differences found between different types of violent extremists in general (Hannah, Clutterbuck, & Rubin, 2008; Taylor & Horgan, 2006) are also present within the radicalized offender samples.

Further research could also be strengthened by including an additional comparison group. Certain findings within this study suggested that radicalized offenders are more like non-offenders than they are like other offenders; explicit comparisons of non-offenders, non-radicalized offenders, and radicalized offenders would allow this interpretation to be tested.

Finally, from a practical stand-point, perhaps the most pressing research goal is to better understand the interventions appropriate for radicalized offenders, and how correctional services can best provide these interventions. A necessary first step will be a better understanding of radicalized offenders' motivations and criminogenic need areas. It will also be necessary to examine whether these can be changed via intervention, and if so, which kinds of interventions are successful in doing so. Given arguments that offenders can become radicalized within correctional institutions (e.g., Silber & Bhatt, 2007), it will be important to ensure research in this area is focused not only on interventions aiming to reduce terroristic recidivism, but also on interventions and population management approaches aiming to reduce offenders' attempts to spread violent extremist beliefs.

### **Study 3: Estimating Susceptibility to Radicalization**

There have always been concerns that prisons act as “schools of crime” (Ignatieff, 1978; Morris & Rothman, 1997; Rothman, 1971). Therefore, it is not surprising that within the study of radicalization there would be a concern that prisons might be a fertile recruiting ground and teaching place for the radicalization of previously un-radicalized offenders (Neumann, 2010; Silber & Bhatt, 2007; Wilner, 2010). The literature on susceptibility to radicalization suggests that some people, based upon personality characteristics and environmental factors, may be more susceptible to a message of radicalization than others and some individuals may be more likely to be targeted by recruiters to extremist groups. Within the radicalization literature there have been a number of articles that have hypothesized what factors might indicate susceptibility to radicalization and a sub-set of those specifically hypothesize about those factors among incarcerated individuals. Given that currently, there are no risk assessments, scales, or even review articles (Loza, 2010; Pressmen, 2009) based upon actual data that look at the issue of susceptibility, this estimation methodology relies upon (previously) theoretically supported variables indicating susceptibility to radicalization. The current susceptibility to radicalization literature has relied upon a number of untested theories to determine that a given factor may be indicative of a susceptibility to a message of radicalization.

#### **Susceptibility**

The issue of susceptibility to radical influence has no empirical studies, to date, and would be difficult to study. A study to look at susceptibility to a radical message would have to be large and prospective in which a very large number of individuals are followed and extensive data collected over time to document their exposure to a given pathogen, in this case, exposure to radicalizing influences. At follow-up, those who have contracted the disorder, radicalization, are compared to those who have not contracted the disorder. It is unlikely that such a study would ever be completed. As a result, this estimation methodology relies on literature reviews that feature the opinions and observations of individuals who write in this field but who do not refer to studies where this question has been (directly) empirically examined. Upon review of the available literature, two findings become quite clear: first, that there are some indicators that appear in several sources and appear to be likely candidates to indicate susceptibility to a message of radicalization, and secondly, that the presence of any one of these factors alone



would not be sufficient in itself to indicate the potential for susceptibility. As a result, the primary focus of this study is to attempt to identify constructs in the research and theoretical literature that may be related to a susceptibility to radicalization within the prison context. Secondly and subsequent to this, this study determines whether there are any indicators or variables within the CSC's administrative data to measure these constructs and whether some of these indicators might be more useful and appropriate than others.

## **Methods**

**Procedure.** This study involved a three-stage process, starting with a literature and data review, followed by a Principle Component Analysis (PCA), and concluding with an enumeration of some available variables that might serve as indicators of susceptibility to a message of radicalization.

**Data.** As Study 3 is an exploratory investigation, data were drawn from a wide variety of areas from the Offender Management System (OMS) database: demographic information (e.g., age, gender, marital status, race), sentence management information (e.g., sentence length, date of admission, Dangerous Offender or LTSO Status, criminal history), internal CSC indicators such as Flags, Needs, and Alerts (e.g., outstanding charges, dietary considerations, suicide concerns), educational and employment indicators, measures of developmental history (e.g., father absent during childhood, family members involved in crime), indicators of alcohol and drug use and abuse, indicators of ability to function in the community, indicators of behavioural propensities (e.g., history of violence, gambling, inappropriate risk taking, thrill seeking), and information on grievances and complaints.

A great deal of the data used in this investigation was drawn from the Offender Intake Assessment (OIA) (CSC, 2012d, 2012e). The OIA includes the Dynamic Factors Identification and Analysis (DFIA, DFIA-R) protocol that assesses a large number of variables that have been shown to be associated with risk to commit crimes. Sometimes referred to as criminogenic need factors (Andrews & Bonta, 2010), the DFIA protocol assesses seven domains: employment, marital/family, associates, substance abuse, community functioning, personal/emotional, and attitudes. Indicators within these domains are scored dichotomously as absent or present. In 2009 the DFIA was shortened and updated with a new measure, the Dynamic Factor Identification and Analysis – Revised (DFIA-R). This presented a challenge as certain indicators were not collected after September 2009 leaving missing information in the dataset. In

comparison to the approach outlined in Study 2 where data collected prior to September 2009 were analysed separately, the decision was made that composite variables, those containing information from both pre September 2009 and post September 2009, would primarily be used in this analysis. This decision was taken as while Study 2 had an emphasis on accurate description of an existing population, this study needed as much information as possible due to its exploratory nature. In the change from the DFIA to the DFIA-R some variables were dropped (e.g., family ties are problematic), while other indicators that were considered sufficiently similar between the new and the old versions were combined to produce an acceptable composite variable (e.g., DFIA item: Has learning disabilities, DFIA-R item: May have a learning disability). These composite variables were primarily used in this estimation methodology.

***Literature and data review.*** This estimation methodology included the examination of the current theoretical literature (as summarized in the preceding introduction) and extracted from that literature a list of apparently relevant basic constructs. These constructs were operationalized such that indicator variables existing within the OMS database were associated with each of these basic constructs. This association of individual indicator variables from the OMS to broader constructs through review of all the variables available in the OMS resulted in a very large number of variables that could be considered for analysis. Frequency analysis of the indicator variables was completed and a large number of variables were not considered for further inclusion in the estimation methodology due to excessive missing data.

***Principle component analysis.*** Principle Component Analysis (PCA) is a descriptive statistical technique used mainly for exploratory data analysis to summarize relationships in a large set of observed variables. PCA is generally used for data reduction while retaining as much of the original information available in the data set as possible, and can be used to evaluate whether variables within a dataset form “coherent subsets” (Tabachnick & Fidell, 2007).

Variables that form coherent subsets are “thought to reflect underlying processes” (Tabachnick & Fidell, 2007, p. 607)<sup>14</sup>. In this document we have been referring to these underlying processes as “basic constructs” that were found in the literature review. Indicator variables associated with each of the nine initial basic constructs were subjected to PCA in order

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<sup>14</sup> PCA is usually applied to continuous data but may also use dichotomous data. Jolliffe (2002) states that “variables could be a mixture of continuous, ordinal, or even binary (0/1) variables” (p. 339) and Tabachnick & Fidell (2007) state that as long as PCA is used descriptively “assumptions regarding the distributions of variables are not in force” (p. 613).

to further reduce the number of indicator variables to those that most closely mapped onto the basic constructs. Therefore, nine separate PCAs were conducted. It should be noted that PCA, unlike some types of factor analysis, was chosen for this procedure as it attempts to load as many as possible of the important variables onto the first factor. For this analysis this is desirable as variables that do not load on this principle component can be eliminated from the model with greater confidence, thereby leading to the inclusion of the strongest indicator variables to measure the basic construct. In addition, when an indicator variable does not associate strongly enough or, “load” in the terminology of PCA (initial correlation > .30; Field & Miles, 2010), with the underlying process or basic construct it can generally be discarded from the analysis, again leading to data reduction and hopefully a simplification and improvement of the model.

It should be noted that missing data occurred in almost all indicators considered in each PCA, and in some cases, the frequency of missing data was quite high. The underlying calculations supporting PCA cannot accommodate missing data, and therefore, in each analysis, only those cases with complete data were retained. Given that this is a preliminary investigation and that the sample was very large (even after allowing for missing data), the results are being presented as preliminary and exploratory findings, to be confirmed in future analyses where missing data occurs less frequently. Future analyses should determine the degree to which missing values are occurring in a random fashion.

**Sample.** The sample includes a snapshot of all people held under warrant by the CSC, both incarcerated and on conditional release on September 21, 2012. The resulting snapshot contained information in 722 variables on 23,711 people. The sample was subsequently reduced to 23,318 as 393 offenders who had been extradited or deported were removed from the sample. Of this sample, 95.2% were male and 4.8% were women offenders with 62.3% of the sample incarcerated and 37.7% in the community. The average age of the sample was 41.3 years ( $SD = 13.5$ ) and the median age was 39.7 years, with a range of 17.9 years to 95.5 years of age. Almost two-thirds (63.1%) of the offenders were White, 8.5% Black, 20.1% Aboriginal (Métis, Inuit, and North American Indian), and 8.3% were split between 13 other ancestries. The sample is composed of 75.3% offenders with determinate sentences, 19.9% with life sentences, 2.6% Long Term Supervision Order offenders, 2.1% Dangerous Offenders, and 0.1% were serving other types of sentences. Almost half (44.5%) of the offenders were serving a sentence between two years and four years in length, 13.6% between four and six years, 12.0% were serving a sentence

between six and ten years, 7.2% a sentence greater than ten years, 22.1% were serving an indeterminate sentence, and 0.6% were serving sentences of lengths that do not fall into the above categories. Approximately three-quarters (73.1%) had less than a high school diploma or a grade 10 equivalence.

## **Results**

**Literature and Data Review to Find Basic Constructs.** The purpose of this analysis is to determine the basic constructs in the literature that are thought to be related in a meaningful way to susceptibility to radicalization. It soon became evident that there were factors hypothesized to be associated with susceptibility to radicalization that were unlikely to be represented in an offender database (see Appendix D for a list of these constructs). Two of these concepts are the concept of “Parochial Altruism” put forward by Choi and Bowles (2007) and the concept of a “significant quest” put forward by Kruglanski, Chen, Dechesne, Fishman, and Orehek (2009). However, examples of basic constructs that might have indicator variables in an offender database were identified (with some of the more common basic constructs referred to in the literature being listed below). These include limited attachment skills, poor family support, violent attitudes, negative attitudes toward conventional society, disorderly life, family violence, employment, grievances, and concerns for personal safety. These basic constructs are reviewed below with examples of indicator variables from the OMS database provided.

One of the basic constructs identified in the literature is “socio-political alienation” that Wilner (2010) describes as one of the three precursors to radicalization. Within the OMS database there are no indicators that specifically relate to a feeling of “socio-political alienation” or “alienation” *per se*. As a result, we attempted to find indicator variables that suggest the person lacks the interpersonal skills that would lead to meaningful attachment to the host society. With this in mind we identified a basic construct entitled Limited Attachment Skills. Kebbell and Porter (2012) suggest that a lack of positive relationships may indeed act to formulate or encourage negative attitudes toward conventional society. In a concept that is allied to Limited Attachment Skills, Kebbell and Porter suggest that an important risk factor for radicalization is isolation from non-radical individuals. Furthermore, Kebbell and Porter describe a very similar construct to Limited Attachment Skills and refer to it as “disengagement” from Western society. We did not find this a satisfactory term as it could be taken to suggest that these individuals were “engaged” with Western society to begin with. Examples of indicator variables that were

thought to be related to Limited Attachment Skills include “frequently interprets neutral situations as hostile” and “difficulty solving interpersonal problems”. Further examples of indicator variables that were thought to be related to the basic construct of Limited Attachment Skills can be seen in Appendix F.

The basic construct Poor Family Support is of interest as it has been hypothesized (Pressman, 2009) that when the individual does not have social family support that they may be more susceptible to messages of radicalization. Monahan (2012) posits that to assess the likelihood of violent action that the individual must be assessed in terms of his family environment and more recently, Veldhuis and Jessels (2013) supports this construct by pointing out that prison can isolate offenders from their family and deliver them to the influence of others. Indicator variables thought to represent a lack of support from family include “prosocial support from an intimate partner is limited” and “prosocial family support is limited”.

Attitudes are cited as an important factor by most commentators in this area. In addition, work in the allied area of general criminal behaviour (Andrews & Bonta, 2010) has shown that attitudes are a fundamental risk factor for criminal activity and violence. In terms of radicalized offenders, Wilner (2010) proposes that attitudes, as a motivating factor, would be different in those who are radicalized while Monahan (2012) strongly concludes that generally accepted measures of criminal attitudes would not be helpful in differentiating those with radicalized views. In discussing how radicalization occurs Wilner (2010) suggests specifically that religious attitudes would be different in those who may radicalize. Pressman (2009) states that “violent actors are influenced by personal dispositions such as attitudes” (p. 7) and goes on to state that “attitudes are fundamental to ideological motivated violence” (p. 33). Available indicator variables within the OMS that appear to relate to the basic construct of Violent Attitudes include such indicators as “attitudes support instrumental/goal-oriented violence” and “attitudes support expressive/emotional violence”.

Negative attitudes toward conventional society may be an outcome of an inability to develop positive relationships with the culture they live in (Kebbell & Porter, 2012) and may make it easier to “attribute negative characteristics to the target group” (p. 11) thereby aiding in a process of dehumanization of the target group and making the commission of violence more cognitively palatable. Indicator variables that relate to the basic construct of Negative Attitudes Toward Conventional Society include “displays negative attitudes toward the criminal justice

system” and “displays non-conforming attitudes toward society”.

The basic construct of Disorderly Life is related to measures of community functioning and both are most likely allied with the construct of Limited Attachment Skills. Both Wilner (2010) and Kebbell and Porter (2012) see the receipt of welfare payments as a risk factor for radicalization as they indicate that the individual is not succeeding in the community. Wilner (2010) also comments upon the potential for individuals to exploit those with disorderly lives to radical causes as this would produce a sense of belonging and order in their lives. Here we have one indicator variable that aligns directly with a noted concept and that is “has used social assistance” as an indicator of welfare payments. Another indicator variable for Disorderly Life is “unstable accommodation”.

The presence of a history of Family Violence is cited by Kebbell and Porter (2012) as a factor that can contribute, through the belief that violence against women is acceptable; to an acceptance that violence against others is acceptable. Indicator variables for the basic construct of Family Violence from the OMS database include “presence of family violence incidents” and “attitudes supportive of family violence”.

Employment is suggested as a factor in the initial phases of adhesion to a radical ideology by Jacques and Taylor (2012) as they propose that “the argument for unemployment as a factor is that poverty or economic hardship forces people to ‘make a living’ through terrorism and that involvement in a radical cause may ‘restore the loss of social identity’ (p. 2). It is acknowledged, however, that employment may not be a good predictor: in a retrospective study of 121 female and 154 male terrorists it was found that 92% were employed or in full-time education when they first became involved in terrorism. In the employment area, Monahan (2012) puts forth an interesting hypothesis and potential complication, in that he contends that well-educated middle-class individuals who are employed at a lower status than their credentials would suggest may be at risk for radicalization due to their dissatisfaction with their social status. Indicator variables for the basic construct Employment include “work ethic can be described as poor” and “job history has been unstable”.

Grievances are seen by researchers (Monahan, 2012; Nebbit & Cohen, 1996) as one of three risk factors for terrorism and these commentators posit that this may be particularly true in what they refer to as “cultures of honor”. Pressman (2009) considers this a likely factor and includes it in her VERA tool while Monahan (2012) points out that grievances may fall into two

categories, personal grievances that reflect harm to the self or loved ones and group grievances that reflect harm to a group or a cause that is important to the individual. Monahan (2012) recommends that prison administration take seriously inmate grievances concerning religious or other rights so that radical recruiters cannot exploit feelings of alienation. An indicator of the basic construct Grievances is “presence of diet related grievances”.

Finally, Wilner (2010) introduces the concept of personal safety and hypothesizes that individuals may join gangs of all types, including radicalized groups, out of fear for their personal safety. Here examples of indicator variables related to the basic construct of Concerns for Personal Safety include the variable “requests for protective custody” and the “presence of an inmate assault where the inmate was the victim”.

**Frequency Analyses.** As mentioned earlier, prior to principle component analysis (PCA), indicator variables were reviewed to determine whether response patterns within the dataset would allow analysis. Variables that were not scored at a sufficient frequency within the dataset, generally a positive response rate of approximately 10 percent (excluding missing data), were not retained for further analysis. The frequency distributions of the remaining variables are presented in Appendix E.

Notably, many of the indicators retained for further analysis were derived from the OIA. As previously mentioned, these are coded by a Parole Officer as present or absent. Data quality issues exist with respect to this procedure, however – while some Parole Officers endorse only those indicators that are present, others positively endorse those that are present and negatively endorse those that are absent. In other words, while all Parole Officers indicate “yes” for the indicators that are present, some indicate “no” for those that are absent and others leave those indicators blank. This issue complicated interpretation, as it was inappropriate to assume that missing data was necessarily equivalent to a “no” response. In order to not introduce error, indicators that were left blank were simply treated as missing data; as such, rates of endorsement presented in Appendix F likely represent slight overestimates.

**Principle Component Analysis.** PCA was used to reduce and summarize the relationships within the retained indicator variables. It does this by trying to find one common component of meaning between all of the variables proposed in the analysis, always trying to fit a model with one “principle component”. When an indicator variable did not associate strongly enough (or “load” in the terminology of PCA) with the basic construct it was dropped from

further analysis.

It is important to note that since PCA cannot account for missing data, the analyses conducted for each construct omitted any individuals who were missing data on any of the indicators identified as part of that construct. As such, each analysis included between 5,825 and 23,318 individuals, with most analyses including between 9,500 and 10,500 cases. While these numbers are more than sufficient to meet the data requirements for these types of analyses, it does mean that results from these analyses do not represent all individuals in the sample and results may therefore not generalize from the sub-groups of individuals for whom data were available to the whole sample.

It should also be noted that one of the shortcomings of PCA may well be demonstrated in the basic construct Violent Attitudes. Here, as seen in Table 9, there are two variables specifically about attitudes towards the expression of violence, two variables specifically about anger, and one variable about frustration tolerance. It is possible that there is only one underlying basic construct, Violent Attitudes, or that there could be two, Anger and Violence Attitudes. As PCA is structured to create a “principle component”, these five items loaded together as one component. In a higher level analysis, factor analysis (Tabachnick & Fidell, 2007); it may well be possible to further refine this relationship, improving our understanding of the underlying model.

The results of the PCA are presented in two Tables and in Appendix F. Table 9 presents the indicator variables for each Basic Construct that was retained after the PCA. Table 10 shows for each Basic Construct the indicator variables that were dropped prior to and during PCA analysis and the reason they were dropped. Appendix G displays the PCA component loadings and final communality estimates for each indicator variable (with bolded indicators indicating those retained after the PCAs).

The results of the PCAs are briefly summarized in the following paragraphs. For each, the number of indicators included in the analyses, as well as the number ultimately retained, is presented. In addition, the number of components thought to be represented in each construct is presented – this is a reflection of Eigenvalues calculated by the PCA, which simply reflect the primacy of each component (in each PCA, the highest Eigenvalue is associated with the construct which explains the most variance amongst the indicators; a threshold of 1.0 is traditionally used to identify important components). Finally, an interpretation of each construct



is provided.

PCA analysis of Limited Attachment Skills started with eight proposed indicator variables. The analysis resulted in two components with an Eigenvalue greater than 1. Three variables had a combination of sufficient endorsement rate and a sufficient component loading to be retained (see Table 9), and five indicator variables were dropped (see Table 10). The Limited Attachment Skills construct appears to represent a state where thinking skills, empathy, and problem solving skills have been assessed as sub-par at correctional intake.

PCA analysis of Poor Family Support started with seven proposed indicator variables. The analysis resulted in two components with an Eigenvalue greater than 1. Four variables had a combination of sufficient endorsement rate and a sufficient component loading to be retained (see Table 9), and three indicator variables were dropped (see Table 10). Poor Family Supports indicates a situation where the inmate experiences a dearth of social contacts, not just within the family but also in terms of friends and an intimate partner.

Analysis using PCA of Violent Attitudes started with six proposed indicator variables. Only one Eigenvalue greater than 1 was obtained. Five variables had a combination of sufficient endorsement rate and a sufficient component loading to be retained (see Table 9), while only one variable was dropped due to low endorsement rates in the dataset (see Table 11). Violent attitudes, as noted above, seems to be bifurcated between attitudes supportive of violence and anger. This construct in particular might benefit from further high level analysis.

Analysis of Negative Attitudes Toward Conventional Society started with five proposed indicator variables. The analysis resulted in one component with an Eigenvalue greater than 1. Four variables had a combination of a sufficient endorsement rate and a sufficient component loading to be retained (see Table 9), and one indicator variable was not retained (see Table 10). Negative Attitudes Toward Conventional Society, as presented to members of the CSC at intake, records negative attitudes toward perceived authority.

The Basic Construct of Disorderly Life initially had seven proposed indicator variables. The analysis resulted in two components with an Eigenvalue greater than 1. Five variables had a combination of sufficient endorsement rate and a sufficient component loading to be retained (see Table 9), and one indicator variable was dropped (see Table 10). Disorderly Life presents a picture of a person who drifts through the community with no steady accommodation, income, or anything constructive to do with their time.

Examination of the Family Violence construct led to a PCA analysis that started with seven proposed indicator variables. The analysis resulted in one component with an Eigenvalue greater than 1. Three variables had a combination of sufficient endorsement rate and a sufficient component loading to be retained (see Table 9), and four indicator variables were dropped (see Table 10). Two of the indicator variables here would be scored based upon historical information and the third is an attitudinal measure. Again, while all three load well on the principle component it may be possible to separate the dynamic attitudinal component from the static component.

Complaints and grievances were all scored by reference to static file record. Starting with six proposed indicator variables, five were immediately removed due to low rates of endorsement in the dataset (< 3.0%). The remaining indicator variable may have significance as it relates to diet and this may be related to ethnic or cultural practices. A PCA for this basic construct was not carried out - one indicator variable was retained (see Table 9).

PCA analysis of Employment indicator variables resulted in one component with an Eigenvalue greater than 1. Seven variables had a combination of sufficient endorsement rate and a sufficient component loading to be retained (see Table 9), and one indicator variable was dropped due to a low endorsement rate (see Table 10). Employment indicator variables convey a picture of an individual with very limited job skills and history who has not had the life experiences to develop a work ethic.

Finally, one of the hypothesized basic constructs, Concern for Personal Safety, was initially thought to have three variables of interest. PCA analysis revealed one component with an Eigenvalue greater than 1. Two variables were retained (see Table 9), and one variable was dropped due to a low endorsement of this variable in the dataset (see Table 10). Here the individual has a history of seeking protective custody and of being the victim of an institutional assault.

Table 9

*Basic Constructs and Most Promising Indicator Variables Retained After PCA*

Basic Construct	Variable Description
Limited attachment skills	Displays narrow and rigid thinking Has difficulty solving interpersonal problems Empathy skills are limited
Poor family support	Prosocial support from friends is limited Prosocial support from an intimate partner is limited Limited attachment to family during childhood Prosocial family support is limited
Violent attitudes	Attitudes support instrumental/goal-oriented violence Attitudes support expressive/emotional violence Low frustration tolerance Frequently suppresses anger Frequently feels intense anger
Negative attitudes toward conventional society	Displays negative attitudes toward the criminal justice system Displays non-conforming attitudes toward society Disrespects public or commercial property Displays negative attitudes toward the correctional system
Disorderly life	Community attachment is limited Constructive leisure activities are limited Unstable accommodation Financial instability Has used social assistance
Family violence	Attitudes supportive of family violence Presence of family violence incidents - Dichotomized Perpetrated family violence
Grievances	Presence of diet related complaints and grievances – Dichotomized
Employment	Work ethic can be described as poor Job skills obtained through formal training are limited Unemployed at time of arrest Job history has been unstable Employment history is absent Dissatisfied with job skills Marketable job skills obtained through experience are limited
Concern for personal safety	Presence of protective custody requests - Dichotomized Presence of assaults where the inmate was a victim – Dichotomized

Table 10

*Basic Constructs, Indicator Variables that were Dropped from Analysis, and the Reason they were Dropped after PCA*

Basic Construct	Variable Description	Reason
Limited attachment skills	Listening skills are limited Frequently interprets neutral situations as hostile Displays non-conforming attitudes toward society Ability to link actions to consequences is limited Assertiveness skills are limited	Low endorsement rate Low endorsement rate Low PCA loading Low PCA loading Low PCA loading
Poor family support	Composite associates variable <i>asslev2</i> – dichotomized Compound variable of ‘easily influenced by others’ and ‘assertiveness skills are limited’ Often victimized in social relations	Low PCA loading Low PCA loading High proportion of missing data
Violent attitudes	Uses excessive force to discipline child	Low endorsement rate
Negative attitudes toward conventional society	Takes pride in criminal exploits	Low endorsement rate
Disorderly life	Use of community resources limited Has previously been referred to programs addressing deficit(s) under this domain	Low PCA loading Low endorsement rate
Family violence	Witnessed family violence during childhood Victimized by spousal abuse Uses excessive force to discipline child Attitudes supportive of domestic violence	Low PCA loading Low PCA loading Low PCA loading High proportion of missing data
Grievances	Presence of religious complaints and grievances – Dichotomized Presence of social complaints and grievances – Dichotomized Presence of articles seized complaints and grievances – Dichotomized Presence of hunger strikes – Dichotomized Presence of discrimination complaints and grievances - Dichotomized	Low endorsement rate Low endorsement rate Low endorsement rate Low endorsement rate Low endorsement rate
Employment	Belief in oneself to improve employability is low	Low endorsement rate
Concern for personal safety	Presence of a fight where the inmate was the victim - dichotomized	Low endorsement rate

## **Discussion**

This estimation methodology attempted to determine if there were any indicator variables within the CSC OMS database that might be used to indicate susceptibility to a message of radicalization. Taken as a whole the PCA results may suggest potential indicators of constructs identified in the theoretical literature to be associated with susceptibility to radicalization that may emerge in a full model. For example, indicators selected reflect the profile of a socially isolated person who has a history of family violence and a poor work history, a person who has been a victim of an assault within the institution and who has sought protective custody. This person seems to present at least a picture of cognitive slowing with narrow and rigid thinking, limited interpersonal and problem solving skills, and reduced empathy. Drifting at intake, this person is without stable accommodation, income, community attachments, and does not have enough to fill his day. These characteristics, combined with anger and attitudes that support violent action and negative attitudes toward authority may lead to not having the resources or the desire to resist the overtures of someone involved in radical proselytizing.

The Basic Constructs and indicator variables used in this estimation methodology, while firmly grounded in the literature of susceptibility to radicalization, bear a striking resemblance to (or at least considerable overlap with) other theories of human behaviour (Maslow, 1954), criminal behaviour (Andrews & Bonta, 2010), and susceptibility to gang recruitment (Office of Juvenile Justice and Delinquency Prevention, no date). As such, it is not clear to what degree susceptibility to radicalization is conceptually, or practically, related to susceptibility to other negative messages. Because susceptibility will likely be based upon personality factors, learning, attitudes, and personal events, it is likely that susceptibility is a dynamic factor and likely to vary given new circumstances, new learning, and new experiences. While this dynamic nature may make susceptibility a moving target and, hence, hard to measure, it should allow for intervention if suitable intervention targets and methods can be determined or if negative influences are present.

A number of the concepts presented in Tables 9 and 10 have been seen in other lists of risk factors for criminal behaviour. For example, anti-social attitudes and anti-social associates are both described as general criminogenic factors by Andrew and Bonta (2010). Other concepts have been associated with susceptibility to gang involvement such as family violence, and having few social ties (Review of Risk Factors, no date). In addition, it could be that

radicalization and gang involvement may be better represented by Maslow's Hierarchy of Needs model (1954). Wilner (2010) touches on this theme when he concludes that gang membership in many forms may be a viable alternative for "vulnerable inmates to seek physical and social safety in gangs, including Islamist ones" (p. 26). It is easy to see how involvement in radicalization or gangs could attend to physiological, safety, belonging, esteem, and self-actualization needs.

Some indicator variables are scored from static file information such as "perpetrated family violence". This is not the case for all indicator variables; many indicator variables would generally not be obvious to someone who just casually meets a person or who has occasional observation of the others behaviour. Many of these factors would only become evident in the context of the semi-structured interview that is part of the OIA process; for example, "frequently suppresses anger". In addition, the individual's level of suppressed anger would have to be above the norm of federal offenders at intake to the CSC to make it worth scoring that OIA item. Hence, for some of these indicators to be scored as "present" the behaviour/attitude of interest would stand out from the norm.

A number of tantalizing variables were not analysed in this methodology due to the limited timeframes associated with this project. An example of one of these would be to analyse data surrounding offender visits; specifically, those where an offender's potential visitors apply for visitor status but are refused such status due to security concerns. This might be a variable that directly touches upon susceptibility to negative messaging, the potential presence of negative messaging, or it may just be an indicator measure for negative social influences in the offender's life (Andrews & Bonta, 2010). Future research should examine these types of variables.

Information was included in this analysis from all sentences on the offender's OMS files. As such, information was included from previous sentences and from the ongoing part of the offender's current sentence. Were the CSC to choose to evaluate the concept of "susceptibility" as an offender starts a new federal sentence, at "intake", the information from the current sentence would not be available for use in that assessment. In effect, there would be less information available and it cannot be determined from this analysis whether that loss of information would differentially affect any of the proposed indicator variables or basic constructs. This would require a secondary analysis where information on susceptibility

indicator variables would only be computed based upon information available at most recent intake.

While most of the information used in this estimation methodology was assessed at intake, there may also be a role for the monitoring of certain theoretically and practically relevant variables through the course of the sentence. An example of this might be where an offender refuses his specialized meal, or refuses his specialized meal in concert with other offenders with whom he is known to associate, where he has not refused his meal previously. This may reflect increased group adhesion or increased interest in radicalization or sub-group activity.

Should a methodology for assessing susceptibility to a message of radicalization be developed, CSC would need to develop an intervention appropriate for individuals thought to be susceptible to radicalizing influences (Horgan & Braddock, 2010; Neumann, 2010). In addition, a discussion would have to occur regarding the point in an offender's sentence in which the CSC would intervene.

It is important to recognize that this estimation methodology is a theory-based investigation of a psychological concept (susceptibility) and as such, it is not appropriate to form any sort of opinion or make any kind of decision involving any individual based upon the presence or absence of any of the indicator variables reported in this estimation methodology.

### **Next Steps**

An obvious next step would be to replicate the analyses described above with more complete datasets of higher quality, such that the possible influence of missing data on findings could be ruled out. Moreover, while beyond the timeframe and mandate of this investigation, the indicator variables used in this estimation methodology would allow for several interesting follow-up projects. A cluster analysis, a statistical technique allowing for the identification of groups of individuals that share similar attributes (Aldender & Blashfield, 1984), would be an additional way to investigate patterns in data that could be related to susceptibility to radicalization. Additionally, a different type of factor analysis, a statistical technique allowing for naturally co-occurring patterns of variables to group together based upon their relative association with each other, could be fruitful to undertake in that unlike PCA, a multi-likelihood factor analysis is not structured to find one "principle component", but instead is capable of loading on multiple factors (Tabachnick & Fidell, 2007). This analysis might allow for a better conceptualization of how individual indicator variables support each of the basic constructs and

to define a higher order factor analysis which allows for a fruitful combination of all the theoretical constructs in a usable measure. This was alluded to in the results section, where it was proposed that the basic construct “Violent Attitudes” might consist of two underlying factors: one related to anger and one related to negative attitudes. By conducting a series of more focused analyses on more complete samples of data, a clearer understanding of what makes an offender susceptible to radicalization could emerge, allowing correctional interventions to potentially identify and prevent attempts to recruit and radicalize within the prison environment.



## Summary

Using primary sources of information as well as quantitative analyses, the results of these studies enhance the level of empirical knowledge surrounding violent extremism in general while improving the understanding of Canadian radicalized offenders specifically. More concretely, the LOA and partnership with Public Safety Canada has allowed the Correctional Service Canada to contribute to the Chemical, Biological, Radiological-Nuclear and Explosive (CBRNE) Research and Technology Initiative (CRTI) in its efforts to enhance the evidence base surrounding violent extremism in Canada while informing institutional operations and policies at CSC.

Through the qualitative and quantitative examination of radicalized offenders and the quantitative examination of offenders susceptible to radicalization, many study objectives were achieved. First, through institutional focus groups, information was obtained from institutional and community-based CSC staff members regarding the types of behaviours or indicators staff members observe, record and communicate about offenders that they suspect or know to be radicalized, and the ways in which this information is recorded, managed, and communicated. Second, through a quantitative analysis of CSC data, literature and focus-group based indicators of radicalization were compared against a Canadian group of radicalized offenders in order to test the applicability of these attributes. Further examinations of the radicalized offender population were also conducted, with comparisons to the general offender population on a large number of characteristics revealing interesting differences. Finally, indicators of susceptibility to radicalization were examined and a first step was made in the effort to quantitatively measure offender's level of susceptibility to radicalization in the prison environment.

Focus group results highlighted the significant level of staff knowledge regarding violent extremism, with many indicators of radicalization and susceptibility discussed and debated. Results supported many theories and processes discussed in the literature, while positing some distinctive dynamics or attributes that were unique to a Canadian correctional environment. Staff discussions also drew attention to improvements that could be made in the correctional setting in regards to the radicalized offender population, including the provision of additional information or training for staff and the creation of more specific policies, frameworks, and definitions concerning radicalized offenders.

The quantitative examination of radicalized offenders was able to confirm many of the indicators of radicalization reported in the literature and in the focus groups as being relevant for the Canadian group of radicalized offenders, while debunking the relevance of other indicators for the Canadian sample. Additionally, comparisons with the general offender population found interesting differences, illustrating that when compared to the general offender population, radicalized offenders were more likely to be younger, better educated, better adjusted in terms of their mental health intervention and criminal history, have more violent tendencies, and be of a visible minority. Finally, the theory-based quantitative examination of offenders susceptible to radicalization offered a tentative first step in the identification, through OMS data, of offenders who may be targeted for radicalization recruitment attempts.

While providing much new information on violent extremists and radicalized offenders, the three studies also guide and inform future research in the area and highlight possible operational priorities for CSC. Unanimous among the three studies was the need for additional research on the population management of radicalized offenders, particularly the examination of the applicability of existing correctional programming and interventions to the needs and unique profiles of radicalized offenders. Both quantitative studies highlighted the need for research focused on the perceptions, motivations, and beliefs of radicalized offenders, constructs which are not measured using the OMS. Examining specific sub-types or groups of radicalized offenders (by ideological belief, for example) could also be beneficial, as attributes may differ between groups. Further work on the concept of susceptibility to radicalization is also recommended, as developments in this area could aid in disrupting or intercepting any attempts to propagate radicalized beliefs throughout the correctional system.

Each of the three studies notes caveats for the interpretation of results and suggests replication with additional data, different samples, or other methodologies. There were many limitations inherent in the studies, mostly due to the relatively low number of identified radicalized offenders and the availability of information or data related to this unique population. This being said, these studies provide an initial step in the quantitative examination of Canadian violent extremists, adding to the available data in the domain and providing valuable information for Correctional Service Canada, and potentially its Public Safety partners, to utilize in the effort to contribute to the safety and security of Canadian communities.

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## Appendix A: Focus Group Questions

### **I. DEFINING A “RADICALIZED OFFENDER” (Approx 10 Minutes)**

The first thing I would like to discuss is how everyone defines a radicalized offender.

1. What are the main ideas or key words that come to mind when describing a radicalized offender?
2. How did you come to your definition of a radicalized offender?
3. CSC officially defines a radicalized offender as an **“ideologically motivated offender, who commits, aspires or conspires to commit, or promotes violent acts in order to achieve ideological objectives.”** Would you agree or disagree with this definition?

### **II. IDENTIFYING A RADICALIZED OFFENDER (Approx 25 Minutes)**

In speaking about your definitions of radicalized offenders, you mentioned some of the behaviours that you have witnessed or learned about in the institution. Let’s talk a little more about these behaviours.

1. What are some of the inmate behaviours that you have witnessed (or that have been reported to you) that indicate to you that an offender may be radicalized?
2. Are there specific behaviours that you have been instructed to keep an eye out for to flag as a potentially problematic behaviour?
3. What is the process in your institution for recording these behaviours?
4. Are there clear procedures in place for reporting these behaviours to the people that need to be informed of them?
5. What are the key changes that should be made to ensure the best recording and communication of information on radicalized offenders at the site, regional, and national level?
6. Are there opportunities for the exchange of radicalized offender information with external partners (i.e. CSIS, RCMP, etc.)?

### **III. SUSCEPTIBLE OFFENDERS (APPROX 15 MINUTES)**

You spoke a bit about radicalized offenders attempting to recruit other offenders for their cause. I would like to speak about those offenders being recruited – susceptible offenders.

1. In your experience, what types of offenders are targeted for radicalization? What are their characteristics?
2. What external or environmental factors could make offenders susceptible to radicalization?
3. What are the security-related impacts of radicalization while in the institution? What impacts could this have in larger society?

## **Appendix B: Study 1 – Focus Group Results**

The tables below outline the responses to the focus group questions outlined in Appendix A. As focus groups contained multiple participants, it was possible for several different opinions and viewpoints to be expressed in one group. For this reason, responses are not mutually exclusive, and the number of responses in each table does not sum to the total number of groups (10), but instead reflect the number of times a response was mentioned across the ten focus groups. While the responses are presented in a numerical and proportional manner, the reader is reminded that the relative importance or significance of a particular theme is not necessarily reflected in the number of times it is mentioned across the focus groups. A particular response may be especially pertinent to the population at the site at which it was mentioned, even though it would only be reflected as coming up once in the list of responses.

Item A1: What are the main key words that come to mind when describing a radicalized offender?

Unique Responses	Respondents	
	<i>n</i>	%
Extreme/extremism	10	100
Terrorist/terrorism	9	90
Religious/religion	8	80
Ideology/ideologically motivated	7	70
Politics/political/anti-government/anti-police	7	70
Rigid uncompromising belief system/with us or against us	6	60
Violent/violence	6	60
Muslim/Islam	5	50
Security risk (institutional and community)	5	50
No limits on actions taken to convey views	4	40
Outside of/deviate from societal norms	4	40
Actions are righteous or for sanctioned cause/goals	3	30
Recruitment	3	30
Anarchy/anarchist	2	20
Defiant behavior/ignore rules	2	20
Environment/environmental	2	20
Loyal to family/their group	2	20
Not necessarily violent	2	20
Supremacy/supremacist	2	20
Similar to gang code/gang members	2	20
Strong leader	2	20
Case by case basis	1	10
Convincing	1	10
Crazy/mental health issues	1	10
Defending rights/grievances	1	10
Fanatic	1	10
Fundamentalist	1	10
Modernist	1	10
Groups	1	10
High profile	1	10
Physical characteristics (dress, tattoos, symbols, etc.)	1	10
Prophesying	1	10
Racism	1	10
Subversive/under the radar	1	10
Threats/threatening behaviour	1	10
Unstoppable/ no reasoning with them	1	10

Note. *n* represents number of focus groups that noted the response. Total number of focus groups = 10.

Item A2: How did you come to your definition of a radicalized offender?

Unique Responses	Respondents	
	<i>n</i>	%
Media/News	10	100
Personal and/or work experience	9	90
Training	5	50
Meetings/briefings with partner agencies	4	40
Personal research of literature (journal articles, reports, etc.)	4	40
CSC policies and/or memos	3	30
Movies/T.V.	3	30
No policy or memo on this subject/no firsthand experience	3	30
Personal life example	3	30
Books	2	20
External conferences and courses	2	20
Informal discussions at work	2	20
Internal (CSC) meetings/briefings/documents	2	20
Discussion with chaplaincy	1	10
From offenders	1	10

Note. *n* represents number of focus groups that noted the response. Total number of focus groups = 10.



Item A3: CSC officially defines a radicalized offender as an “ideologically motivated offender, who commits, aspires or conspires to commit, or promotes violent acts in order to achieve ideological objectives.” Would you agree or disagree with this definition?

Unique Responses	Respondents	
	<i>n</i>	%
Agree		
Broad enough to allow for flexibility/interpretation	8	80
Focus on violence is good/necessary	4	40
Focus on ideology is good/necessary	3	30
Difficult to make it more specific	1	10
Neither agree nor disagree		
Definition is very broad – which could be good or bad	5	50
Definition of <i>ideology</i> is unknown/needs to be clarified	5	50
Process/indicators of what to look for should be included	3	30
Element of recruitment should be included	2	20
Should include religious/political specifications	2	20
Should note difference in motivation vs. non-radicalized criminals	2	20
Should include element of national/international interest	1	10
Should include passive methods of attack such as brain washing/manipulation	1	10
The word <i>incite</i> should be included within the definition	1	10
Disagree		
Too flexible and broad, risk mislabeling with this definition	6	60
Disagree with the use of the word <i>violent</i> . How is <i>violent</i> defined?	5	50
Definition is unclear	3	30
Different from definitions used by partner agencies	2	20
Too specific/limiting	1	10

Note. *n* represents number of focus groups that noted the response. Total number of focus groups = 10.

Item B1: What are some of the inmate behaviours that you have witnessed (or that have been reported to you) that indicate to you that an offender may be radicalized?

Unique Responses	Respondents	
	<i>n</i>	%
Certain books or material in cell/conducting research on beliefs	9	90
Change in institutional associations	9	90
Begin having ideological arguments with staff or other inmates	7	70
Congregating in specific areas/praying together in informal prayer sessions	7	70
Certain drawings/art/hobby craft	6	60
Certain tattoos	6	60
Changes in external communications (calls and letters)	6	60
Religious conversion/sudden interest in religion	6	60
Attitude toward other inmates or people	5	50
Begin verbalizing changes of ideology	5	50
Ranting and/or preaching behaviour	5	50
Changes in compliance-become more compliant	4	40
Increase in acts or threats of violence	4	40
Known link to/communication with a radical group	4	40
Leading prayer group	4	40
Recruiting/encouraging religious conversions	4	40
Being a certain religion/having a certain belief structure (Islamic, white supremacist)	3	30
Changes in behavior/institutional roles	3	30
Changes in facial hair	3	30
Dietary changes	3	30
Evidence of being a charismatic/powerful leader	3	30
Exploitation of religion for personal gain	3	30
Increase in formal grievances	3	30
Radical views/verbalizing radical political views	3	30
Change in manner of dress	2	20
Changes in length of hair	2	20
Use of certain symbols	2	20
Adopting alternative name	1	10
Attempts to corrupt staff	1	10
Become consumed with media/news	1	10
Change in visits/visitors	1	10
Mental health issues	1	10
Logging of institutional/staff information	1	10
Negative attitude toward 'other' inmates or people/us vs. them mentality	1	10
Negative attitude toward policies	1	10
Not gang affiliated	1	10

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Peer report of radicalization	1	10
Requesting the recognition of different holidays	1	10
Self-identification	1	10
Specific offence or conviction (robbery)	1	10
Use of certain language	1	10

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Note. *n* represents number of focus groups that noted the response. Total number of focus groups = 10.

Item B2: Are there specific behaviours that you have been instructed to keep an eye out for to flag as potentially problematic behavior?

Unique Responses	Respondents	
	<i>n</i>	%
No formal direction given	8	80
Art/drawing/hobby craft/paraphernalia	5	50
Books or materials in cells	5	50
Tattoos	5	50
Ideological arguments with staff or other offenders	4	40
Verbalizing changes/support for a problematic ideology	4	40
Become less compliant	3	30
Changes in manner of dress	3	30
“Ranting” and/or “preaching”	3	30
Symbols/gestures	3	30
Verbalizing radical political views	3	30
Become more compliant	2	20
Changes in external communications (calls/letters)	2	20
Changes in facial hair	2	20
Changes in institutional associations	2	20
Common group identifier (symbols, colours, etc.)	2	20
Extreme behaviour	2	20
Instructed to consider motivation, not necessarily religion	2	20
Instructed to treat them no differently than other offenders	2	20
Being quiet/not talking to staff	1	10
Changes in length of hair	1	10
Changes in routine	1	10
Dietary changes	1	10
Increase in grievances	1	10
Increase in news media intake	1	10
Monitor National Security	1	10
Recruiting/encouraging religious conversions	1	10
Religious conversion	1	10
Requests for faith-based units	1	10
Visits	1	10

Note. *n* represents number of focus groups that noted the response. Total number of focus groups = 10.

Item B3: What is the process in your institution for recording behaviours that indicate to you that an offender may be radicalized?

Unique Responses	Respondents	
	<i>n</i>	%
Statement/Observation report (Form 0875)	10	100
Informal processes (via e-mail or verbal communication)	8	80
Formal Policies	4	40
Security Intelligence Report (Form 0232)	4	40
Forms (in general)	3	30
No specific forms/policies for radical offenders	3	30
Protected Information Report (Form 0426)	3	30
Incident Report (Form 1004)	1	10
Partner Liaison Log (Form 1442)	1	10
Security Intelligence Briefing Record/Briefings	1	10
Security Threat Group Information Form (Form 1184-1)	1	10
Tracking reports	1	10
Unit log book	1	10

Note. *n* represents number of focus groups that noted the response. Total number of focus groups = 10.

Item B4: Are there clear procedures in place for reporting these behaviours to the people that need to be informed of them?

Unique Responses	Respondents	
	<i>n</i>	%
Yes	9	90
Information to Regional Headquarters (RHQ), then to NHQ	3	30
Briefings	2	20
Informal information sharing	2	20
Same Standard Operating Procedures as for any other inmate (i.e. gang members)	1	10
Weekly Bulletins	1	10
No	5	50
To some degree	2	20
Quality of information reported is compromised due to lack of training/experience	5	50
Done well at site, not well with other sites, RHQ, and/or NHQ.	4	40
Information sharing from RHQ and NHQ is slow and/or does not occur.	4	40
Lack of confirmation and/or feedback regarding reported information.	4	40
Quality of shared information is compromised due to unclear definitions, criteria, and/or guidelines.	4	40
Additional reporting mechanisms required (case work records, OMS alerts/flags).	2	20
Lack of time and resources to report everything witnessed or for self-study on radicalization.	2	20
Reporting of radicalized behaviours needs to be emphasized as a priority.	2	20
The “need to know” limits staff knowledge, thus their reporting capabilities (limits information coming in).	2	20
The size of the staff compliment makes it difficult to ensure all are informed.	2	20
Difficult to inform staff about groups that are “under the radar”.	1	10

Note. *n* represents number of focus groups that noted the response. Total number of focus groups = 10.

Item B5: What are the key changes that should be made to ensure the best recording and communication of information on radicalized offenders at the site, regional, and national level?

Unique Responses	Respondents	
	<i>n</i>	%
Improve radicalized offender policies/procedures/framework.	10	100
Provide more/better radicalization training for <i>all</i> staff.	10	100
Standardize the definition and indicators/criteria of radicalization.	8	80
Improve reporting mechanisms (i.e. forms). Look to other agencies for examples that work well.	8	80
Improve feedback process after information has been reported.	6	60
Standardization of definitions and policies across sites.	5	50
Improve level of detail in reports.	5	50
Improve policy surrounding transfers (increase information shared ahead of the transfer, increase support after the transfer).	5	50
Improve flow of information down from NHQ/RHQ.	5	50
Increase HR resources dedicated to radicalized offenders (more SIOs, increase their accessibility/visibility).	4	40
Require increased security clearance for staff (and thus increased access to information).	4	40
Increase funding to sites.	3	30
Increase level of information in OMS/Radar.	3	30
Consider a complex due diligence process to avoid mislabeling.	3	30
Improve electronic resources (improve/replace secure network, consider Intellishare, increase access to Y drive).	2	20
Improve availability of information for staff (national snapshots and site level population profiles).	2	20
Strengthen role of SIO as disseminator of information.	2	20
Increase opportunities for staff to communicate with one another (i.e. internal informal social networking, provide a lunchroom).	2	20
Increase support for the reporting of politically sensitive information.	2	20
Reduce the “cult of secrecy” surrounding security information, encourage information sharing.	2	20
Improve access to information from other agencies.	1	10
Decrease the amount of property allowed in the institution.	1	10
Increase non-NHQ sources of information/support.	1	10
Prioritize/emphasize the importance of reporting to all staff, including kitchen staff, librarian, etc.	1	10
NHQ needs to prioritize the roles of an SIO.	1	10
Responsibility for analysis should sit with analytic unit	1	10
Criteria/indicators of radicalization should be congruent with those used at partner agencies.	1	10
Improve strength of external partnerships/information sharing partnerships.	1	10

Note. *n* represents number of focus groups that noted the response. Total number of focus groups = 10.

Item B6: Are there opportunities for the exchange of radicalized offender information with external partners (i.e. CSIS, RCMP, etc.)?

Unique Responses	Respondents	
	<i>n</i>	%
Yes		
With Law enforcement (RCMP, Provincial, city)	6	60
Via Liaison meetings	5	50
With the Canadian Security Intelligence Service (CSIS)	4	40
Via Informal communications	4	40
With the Integrated Terrorism Assessment Centre (ITAC)	1	10
With CSIA	1	10
No		
Not by front-line staff	4	40
Not at the regional level	1	10
Could compromise an investigation	1	10
Barriers to communication exist		
Partners are not receptive to sharing information with us.	5	50
Lack of understanding surrounding weight/importance of information/ how to handle.	4	40
Partners communicate with NHQ, but this information is not filtered down to the site level.	3	30
Vetting process before sharing information (site to RHQ to NHQ) is too slow and sites often do not receive direction back.	3	30
Limited by the security clearance level of the staff.	2	20
Hesitant to share due to threats of legal action.	2	20
Unsure of how to share with partners.	1	10
People report each other's information/cyclical.	1	10
Limited by Access To Information and Privacy Act (ATIP).	1	10

Note. *n* represents number of focus groups that noted the response. Total number of focus groups = 10.



Item C1: In your experience, what types of offenders are targeted for radicalization?

Unique Responses	Respondents	
	<i>n</i>	%
Those looking to belong/looking for status	9	90
Weak vulnerable offenders	9	90
Those who are easily influenced	8	80
Loners	7	70
Marginalized/disenfranchised offenders	7	70
Those convicted/capable of violent offences	7	70
Younger offenders	7	70
First time in federal institution	5	50
Misfits	5	50
Those with disrupted/disorderly lives	5	50
Those with high levels of moral emotions (e.g. anger)	5	50
Those who are angry at “the system”/ “the man”	5	50
Dependent on the power, reputation and charisma of the person doing the recruiting	4	40
Looking for power and/or a cause	4	40
Those exhibiting beliefs that are outside of the norm	4	40
Those looking for protection/need for survival	4	40
Those with higher education levels	4	40
Those with a specific skill set	4	40
Those with useful connections/particular types of associations	4	40
Those with common values/beliefs	3	30
Lower functioning offenders	3	30
Those with no underlying belief system/no affiliations at the time of incarceration	3	30
Those with a sense of entitlement	3	30
Social failures/feeling under-appreciated	3	30
Those of a certain religion	3	30
Those who are charismatic and compliant with staff	3	30
Anyone can be radicalized/difficult to detect	2	20
Those who disrespect rules	2	20
Those in financial difficulty	2	20
Those of a certain political leaning	2	20
Those with a low-education level	2	20
Those with mental health issues	2	20
Those who know how to manipulate the system	2	20
Those who are security literate	2	20
Those with a lack of personal boundaries	1	10
Gang members	1	10
Impulsive offenders	1	10

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Older, middle aged offenders with long sentences	1	10
Those close to getting out of prison	1	10
Those coming from a variety of ethnicities	1	10
Those coming from a variety of religious backgrounds	1	10
Those looking for a parental figure	1	10
Those who are considered high risk	1	10
Those with a big picture outlook/ independent thinkers	1	10
Quieter offenders	1	10
Similar offenders who are susceptible to gangs	1	10

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Note. *n* represents number of focus groups that noted the response. Total number of focus groups = 10.

Item C2: What external or environmental factors could make offenders susceptible to radicalization?

Unique Responses	Respondents	
	<i>n</i>	%
When significant events happen in the community or the world	5	50
Early in sentence	4	40
When they have negative experiences at the hands of “the system”	4	40
When vulnerable due to life events	4	40
Cultural norms/practices in certain geographical areas	3	30
No family support/sensitive family situation	3	30
Internet access	2	20
Potential for media attention/fame	2	20
Recent disappearance of the “Con Code” leaves room for radicalization	2	20
Perks offered by certain religions (diet, opportunities for movement)	2	20
The dynamic within the institution/population management practices	2	20
Accessibility to individuals in prison	1	10
Accessibility to law, money	1	10
After religious conversion	1	10
Culturally isolated	1	10
Dynamics in other institutions	1	10
Imams with undiscovered radical ideology	1	10
Low socio-economic status	1	10
Material coming into the institution (books, DVDs, etc.)	1	10
Threats/pressure to radicalize by other offenders	1	10

Note. *n* represents number of focus groups that noted the response. Total number of focus groups = 10.

Item C3: What are the security related impacts of radicalization while in the institution? What impacts could this have in larger society?

Unique Responses	Respondents	
	<i>n</i>	%
Could result in:		
An elevated increase in threats to the community	9	90
An increase in attempts to threaten/ attack staff	8	80
Population management concerns	8	80
A need for more staff	7	70
More dangerous/violent inmates	7	70
Pressure to segregate and/or transfer offenders (spread out or segregate the problem)	7	70
Inmates coming together/learning new 'skills' from one another	6	60
More work for institutional staff	6	60
Increased recruiting	5	50
Possible terrorist acts in institutions	4	40
A loss of control over institutional operations	3	30
More conflict	3	30
An increased need for intelligence-gathering capacities	2	20
A need for more training for staff	2	20
An increase in threats to the courts	1	10
An increased risk of offenders pretending to be rehabilitated	1	10
Attempts to break offenders out of the institutions	1	10
Increased hostage-takings	1	10

Note. *n* represents number of focus groups that noted the response. Total number of focus groups = 10.

**Appendix C: Operationalization and Results of Examination of  
Indicators Identified in the Literature and Focus Groups**

<b>Indicator</b>	<b>Source</b>	<b>Operationalization</b>	<b>Result</b>
<i>Socio-demographics and childhood history</i>			
Male	Bakker, 2006; Clutterbuck & Warnes, 2011; Kebbell & Porter, 2011; Monahan, 2012; Sageman, 2004	Demographic info: Male gender	Not significantly different
Middle or Lower class (contrasting results)	Bakker, 2006; Gartenstein-Ross & Grossman, 2008; Monahan, 2012; Sageman, 2004	DFIA: Lacks a skill area / trade / profession? ( <i>not endorsed</i> ) Lacks employment benefits? ( <i>not endorsed</i> ) Unemployed at the time of arrest? ( <i>not endorsed</i> ) Has no high school diploma? ( <i>not endorsed</i> ) DFIA-R: Marketable job skills obtained through experience are limited? ( <i>not endorsed</i> ) Unemployed at time of arrest? ( <i>not endorsed</i> ) Has less than high school diploma or equivalent? ( <i>not endorsed</i> )	Not significantly different  Not significantly different  Not significantly different  Not significantly different  Not significantly different  Radicalized: 69 %; All: 26%  Radicalized: 58%; All: 26%
Well educated – not well educated (contrasting results)	Bakker, 2006; Gartenstein-Ross & Grossman, 2008; Goli & Rezael, 2011; Jacques & Taylor, 2012; Porter & Kebbell, 2011; Sageman, 2004	DFIA: Has no high school diploma? ( <i>not endorsed</i> ) DFIA-R: Has less than high school diploma or equivalent? ( <i>not endorsed</i> )	Not significantly different  Radicalized: 58%; All: 26%
Have a family (wife, children) (contrasting results)	Bakker, 2006; Gartenstein-Ross & Grossman, 2008; Clutterbuck & Warnes, 2011; Jacques & Taylor, 2012; Monahan, 2012; Porter & Kebbell, 2011; Sageman, 2004;	Marital status: Married / common-law Single  DFIA: Has no parenting responsibilities? DFIA-R: Has no parenting responsibilities?	Not significantly different Not significantly different  Not significantly different  Not significantly different
Young age (20-30)	Bakker, 2006; Clutterbuck & Warnes, 2011; Jacques & Taylor, 2012; Kebbell & Porter, 2011; Monahan, 2012; Porter & Kebbell, 2011;	Demographic info: Age at sentence commencement?	Radicalized: <i>M</i> = 31 years; All: <i>M</i> = 34 years

	Sageman, 2004;		
Foreign recruitment	Sageman, 2004 (in Bakker, 2006)	--	
Semi-skilled or professional job; contrast with Goli & Rzael who found no difference associated with employment	Bakker, 2006; Goli & Rezael, 2011; Sageman, 2004	DFIA: Lacks a skill area / trade / profession? ( <i>not endorsed</i> ) DFIA-R: Marketable job skills obtained through experience are limited? ( <i>not endorsed</i> )	Not significantly different  Not significantly different
Some criminal history (majority support this – Jacques & Taylor, 2012 do not)	Bakker, 2006; Pressman, 2009; Clutterbuck & Warnes, 2011; Goli & Rezael, 2011; Jacques & Taylor, 2012; Monahan, 2012; Porter & Keibell, 2011; Sageman, 2004 (in Bakker, 2006)	Offence info: Previous federal sentence(s)	Radicalized: 18%; All: 35%
Decrease in social activities	Clutterbuck & Warnes, 2011	--	
Positive childhood experience	Porter & Keibell, 2011	DFIA: Spousal abuse during childhood? ( <i>not endorsed</i> ) Childhood lacked family ties? ( <i>not endorsed</i> ) Mother absent during childhood? ( <i>not endorsed</i> ) Maternal relations negative as a child? ( <i>not endorsed</i> ) Father absent during childhood? ( <i>not endorsed</i> ) Paternal relations negative as a child? ( <i>not endorsed</i> ) Parents' relationship dysfunctional during childhood? ( <i>not endorsed</i> ) Sibling relations negative during childhood? ( <i>not endorsed</i> ) Other relative(s) relations negative during childhood? ( <i>not endorsed</i> ) DFIA-R: Witnessed family violence during childhood? ( <i>not endorsed</i> ) Limited attachment to family unit during childhood? ( <i>not endorsed</i> ) Relations with parental figure were negative during childhood? ( <i>not endorsed</i> ) Abused during childhood?	Not significantly different Not significantly different Not significantly different Not significantly different Not significantly different Not significantly different Not significantly different Not significantly different Not significantly different Not significantly different Not significantly different Radicalized: 92%; All: 65% Not significantly different Radicalized: 85%; All: 53% Radicalized: 92%; All: 62%

		( <i>not endorsed</i> ) Family members criminally active during childhood? ( <i>not endorsed</i> )	Not significantly different
Early exposure to violence in home	Pressman, 2009	DFIA: Spousal abuse during childhood? DFIA-R: Witnessed family violence during childhood?	Not significantly different  Radicalized: 8%; All: 35%
Employed	Jacques & Taylor, 2012; Porter & Kebbell, 2011; Sageman, 2004	DFIA: Unemployed at the time of arrest? ( <i>not endorsed</i> ) DFIA-R: Unemployed at time of arrest? ( <i>not endorsed</i> )	Not significantly different  Radicalized: 69 %; All: 26%
Non-immigrant	Clutterbuck & Warnes, 2011; Jacques & Taylor, 2012; Porter & Kebbell, 2011	Citizenship info: Canadian citizen  Ethnicity info: White Black Aboriginal Other	Radicalized: 86 %; All: 95%  Not significantly different Not significantly different Radicalized: 4 %; All: 23% Radicalized: 26 %; All: 8%
Use of certain language	Focus groups	Offender info: Home language other than English or French	Radicalized: 26%; All: 7%
Receipt of welfare payments (not necessarily that they cannot get a job, but they need the time to devote to their extremist activities)	Kebbell & Porter, 2011	DFIA: Has used social assistance? DFIA-R: Has used social assistance?	Not significantly different  Not significantly different
<b>Associates</b>			
Social affiliation – activist, extremist, or radical friends / Friends’ support for extremism	Horgan, 2008; Monahan, 2012; Pressman, 2009; Sageman, 2004; Ungerer, 2011; Focus groups	DFIA: Has many criminal acquaintances? Has mostly criminal friends? DFIA-R: Has many criminal acquaintances? Has many criminal friends?	Radicalized: 83%; All: 66%  Not significantly different  Not significantly different  Not significantly different
Limited number of anti- radical friends / associates	Kebbell & Porter, 2011; McCauley & Moskalenko, 2011	DFIA-R: Prosocial support from friends is limited?	Not significantly different
Social affiliation – activist, extremist, or radical family members / Family support for extremism	Bakker, 2006; Clutterbuck & Warnes, 2011; Jacques & Taylor, 2012; Horgan, 2008; Monahan, 2012; Pressman, 2009; Ungerer, 2011	DFIA: Family members involved in crime? Family ties are problematic? DFIA-R: Family members	Not significantly different  Not significantly different  Not significantly different

		<p>criminally active during childhood?</p> <p>Has contact with criminal family members?</p> <p>Prosocial family support is limited?</p>	<p>Not significantly different</p> <p>Not significantly different</p>
Love affiliation – radical love interest	McCauley & Moskalenko, 2011	DFIA-R: Prosocial support from an intimate partner is limited?	Not significantly different
Contact with violent extremists / radical group	Pressman, 2009; Focus groups	<p>Offence info: Convicted of terrorism-related offences</p> <p>Alert info: Terrorism offence</p> <p>Affiliation info: Terrorist group</p>	<p>Radicalized: 11%; All: 0%</p> <p>Radicalized: 8%; All: 0%</p> <p>Radicalized: 20%; All: 0%</p>
Affiliations <i>early</i> in the radicalization process	Helfstein, 2012	--	
Membership or participation in radical political groups / gang	Kebbell & Porter, 2011	<p>DFIA: Has been affiliated with a gang?</p> <p>Gang member?</p> <p>DFIA-R: Suspected affiliation with street gang/organized crime?</p>	<p>Radicalized: 47%; All: 19%</p> <p>Radicalized: 29%; All: 11%</p> <p>Radicalized: 79%; All: 17%</p>
Discipleship	Ungerer, 2011	--	
Trusting only select and ideologically rigid religious authorities	Gartenstein-Ross & Grossman, 2008	--	
Need for commitment (to Islam and religious network)	Slootman & Tillie, 2006	--	
Restricted social contacts	Clutterbuck & Warnes, 2011	DFIA-R: Community attachment is limited?	Radicalized: 21%; All: 50%
Alienation	Goli & Rezael, 2011; Helmus, 2009; Pressman, 2009	<p>DFIA: Socially isolated? Unattached to any community groups?</p> <p>DFIA-R: Community attachment is limited?</p>	<p>Radicalized: 8%; All: 27%</p> <p>Not significantly different</p> <p>Radicalized: 21%; All: 50%</p>
Cross-ethnic intimate relationship	Goli & Rezael, 2011	--	
Closest friends are other immigrants	Goli & Rezael, 2011	--	
Changes in external communication (calls and letters)	Focus groups	--	
Changes in visits / visitors	Focus groups	<p>Visit info: Received visits last year? Received visits from</p>	<p>Not significantly different</p> <p>Radicalized: 1%; All: 0%</p>



		clergy last year?	
Evidence of being a charismatic/powerful leader	Focus groups	--	
<b>Attitudes</b>			
Perceptions of procedural justice	Moghaddam, 2005	--	
Moral engagement with a cause	Moghaddam, 2005	--	
Social categorization (assists with the us vs. them distinction)	Moghaddam, 2005; Focus groups	DFIA: Women/men roles are unequal? Ethnically intolerant? Intolerant of other religions? Intolerant of disabled persons?	Not significantly different  Radicalized: 16%; All: 5% Radicalized: 19%; All: 1% Not significantly different
Mistrustful of established order / policies	Slootman & Tillie, 2006	DFIA: Negative towards law? Negative towards police? Negative towards courts? Negative towards corrections? DFIA-R: Displays negative attitudes towards the criminal justice system? Displays negative attitudes towards the correctional system?	Radicalized: 90%; All: 64% Radicalized: 66%; All: 49% Radicalized: 68%; All: 48% Radicalized: 57%; All: 36%  Not significantly different  Not significantly different
Unclear identity – need for meaning and stability	Precht, 2007; Pressman, 2009; Slootman & Tillie, 2006; Victoroff, 2005	--	
Dissatisfied with current political, religious, ideological, or social issue	Horgan, 2008; Pressman, 2009	DFIA: Negative towards law?	Radicalized: 90%; All: 64%
Perceived possibility for them to improve the situation	Moghaddam, 2005	--	
Belief that engaging in violence is not inherently immoral and/or is necessary for change	Clutterbuck & Warnes, 2011; Helmus, 2009; Horgan, 2008; Pressman, 2009	DFIA: Supportive of instrumental violence? DFIA-R: Attitudes support instrumental / goal-oriented violence? Attitudes support expressive / emotional violence?	Not significantly different  Radicalized: 79%; All: 50%  Not significantly different
Desire for religious, political, or ideological change	Helmus, 2009	--	
Need for group belonging	Pressman, 2009	--	
Rejection of society and	Pressman, 2009	DFIA-R:	

values		Display non-conforming attitudes toward society?	Not significantly different
Social-political alienation / Radical views / verbalizing extreme political views	Wilner, 2010; Focus groups	DFIA: Negative towards law?	Radicalized: 90%; All: 64%
Dislike for western culture	Clutterbuck & Warnes, 2011	DFIA: Ethnicity is problematic? Religion is problematic?	Radicalized: 16%; All: 5% Radicalized: 14%; All: 2%
<b>Beliefs</b>			
Being a certain religion / having a certain belief structure (Islamic, White supremacist)	Focus groups	Offender info: Muslim Christian  Affiliation info: Affiliated with White supremacist or extremist racial organization	Radicalized: 35%; All: 6% Radicalized: 28%; All: 57%  Radicalized: 4%; All: 0%
Religious conversion / sudden interest in religion / change in ideology	Focus groups	--	
Exploitation of religion for personal gain	Focus groups	Grievance info: Grievances on religious / spiritual activities	Radicalized: 2%; All: 0%
Recruiting / encouraging religious conversion / imposing religion on others / preaching / having ideological arguments	Clutterbuck & Warnes, 2011; Gartenstein-Ross & Grossman, 2008; Focus groups	--	
Increase in strength/devotion to religious beliefs prior to joining extremist group	Bakker, 2006; Clutterbuck & Warnes, 2011; Porter & Kebbell, 2011; Precht, 2007; Sageman, 2004; Wiktorowicz, 2004; Wilner, 2010	--	
Orthodox religious interpretation (rigid, rule based) that may trump moral reasoning	Gartenstein-Ross & Grossman, 2008; Goli & Rezael, 2011; Monahan, 2012; Slootman & Tillie, 2006;	--	
Low tolerance for perceived theological deviance (close adherence to religious code)	Gartenstein-Ross & Grossman, 2008; Goli & Rezael, 2011	--	
Religiously observant / adherent or attend religious events	Bakker, 2006; Clutterbuck & Warnes, 2011; Goli & Rezael, 2011; Sageman, 2004	--	
Global view of Jihad battlefield	Ungerer, 2011	--	
Religious justification of	Kebbell & Porter, 2011;	DFIA:	

violence	Porter & Kebbell, 2011	Supportive of instrumental violence? DFIA-R: Attitudes support instrumental / goal-oriented violence? Attitudes support expressive / emotional violence?	Not significantly different  Radicalized: 79%; All: 50%  Not significantly different
Identifies by faith and not location or culture	Cole & Cole, 2009; Silber & Bhatt, 2007	--	
View that prison is not punishment but a "palace of isolation"	Ungerer, 2011	--	
Religion-related behaviours (e.g., change in diet, different art or hobby craft pursuits, participating in and/or leading prayer groups)	Focus groups	Grievance info: Grievances on amenities - food and/or diet	Radicalized: 6%; All: 2%
<b><i>Behavioural</i></b>			
Changes in compliance within institution	Focus groups	Charge info: No institutional charges within last year but charges prior to that	Not significantly different
Changes in acts or threats of violence (both directions)	Focus groups	Incident info: Incidents (assault, threat) Charges info: Charges (serious) Absence of any charges	Not significantly different  Not significantly different Radicalized: 81%; All: 51%
Attempts to corrupt / intimidate staff	Focus groups	Incident info: Incidents (assault or threaten staff)	Not significantly different
Atypically aggressive or frustrated	Pressman, 2009; Victoroff, 2005	DFIA: Aggressive? Hostile? Relations are described as predatory? DFA-R: Frequently feels intense anger? Frequently acts in an aggressive manner?	Not significantly different Not significantly different Not significantly different  Not significantly different Radicalized: 14%; All: 42%
Use or possession of extremist materials (books, websites)	Kebbell & Porter, 2011; Pressman, 2009; Focus groups	Incident info: Contraband (any) Unauthorized item (any) Unauthorized item ("other" type of unauthorized item only)	Radicalized: 6%; All: 17% Radicalized: 6%; All: 16% Radicalized: 4%; All: 10%
Fighting/Military training	Pressman, 2009	Alerts info: Explosives/weapons capability	Radicalized: 14%; All: 0%
Provide financial support for radical groups/causes	Clutterbuck & Warnes, 2011	Offence info: Convicted of providing property or service for a	Radicalized: 1%; All: 0%

		terrorist group	
Involved in charity work (provides exposure to deprivation experienced by victims or can act as a front for illegal activities)	Kebbell & Porter, 2011	--	
Engagement with extremely violent media / Changes in media consumption	Kebbell & Porter, 2011; Focus groups	--	
Operational capability to commit acts of violent extremism	Kebbell & Porter, 2011	Alerts info: Explosives/weapons capability	Radicalized: 14%; All: 0%
Previous attempt or actual participation in political or religious conflict	Kebbell & Porter, 2011; McCauley & Moskalenko, 2011	Offence info: Convicted of terrorism-related offences	Radicalized: 11%; All: 0%
Target selection for extremist act	Kebbell & Porter, 2011	--	
Need for personal security while in prison	Wilner, 2010	Alerts info: Protective custody request/history  DFIA: Has been affiliated with a gang? ( <i>not endorsed</i> ) Gang member? ( <i>not endorsed</i> ) DFIA-R: Suspected affiliation with street gang/organized crime? ( <i>not endorsed</i> )	Not significantly different  Radicalized: 53%; All: 81% Radicalized: 71%; All: 89% Radicalized: 21%; All: 83%
Credible expression to use violence or desire for martyrdom	Kebbell & Porter, 2011; Pressman, 2009	--	
Dehumanization of opponent	Kebbell & Porter, 2011; Pressman, 2009	DFIA: Incapable of understanding the feelings of others? DFIA-R: Empathy skills are limited?	Radicalized: 30%; All: 51% Not significantly different
Homegrown identify by country of origin	Goli & Rezael, 2011	Citizenship info: Not a Canadian citizen	Radicalized: 14%; All: 5%
<b><i>Psychological</i></b>			
Attraction to risk taking; fearlessness; adventurism	McCauley & Moskalenko, 2011; Ungerer, 2011; Victoroff, 2005	DFIA: Takes risks inappropriately? Thrill-seeking? Impulsive? DFIA-R: Engages in thrill-seeking behaviour? Impulsive?	Not significantly different Not significantly different Radicalized: 62%; All: 79%  Not significantly different Radicalized: 31%; All: 75%
Low self-esteem	Lankford, 2010;	DFIA-R:	

	Pressman, 2009	Low self-esteem?	<i>Could not calculate</i>
Emotional vulnerability (concept incorporates many of the other variables included in this Psychological list)	Horgan, 2008	--	
Impulse control impairment	Victoroff, 2005	DFIA: Impulsive? DFIA-R: Impulsive?	Radicalized: 62%; All: 79%  Radicalized: 31%; All: 75%
Vulnerable to charismatic influence	Victoroff, 2005	DFIA: Easily influenced by others? Often victimized in social relations?	Not significantly different Radicalized: 0%; All: 14%
Desire to escape moral responsibility for their actions	Lankford, 2010	DFIA-R: Denies crime or uses excuses to justify or minimize crime?	Not significantly different
Poor coping skills	Lankford, 2010	DFIA: Assertion problems? Copes with stress poorly? Poor conflict resolution? Has low frustration tolerance? Worries unreasonably? DFIA-R: Assertiveness skills are limited? Has difficulty coping with stress? Has low frustration tolerance?	Not significantly different Radicalized: 37%; All: 76% Radicalized: 71%; All: 83% Not significantly different Not significantly different  Not significantly different Radicalized: 29%; All: 64% Not significantly different
Self-destructive	Victoroff, 2005	DFIA-R: Suicide attempts / self-harm history?	<i>Could not calculate</i>
Intolerance of ambiguity	Victoroff, 2005 (see also – social categorization under Attitudes)	DFIA: Has low frustration tolerance? DFIA-R: Has low frustration tolerance?	Not significantly different  Not significantly different
Affectively atypical (depression, irritability, anxiety) / mental health concerns	Victoroff, 2005; Focus groups	DFIA: Has a mental health diagnosis? Prescribed psychotropic medication?	Not significantly different  Radicalized: 11%; All: 24%
Identity seeking	Victoroff, 2005	--	
High need for approval and acceptance	Pressman, 2009	DFIA: Easily influenced by others?	Not significantly different
Low empathy for those outside own group	Pressman, 2009	DFIA: Has disregard for others? DFIA-R: Empathy skills are limited?	Not significantly different  Not significantly different

<b>Perceived Grievance</b>			
Perceived group deprivation or injustice	CSIS, 2011; McCauley & Moskalenko, 2011; Moghaddam, 2005; Pressman, 2009; Sloodman & Tillie 2006; Victoroff, 2005	--	
Perceived personal grievance	McCauley & Moskalenko, 2011; Precht, 2007; Pressman, 2009	Grievance info: Any grievances; Grievances – religious / spiritual programs Grievances – social / cultural activities Grievances – discrimination Grievances, amenities – food and / or diet	Not significantly different Radicalized: 2%; All: 0%  Not significantly different  Not significantly different  Radicalized: 6%; All: 2%
Increase in official grievances	Focus groups	Grievance info: Any grievances; Grievances – religious / spiritual programs Grievances – social / cultural activities Grievances – discrimination Grievances, amenities – food and / or diet	Not significantly different Radicalized: 2%; All: 0%  Not significantly different  Not significantly different  Radicalized: 6%; All: 2%
Identification with perceived victims	Horgan, 2008	--	
Desire to respond to perceived grievance (e.g., revenge)	CSIS, 2011; Helmus, 2009; Pressman, 2009; Ungerer, 2011; Victoroff, 2005	--	
History of responding to grievances	Kebbell & Porter, 2011; Neumann, 2010	--	
Upset with country's policy (e.g., foreign policy)	Kebbell & Porter, 2011; Porter & Kebbell, 2011; Pressman, 2009; Wilner, 2010	--	
<b>Other</b>			
Overcrowded, disorderly prison	Neumann, 2010	--	
Changes in appearance – facial hair / length of hair / manner of dress	Focus groups	--	
Certain tattoos	Focus groups	Physical feature info: Has tattoo(s)	Radicalized: 27%; All: 59%
Self-identification / peer report	Focus groups	Alert info: Terrorism offence  Affiliation info: Terrorist group	Radicalized: 8%; All: 0%  Radicalized: 20%; All: 0%
Adopting alternative name	Focus groups	Alias table: Existence of any alias	Not significantly different
Convicted of robbery	Focus groups	Offence info:	

offence		Robbery	Not significantly different.
Use of symbols	Focus groups	--	

*Note.* For a small number of indicators, insufficient data were available to calculate proportions with confidence.

## Appendix D: Literature-Suggested Constructs with No Available OMS Indicator Variable

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Literature-Suggested Construct
Superficial knowledge of religion
Seeking maximum attention and exposure
Believes his ideology justifies violence
Believes he or his “group” are the subjects of injustice
He has identified a target group as the source of that injustice
Dehumanizes the target group
Alienation from civil society and democracy
Strong belongingness needs
Does not wish to be identified with “normal” society – wishes to be “other”
Low empathy for anyone outside his group
Has accepted martyrdom as necessary
Hate, frustration, feels persecuted
Has pictures, pamphlets about martyrs
Wants to be “in the gang”
Believes political action does not work
Identification with victims (police/military)
Believes he will achieve more in death than in life
Has kinship or social ties to people already involved in terrorism/extremism
Facilitating beliefs in violent action
Facilitating beliefs in martyrdom
Facilitating beliefs in political action
Facilitating beliefs in ideological action
Beliefs his “community” needs defending
Beliefs his “community” is under attack
Believes “everyone” is against him
Expressions of disgust for others
Refers to others as animals “dogs” Etc.
Refers to others as “monsters”, “Demons”, or “Devils”
Has expressed desire for martyrdom
Believes the prison system is just one more unjust system that must be struggled against and overcome
Belongingness to an extremist group fills a “Hole” – someone tells him he is special – a measure of “specialness”
Has literature/pamphlets about extremism
Has had mail intercepted with “questionable” materials related to extremism
Has family/friends/community support for violent action
Seeks or has contact with other violent extremists
Expresses anger against the government
Financial indicators

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Literature-Suggested Construct

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High density housing  
Tales of discrimination  
Tales of victimization  
Objections to sniffer/other dogs  
Objections to strip searches/searches  
Military or paramilitary training  
One's own group is tragically obstructed  
Risk & Status (Tolerance for risk taking behaviours – enhancement of personal status)  
Loss of prior social connection  
Glorification of violent action  
Has pictures on walls of jihad  
Travel out of country for training or fighting  
Love – somebody already “in the movement”  
Glorification of the past (especially one's own group)  
Utopian thinking  
Catastrophizing – focus on calamities past, present , and future  
Perceived need for unconventional and extreme measures  
Atypical overextension of military terminology  
Rationalizations absolving oneself (and one's group) of responsibility for any harmful consequences of one's violence  
Expectations of supernatural intervention  
Imperative to annihilate evil and purify the world  
Duty to kill or initiate hostilities  
Glorification of dying for the cause  
Machiavellianism in the service of the sacred  
Elevation of intolerance and vengeance to a virtue  
Dehumanizing one's adversaries  
Modernity seen as disastrous  
Civil government seen as illegitimate  
Parochial Altruism  
Substantial significance gain (personal status, financial)  
Attainment of hero or martyr status in others eyes  
A “significant quest”  
Problems with authority of prison chaplain  
Movement to more religious lifestyle  
Preaches to other inmates  
Chastises other inmates on lifestyle  
Acts as self-made religious leader  
Tutors other inmates on religious matters  
Racist attitudes and opinions – Esp. anti-Israel  
Cozies up to new inmates/befriends them  
Known political leanings  
Known change in religious status  
Attempts to “force out” religious leaders

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Literature-Suggested Construct

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Threats of bullying of other offenders about religious views  
Sudden interest in physical fitness  
Significant weight loss  
“Military Style” calisthenics/exercises  
Need to belong  
Need for status or “limelight”  
Identity confusion  
Failure to integrate into one’s ethnic, religious, or broader community  
“Keen sense of social failure”  
Fear of rejection  
Eager to please  
Tends to avoid conflicts  
Specific charitable work  
Forgery  
Fraud  
Money laundering  
Pulling away from others that he used to hang with  
Tries to limit contact with “westerners” or “non-believers”  
Weaker professional prospects  
Less privileged socioeconomic upbringing  
Weaker educational background  
Disenfranchisement  
Feeling culturally uprooted or displaced  
Longing for community  
Feelings of social isolation  
Lack of success  
Being shunned  
Young with few responsibilities  
Expresses contempt for others (Esp. staff)  
Celebrates terrorist acts  
Voices anti-western sentiments  
Voices ideas of “corrupt western civilization”  
Changes in the use of TV/Music - prayer  
Adopts different “foreign sounding” name  
Pledges loyalty to Islam or some other entity  
Has moved cells/requested move to be near other inmates  
Speaks non-English/French in front of staff  
Uses codes or code words not obvious to staff  
Communicates with religious service providers outside of the prison  
Secretive/excessively protective of personal belongings  
High affective valence regarding ideological issues  
Feelings of having a “personal stake”  
Low cognitive flexibility  
Low tolerance for ambiguity

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Literature-Suggested Construct

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Elevated tendency toward attribution error

Capacity to suppress constraints against harming innocents

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*Note.* There is some overlap/duplication in the literature suggested constructs due to multiple sources. The pronouns “he/his” have been used throughout this list as this is the way these variables are expressed in the literature.

However, it is acknowledged that women offenders may also be drawn to terrorism/extremist activities.

**Appendix E: Frequency Analysis Results - Basic Constructs Indicator Variables  
per Basic Construct**

Basic Construct with Indicator Variables	Scored as “1” % (n)	Scored as “0” % (n)	Missing % (n)
<b>Limited Attachment Skills</b>			
Displays narrow and rigid thinking	37.15 (8,662)	38.66 (9,014)	24.20 (5,642)
Listening skills are limited	11.27 (2,627)	36.86 (8,596)	51.87 (12,095)
Has difficulty solving interpersonal problems	52.60 (12,266)	23.20 (5,410)	24.20 (5,642)
Empathy skills are limited	48.05 (11,205)	27.49 (6,410)	24.46 (5,703)
Frequently interprets neutral situations as hostile	10.01 (2,334)	36.76 (8,571)	53.23 (12,413)
Displays non-conforming attitudes toward society	52.05 (12,137)	24.50 (5,712)	23.45 (5,469)
Ability to link actions to consequences is limited	43.94 (10,247)	32.23 (7,515)	23.83 (5,556)
Assertiveness skills are limited	26.50 (6,179)	48.92 (11,407)	24.58 (5,732)
<b>Poor Family Support</b>			
Prosocial support from friends is limited	33.18 (7,737)	13.89 (3,238)	52.93 (12,343)
Prosocial family support is limited	16.45 (3,836)	31.58 (7,364)	51.97 (12,118)
Prosocial support from an intimate partner is limited	26.95 (6,285)	20.77 (4,842)	52.28 (12,191)
Assessed need relating to associates - Dichotomized	50.90 (11,866)	42.70 (9,958)	6.40 (1,494)
Limited attachment to family during childhood	21.58 (5,033)	54.74 (12,764)	23.68 (5,521)
Composite variable of ‘easily influenced by others’ and ‘assertiveness skills are limited’	26.03 (6,069)	49.16 (11,464)	24.81 (5,785)
Often victimized in social relations	3.58 (834)	23.44 (5,466)	72.98 (17,018)
<b>Violent Attitudes</b>			
Attitudes support instrumental/goal-oriented violence	37.73 (8,798)	37.96 (8,851)	24.31 (5,669)
Low frustration tolerance	34.65 (8,080)	39.77 (9,273)	25.58 (5,965)
Attitudes support expressive/emotional violence	29.36 (6,845)	19.04 (4,440)	51.60 (12,033)
Frequently suppresses anger	19.48 (4,542)	53.71 (12,523)	26.82 (6,253)
Frequently feels intense anger	19.98 (4,660)	54.15 (12,626)	25.87 (6,032)
Uses excessive force to discipline child	1.15 (260)	43.70 (10,190)	55.15 (12,868)

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Basic Construct with Indicator Variables	Scored as "1" % (n)	Scored as "0" % (n)	Missing % (n)
<b>Negative Attitudes Towards Conventional Society</b>			
Displays negative attitudes toward the criminal justice system	46.51 (10,845)	29.94 (6,981)	23.55 (5,492)
Displays non-conforming attitudes toward society	52.05 (12,137)	24.50 (5,712)	23.45 (5,469)
Displays negative attitudes toward the correctional system	28.75 (6,703)	47.44 (11,062)	23.81 (5,553)
Takes pride in criminal exploits	7.37 (1,719)	40.31 (9,399)	52.32 (12,200)
Disrespects public or commercial property	27.66 (6,450)	47.96 (11,184)	24.48 (5,684)
<b>Disorderly Life</b>			
Community attachment is limited	43.01 (10,028)	32.77 (7,641)	24.23 (5,649)
Constructive leisure activities are limited	44.13 (10,290)	30.74 (7,169)	25.13 (5,859)
Unstable accommodation	26.93 (6,279)	48.81 (11,382)	24.26 (5,657)
Financial instability	52.51 (12,245)	23.33 (5,439)	24.16 (5,634)
Has used social assistance	42.98 (10,022)	30.54 (7,122)	26.48 (6,174)
Use of community resources is limited	21.38 (4,986)	53.41 (12,455)	25.21 (5,877)
Has previously been referred to programs addressing deficit(s) under this domain	6.03 (1,407)	69.63 (16,237)	24.34 (5,674)
<b>Family Violence</b>			
Presence of family violence incidents - Dichotomized	22.37 (5,216)	77.63 (18,102)	-
Witnessed family violence during childhood	24.25 (5,655)	49.20 (11,472)	26.55 (6,191)
Victimized by spousal abuse	10.23 (2,386)	65.28 (15,223)	24.49 (5,709)
Perpetrated spousal violence	25.56 (5,961)	49.08 (11,445)	25.35 (5,912)
Attitudes supportive of spousal violence	13.49 (3,145)	60.78 (14,173)	25.73 (6,000)
Uses excessive force to discipline child	1.12 (260)	43.70 (10,190)	55.18 (12,868)
Attitudes supportive of domestic violence	5.73 (1,336)	20.88 (4,868)	73.39 (17,114)

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Basic Construct with Indicator Variables	Scored as “1” % (n)	Scored as “0” % (n)	Missing % (n)
<b>Grievances</b>			
Presence of diet related complaints and grievances – Dichotomized	10.12 (2,360)	89.88 (20,958)	-
Presence of religious complaints and grievances - Dichotomized	1.29 (301)	98.71 (23,017)	-
Presence of social complaints and grievances - Dichotomized	1.96 (457)	98.04 (22,861)	-
Presence of articles seized complaints and grievances - Dichotomized	2.58 (601)	97.42 (22,717)	-
Presence of hunger strikes – Dichotomized	.06 (139)	99.40 (23,179)	-
Presence of discrimination complaints and grievances - Dichotomized	2.80 (652)	97.20 (22,666)	-
<b>Employment</b>			
Work ethic can be described as poor	13.69 (3,192)	29.70 (6,926)	56.61 (13,200)
Job skills obtained through formal training are limited	51.59 (12,029)	23.14 (5,396)	25.27 (5,893)
Unemployed at time of arrest	46.87 (10,928)	28.30 (6,598)	24.84 (5,792)
Job history has been unstable	55.59 (12,963)	19.68 (4,590)	24.72 (5,765)
Marketable job skills obtained through experience are limited	38.73 (9,032)	36.20 (8,442)	25.06 (5,844)
Employment history is absent	11.28 (2,630)	64.30 (14,993)	24.42 (5,695)
Dissatisfied with job skills	37.41 (8,723)	35.08 (8,180)	27.51 (6,415)
Belief in oneself to improve employability is low	8.17 (1,905)	37.89 (8,835)	53.94 (12,578)
<b>Concern For Personal Safety</b>			
Presence of protective custody requests - Dichotomized	6.00 (1,399)	94.00 (21,919)	-
Presence of a fight where the inmate was the victim – Dichotomized	1.38 (321)	98.62 (22,997)	-
Presence of assaults where the inmate was a victim – Dichotomized	9.16 (2,135)	90.84 (21,183)	-

**Appendix F: Factor Pattern and Final Communality Estimates from Principle Component Analysis of Indicator Variables**

	Component		Item #	Item
	1	2		
<b>Limited attachment skills (<i>n</i> =10,376)</b>				
.67	-.30	.54	1	<b>Displays narrow and rigid thinking</b>
.68	.14	.48	2	Listening skills are limited
.60	.35	.48	3	<b>Has difficulty solving interpersonal problems</b>
.65	-.26	.49	4	<b>Empathy skills are limited</b>
.63	-.04	.46	5	Frequently interprets neutral situations as hostile
.40	-.55	.46	6	Displays non-conforming attitudes toward society
.44	.14	.22	7	Ability to link actions to consequences is limited
.34	.73	.64	8	Assertiveness skills are limited
<b>Poor family support (<i>n</i> =10,244)</b>				
.74	.29	.63	1	<b>Prosocial support from friends is limited</b>
.72	.22	.57	2	<b>Prosocial family support is limited</b>
.62	.11	.40	3	<b>Prosocial support from an intimate partner is limited</b>
.46	-.70	.70	4	Assessed need relating to associates - dichotomized
.55	.28	.38	5	<b>Limited attachment to family during childhood</b>
.26	.57	.40	6	Composite variable of “easily influenced by others” and “assertiveness skills are limited”
-	-	-	7	Often victimized in social relations [Removed from analysis due to a high proportion of missing data]
<b>Violent attitudes (<i>n</i> =9,640)</b>				
.58	-	.33	1	<b>Attitudes support instrumental/goal-oriented violence</b>
.76	-	.77	2	<b>Low frustration tolerance</b>
.74	-	.55	3	<b>Attitudes support expressive/emotional violence</b>
.59	-	.59	4	<b>Frequently suppresses anger</b>
.79	-	.63	5	<b>Frequently feels intense anger</b>
.15	-	.02	6	Uses excessive force to discipline child
<b>Negative attitudes toward conventional society (<i>n</i> =10,870)</b>				
.74	-	.55	1	<b>Displays negative attitudes toward the criminal justice system</b>
.63	-	.40	2	<b>Displays non-conforming attitudes toward society</b>
.75	-	.58	3	<b>Displays negative attitudes toward the correctional system</b>
.58	-	.33	4	Takes pride in criminal exploits
.58	-	.34	5	<b>Disrespects public or commercial property</b>
<b>Disorderly Life</b>				
.74	-.33	.66	1	<b>Community attachment is limited</b>
.74	-.20	.59	2	<b>Constructive leisure activities are limited</b>
.66	.21	.48	3	<b>Unstable accommodation</b>
.66	.29	.51	4	<b>Financial instability</b>

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Component			Item #	Item
1	2	$h^2$		
Disorderly Life Continued...				
.52	.51	.53	5	<b>Has used social assistance</b>
.48	-.63	.62	6	Use of community resources is limited
.31	.34	.21	7	Has previously been referred to programs addressing deficit(s) under this domain
Family violence				
.85	-	.74	1	<b>Presence of family violence incidents - Dichotomized</b>
.34	-	.12	2	Witnessed family violence during childhood
.49	-	.24	3	Victimized by spousal abuse
.87	-	.75	4	Perpetrated spousal violence
.77	-	.59	5	<b>Attitudes supportive of spousal violence</b>
.21	-	.04	6	Uses excessive force to discipline child
-	-	-	7	Attitudes supportive of domestic violence [Removed from analysis due to a high proportion of missing data]
Grievances				
.63	-	.40	1	<b>Presence of diet related complaints and grievances – Dichotomized</b>
.52	-	.27	2	Presence of religious complaints and grievances – Dichotomized
.54	-	.29	3	Presence of social complaints and grievances – Dichotomized
.51	-	.26	4	Presence of articles seized complaints and grievances – Dichotomized
.29	-	.08	5	Presence of hunger strikes – Dichotomized
.53	-	.29	6	Presence of discrimination complaints and grievances – Dichotomized
Employment				
.65	-	.42	1	<b>Work ethic can be described as poor</b>
.62	-	.58	2	<b>Job skills obtained through formal training are limited</b>
.62	-	.39	3	<b>Unemployed at time of arrest</b>
.71.76	-	.76	5	<b>Marketable job skills obtained through experience are limited</b>
.58	-	.33	6	<b>Employment history is absent</b>
.63	-	.40	7	<b>Dissatisfied with job skills</b>
.45	-	.20	8	<b>Belief in oneself to improve employability is low</b>

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Component			Item #	Item
1	2	$\underline{h}^2$		
Concern for personal safety				
.67	-	.45	1	<b>Presence of protective custody requests - Dichotomized</b>
.49	-	.24	2	Presence of a fight where the inmate was the victim – Dichotomized
.75	-	.56	3	<b>Presence of assaults where the inmate was a victim – Dichotomized</b>

*Note.* Bolded font denotes items that were retained after PCA.