

# **Remorse, Psychopathology, Psychopathic Characteristics, and Recidivism among Adolescent Offenders**

by

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Dissertation Submitted in Partial Fulfillment  
of the Requirements for the Degree of  
Doctor of Philosophy

in the  
Department of Psychology  
Faculty of Arts and Social Sciences

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**SIMON FRASER UNIVERSITY**

**Summer 2013**

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## **Abstract**

Remorse has long been considered important to the juvenile justice system. However, the nature of this construct has not yet been clearly articulated, and little research has examined its associations with other theoretically and legally relevant variables. The present study was intended to address these issues by examining relationships among remorse, psychopathology, psychopathic characteristics, and recidivism in a sample of adolescent offenders (N = 97) using the theoretically and empirically established framework of guilt and shame (Tangney & Dearing, 2002). Findings indicated that guilt was negatively related to recidivism, psychopathic characteristics, anger problems, depression, and anxiety. Furthermore, guilt provided incremental validity beyond established risk factors for offending and existing measures of “remorse” in the prediction of recidivism. In contrast to guilt, shame was positively related to recidivism, behavioural features of psychopathy, and numerous mental health problems. Moreover, the externalization of blame that is considered an important feature of shame provided incremental validity in the prediction of recidivism beyond established risk factors for offending as well as existing measures of “remorse”. These results suggest that assessment of guilt, shame, and externalization of blame may be of greater utility than “remorse”, and also underscore these features as potentially important treatment targets for adolescent offenders.

**Keywords:** Guilt; Shame; Remorse; Young Offenders; Offending; Psychopathy; Mental Health

*To Nathalie.*

## **Acknowledgements**

I wish to thank my senior supervisor, Dr. Jodi Viljoen, who for the past six years has been a constant source of support, encouragement, and faith. She has stood steadfastly by my side while also allowing me the freedom to pursue my interests and passions. Her flexible yet unwavering mentorship taught me that I can do better than my best, and I will carry that with me forever.

My committee members, Drs. Kevin Douglas and Steve Hart, have always imparted their amazing intellect and wisdom with an attitude of kindness. I am grateful to them for continually inspiring me to rise to a new standard.

Dr. Alex Chapman's clinical mentorship transformed my professional identity and interests. I thank him for instilling confidence in me and for helping me to think about the emotions explored in this research with greater depth.

My colleagues in the Mental Health and Youth Justice Lab were unflappable in the face of the many ups and downs of this project. It has been a delight to work with them.

The youth who participated in this study generously shared their stories and their time, and I am grateful for the opportunity to have learned from them.

My wonderful friends Andrew, Sarah, Sophie, Mike, Ramsay, Shawn, Luke, Tabassum, and Glynnis carried me through the thorny patches. I am fortunate to have had their truly unconditional support.

My mother, father, and sister provided weekly phone calls, quarterly family dinners, and daily love that always put the wind back in my sails. I thank them for always being there.

Lastly, my friend Nathalie Lovasz deserves more credit for my completion of this project than I can possibly describe. I thank her for believing in me when I needed it most, and for all the fun along the way.

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## Preface

The notion of remorse has captivated interest across numerous disciplines for centuries. In the context of religion, remorse is considered to be an acknowledgment of complicity in sin (Bassett et al., 2011), with roots of this experience to be found in the original transgression of Adam and Eve (Thomas & Parker, 2004). In literature, remorse has been characterized as a “gnawing from the inmost heart” (Hawthorne, 1978, p. 182) and as “Bloody instructions which, being taught, return / To plague th’inventor” (Shakespeare, trans. 1992, 1. 7. 9-10). Given the intensity of affect associated with remorse, as well as its links to the commission of harmful acts, this emotion has also garnered particular attention in psychology and law. Remorse can have a considerable impact on legal decisions (e.g., Slobogin, 1999) based on the notion that remorse following a crime is desirable whereas lack of remorse is an aggravating factor (Duncan, 2002). Despite the importance of this construct to the justice system, however, psychologists have struggled to come to a consensus regarding the definition of remorse and the optimal ways to measure it (Proeve & Tudor, 2010). To illustrate, conceptualizations of remorse thus far have ranged from reactions to unacceptable sexual impulses (Freud, 1930/2002) to cognitions about having done wrong to others (Proeve & Tudor, 2010) to combinations with other constructs such as empathy (Borum et al., 2006). Due to these foundational difficulties regarding the definition of remorse, even less is known about its relationship with other variables that might inform its relevance to the law (e.g., recidivism).

Further efforts in this area are needed. A search for the term “remorse” in the PsycINFO database on March 5, 2013 yielded 351 peer-reviewed articles, indicating that relatively little research has been devoted to this subject (by contrast, a search for the term “psychopathy” yields 4622 results). The number of results plummets to a mere 46 when the search terms “juvenile” or “adolescent” are added, demonstrating that even less is known about the experience of remorse among youth. This problem is especially troubling given that Canadian Supreme Court cases involving juveniles cite remorse as an important consideration in decisions such as sentencing (*R. v. C.*, 2005) and transfer to adult court (*R. v. L.*, 1989). More broadly, principles of the *Youth Criminal Justice Act* (YCJA; 2003) that are especially relevant to this issue include “promoting the

rehabilitation and reintegration of young persons” (s. 3 [1]) as well as “address[ing] the circumstances underlying their offending behaviour” (s. 3[1]). These aims could potentially be furthered by the development of a clear conceptualization of remorse, highlighting empirical links between remorse and issues related to rehabilitation, and by demonstrating whether this construct is indeed a circumstance that underlies offending behaviour among youth.

The present research was intended to address these needs through a longitudinal study of adolescent offenders on probation in British Columbia, Canada. It is divided into three chapters, with each describing a distinct aspect of the study. Most foundationally, all chapters are guided by the proposal that measurement of remorse could be informed by the empirically supported theoretical framework of guilt and shame (Lewis, 1971; Tangney & Dearing, 2002). Although both of these emotions may arise in response to a transgression, guilt is a negative evaluation of *behaviour* whereas shame is a negative evaluation of the *self* (e.g., Tangney et al., 1996). The related but differing nature of guilt and shame is highlighted, and an argument is presented that both could be relevant to the construct referred to as “remorse.” Furthermore, the framework is buttressed by distinguishing between guilt and shame as specifically related to an offence (Wright & Gudjonsson, 2007) versus guilt and shame as related to life circumstances more generally (e.g., Tangney & Dearing, 2002).

Guided by this framework, Chapter 1 is an investigation of the relationship of guilt and shame to psychopathy and other forms of psychopathology. It also details developmental differences in guilt and shame across adolescents of different ages. First, with regard to psychopathy, extant theory has long held that “lack of remorse” is a key feature of the disorder (e.g., Cleckley, 1941; Hare, 1991). However, no studies have directly examined the relationship between psychopathic characteristics and remorse. Chapter 1 details investigation of the hypothesis that contrary to a straightforward “lack of remorse,” guilt may be negatively related to psychopathy while shame may be *positively* related to the behavioural and antisocial features of the disorder. Secondly, with regard to other forms of psychopathology, a sizeable body of research indicates that shame is a risk factor for numerous mental health problems whereas guilt is unrelated or potentially protective against these problems (Tangney et al., 2007). As such, this study includes an examination of whether such findings hold true among adolescent offenders.

This question is especially relevant for justice-involved youth in light of high rates of mental disorder in this population (e.g., Teplin et al., 2006). Finally, with regard to developmental differences, the present research explores whether youths of differing ages report differing levels of guilt and shame. Given that remorse appears to be an influential factor in legal decisions involving adolescents (e.g., *R. v. C.*, 2005), this study broaches the issue of whether legal expectations of remorse should be adjusted based on the age of the youth in question. On the whole, the three research questions addressed in Chapter 1 speak most directly to the YCJA principle of “promoting the rehabilitation and reintegration of young persons” (s. 3 [1]) by illustrating how guilt and shame may inform treatment efforts for adolescent offenders.

Chapter 2 describes an examination of the relationship between guilt, shame, and recidivism. A small number of studies have addressed this issue among adults, non-offender community samples, and incarcerated youth, but the present study is the first truly prospective study of this nature with participants under the age of 18. This study also includes an investigation of whether guilt and shame contribute uniquely to the prediction of reoffending beyond other established risk factors for recidivism as well as existing measures of “remorse”. In doing so, the present research addresses the YCJA principle of whether guilt and shame are “circumstances underlying...offending behaviour” (s. 3[1]) as well as the issue of whether the framework of guilt and shame may offer any added benefit above existing risk assessment practices.

Finally, Chapter 3 (the General Discussion) summarizes key findings from the above studies and highlights areas for further research. It is noted that conceptual and definitional consensus on remorse is needed in light of the marked inconsistency evidenced in past (e.g., Freud, 1930/2002) and recent (Proeve & Tudor, 2010) theory and research. In turn, an argument is made that emerging consensus should inform refinement of assessment practices for remorse, which should also maintain a distinction between offence-related and non-offence-related guilt and shame. It is emphasized that such practices should be guided by research on developmental differences in guilt and shame among adolescents. Finally, Chapter 3 concludes with a call for research on relevant interventions such that these findings may help to steer meaningful changes for justice-involved youth.

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# **1. Chapter 1. Remorse, Psychopathology, and Psychopathic Characteristics among Adolescent Offenders**

## **1.1. Abstract**

Remorse has long been important to the juvenile justice system. However, the nature of this construct has not yet been clearly articulated, and little research has examined its relationships with other theoretically and legally relevant variables. The present study was intended to address these issues by examining relationships among remorse, psychopathology, and psychopathic characteristics in a sample of adolescent offenders (N = 97) using the theoretically and empirically established framework of guilt and shame (Tangney & Dearing, 2002). Findings indicated that shame was positively related to behavioural features of psychopathy, whereas guilt was negatively related to psychopathic characteristics more broadly. In addition, shame was positively associated with numerous mental health problems whereas guilt was negatively associated with anger, depression, and anxiety. These results provide empirical support for theory that psychopathy is characterized by lack of remorse (e.g., Hare, 1991), and also underscore shame and guilt as potentially important treatment targets for adolescent offenders.

## 1.2. Introduction

The construct of remorse has played a long-standing role in the juvenile justice system. Remorse is emphasized in Canadian and United States case law (e.g., *Hall v. State*, 1998; *R. v. C.*, 2005), legal scholarship and theory (e.g., Duncan, 2002), forensic psychological assessment instruments (e.g., Forth et al., 2003; Frick & Hare, 2001), and the popular press (e.g., “Jordan Brown”, 2010). Despite the apparent importance of this construct for justice-involved youth, however, little research has investigated its relationships with other theoretically related and legally relevant characteristics. The purpose of the present study was to examine the relationship of remorse with psychopathic characteristics and psychopathy among adolescent offenders.

Although remorse has been underscored in numerous arenas relevant to juvenile law, no well-articulated and consistent definition of this construct exists. Case law has defined remorse as being “sorry” about what happened (*R. v. Fungler*, 1992) or as being concerned about the victim (*R. v. D.H.*, 1993). Forensic psychological science has treated remorse as “feeling bad” after a misdeed (Frick & Hare, 2001), or as being analogous to other constructs such as empathy (Borum et al., 2006) and guilt (e.g., Tangney et al., 2011; ten Brinke et al., 2012). It appears that the common thread among these notions of remorse is that it is an unpleasant affective event that follows a transgression. However, it remains unclear as to the emotion(s) which most closely describe this experience, any accompanying cognitions, and the focus of these thoughts and feelings (e.g., on the transgression itself or elsewhere).

In the absence of relevant research and theory addressing these questions, it is proposed here that a useful means of defining remorse may be the framework of guilt and shame. Both of these emotions involve negative affect (e.g., Tangney et al., 1992), which aligns with the typical usage of remorse in forensic contexts (e.g., Frick & Hare, 2001). However, according to the framework initially described by Lewis (1971) and subsequently supported in a wide array of theory and empirical research (Tangney & Dearing, 2002; Tangney, Stuewig, & Mashek, 2007; Tracy & Robins, 2006), the focus of

guilt differs from that of shame. In particular, whereas the target of guilt is a specific event or behaviour (e.g., “I *did* that bad *thing*”), shame involves a negative evaluation of the *self* as a corollary of the event or behaviour (e.g., “I did that bad thing and therefore I am a *bad person*”). Although shame and guilt are often tied to an instance of wrongdoing and can exist in the moment (Ausubel, 1955; Wicker, Payne, & Morgan, 1983; Tangney & Dearing, 2002), there are also individual differences in overall propensities to experience these emotions across a variety of situations (i.e., “state” versus “dispositional” shame and guilt; Tangney et al., 2007).

This definitional approach may be useful in forensic contexts involving “remorse.” In particular, given that crime is an instance of wrongdoing that happens to be a social and moral transgression, it is a potential trigger of guilt and shame. For example, following commission of an assault, the offender could be experiencing guilt focused on the event (e.g., that *assault* was a *bad thing* to do), shame focused on the self (e.g., I am a *bad person* for committing that assault), or some combination thereof. There would also likely be differences between offenders with respect to their dispositional tendencies to experience shame and guilt after an offence or in other situations (Tangney et al., 2007). Therefore, instead of as-yet undefined terms such as “remorse,” being “sorry” (*R. v. Fungler*, 1992), or “feeling bad” (Frick & Hare, 2001), the better articulated framework of guilt and shame may provide a more precise and comprehensive picture of an offender’s affective experience.

### **1.2.1. Phenomenology of Guilt and Shame**

A substantial body of research comprising multiple methods (Baumeister et al., 1994), levels of measurement (Tangney et al., 1991; Tangney & Dearing, 2002), dispositional studies (Tangney, 1995), and state studies (e.g., Talbot et al., 2004) has further elucidated the phenomenology of guilt and shame. These experiences are generally considered to be “self-conscious” emotions that require self-awareness (e.g., Tracy & Robins, 2004), as differentiated from the “basic” emotions (e.g., sadness and joy; Ekman, 1992) that are biologically-rooted and universal. Shame and guilt share many overlapping characteristics, including self-consciousness evoked by self-reflection and self-evaluation (Tangney et al., 2007), dysphoria, regret, and secondary emotions of anger and disgust (Tangney et al., 1996a). As would be expected given these common

features, numerous studies have demonstrated that shame and guilt are moderately correlated (e.g., Tangney et al., 1992a; 1992b; 1996b; Wright & Gudjonsson, 2007). Nevertheless, factor analyses of shame and guilt measures uniformly support two-factor models (e.g., Ferguson & Crowley, 1997; Luyten et al., 2002), highlighting the existence of important differences between these two experiences.

One such difference is that shame, relative to guilt, is considered the far more painful and difficult experience. This pain is attributed to the tendency for the self, rather than an external event or behaviour, to be judged negatively (Tangney, 1991; 1995; Tangney et al., 1996a; Tangney & Dearing 2002). In other words, the external behaviour is considered an extension of a defective, objectionable self (Lewis, 1971; Tangney, 1995; 1996a). Shame experiences are associated with feeling physically small, inferior, and exposed (Tangney, 1993; Smith et al., 2002). They prompt urges to hide and disappear (Lindsay-Hartz, 1984).

Guilt, in contrast, is considered the less painful and more adaptive emotion. Although still unpleasant, guilt is easier to bear than shame because it is focused on a specific transgression rather than on one's core self-concept (Lewis, 1971; Tangney et al., 1996a; 1996b). It is often accompanied by wishes that one had behaved differently or that the deed could somehow be undone (Tangney, 1993). Importantly, and in contrast to shame-related urges to escape, guilt seems to motivate reparative action such as confessions, apologies, and attempts to right the wrong that was done (Tangney et al., 1996a).

Research has also been undertaken to identify the types of situations that elicit guilt versus shame and vice versa (Tangney et al., 2011). Although several potential differences in such situations have been suggested by theorists (e.g., "public" versus "private" situations; Benedict, 1946), empirical studies indicate that there is no singular type of situation or act that reliably prompts one emotion more than the other (Keltner & Buswell, 1996; Tangney, 1992; Tangney & Dearing, 2002; Tracy & Robins, 2006). These findings suggest that regardless of the situational precedent, individual assessment may be particularly important in determining whether shame or guilt is the more predominant emotional response.

The above phenomenological research has all been conducted in non-forensic contexts with non-offender populations from the community. However, the relevance of shame and guilt to the law has been further emphasized by the recent development of the Offence-Related Shame and Guilt Scale (ORSGS; Wright & Gudjonsson, 2007). The ORSGS was created based on the notion that criminal offences, being social and moral transgressions, could be especially potent triggers of guilt and shame. The authors (Wright & Gudjonsson, 2007) argue that offence-related shame and guilt should be measured distinctly in order to gain the fullest picture of an offender's affective response. Initial research on the ORSGS (Wright & Gudjonsson, 2007; Wright et al., 2008) indicates that offence-related shame and guilt are related to one another and are best captured by a two-factor model, which aligns with studies on non-offence-related shame and guilt (e.g., Luyten et al., 2002; Tangney et al., 1996a). However, as is also the case for non-offence-related shame and guilt, no research has yet examined the association between ORSGS scales and other theoretically and forensically relevant constructs among adolescent offenders.

### **1.2.2. Guilt, Shame, and Psychopathy**

Perhaps the most forensically relevant of such constructs is the personality disorder of psychopathy. Psychopathy involves a confluence of affective, interpersonal, and antisocial traits (Cleckley, 1941) including shallow affect, grandiose sense of self, manipulation for personal gain, and criminal versatility (Hare, 1991). In the case of adults, psychopathy has been described as "the most important and useful psychological construct yet discovered for criminal justice policies" (Harris, Skilling, & Rice, 2001, p. 237). In the case of children and adolescents, however, researchers have been considerably more cautious. Specifically, numerous developmental challenges in assessing psychopathy have been identified (e.g., Seagrave & Grisso, 2002), and researchers have explicitly warned against labelling youth as psychopathic (e.g., Edens et al., 2007). Nevertheless, there is strong evidence for the existence of psychopathic *features* among youth (e.g., Neumann et al., 2006), and also that such features are related to problems such as aggression, antisocial behaviour, interpersonal problems, substance abuse, and offending (Edens et al., 2007; Hillege et al., 2010; Javdani et al., 2011; Munoz & Frick, 2007; Olver et al., 2009).

Research on psychopathy is similar to other forensic literature (e.g., Duncan, 2002; *R. v. C.*, 2005) in its emphasis on remorse. Specifically, lack of remorse is considered a key feature of psychopathy vis-à-vis the deficient affective experience that is a hallmark of the disorder (Cooke & Michie, 2001; Hare & Neumann, 2009). Lack of remorse has also been conceptualized as one of several “callous-unemotional traits” (CU traits; Frick & White, 2008) considered to be core features of psychopathy among youth.

Despite the importance of remorse to CU traits and psychopathy, this area of research is similar to the law and other social scientific literature in its failure to provide a clear definition of the nature of this construct. In particular, remorse is treated as being analogous to guilt (Forth, Kosson, & Hare, 2003) or as “feeling bad” after a misdeed (Frick & Hare, 2001). In turn, this ambiguity raises the question as to whether consideration of guilt and shame may provide a clearer picture of the nature of remorse in the context of psychopathy. Guilt, in particular, is characterized by acknowledgment of a problematic behaviour and a negative evaluation of that action (Tangney & Dearing, 2002), and therefore runs contrary to psychopathic features such as irresponsibility and failure to accept responsibility (Forth et al., 2003). Furthermore, both guilt and shame are strong self-conscious emotions (Lewis, 1971), and thus stand in stark contrast to the psychopathic characteristic of shallow affect (Forth et al., 2003).

The specific case of shame alone, however, may present a more complex picture. On one hand, Cleckley (1964) stated that “whether judged in light of his conduct, his attitude, or of material elicited in psychiatric evaluation, he [the psychopath] shows almost no sense of shame” (p. 372). Indeed, given that shame is characterized by a negative evaluation of the self (Tangney & Dearing, 2002), this emotion runs contrary to features of psychopathy such as grandiose sense of self-worth and impression management (i.e., a glib presentation of the self as being far better than what actually is the case; Forth et al., 2003).

On the other hand, more recent research has demonstrated that the antisocial and behavioural features of psychopathy are actually *positively* associated with negative affect (e.g., Verona et al., 2001; Hicks & Patrick, 2006). This research aligns with theories of primary and secondary psychopathy (Karpman, 1941; Skeem et al., 2003),

which hold that some psychopathic traits may similarly be *positively* related to shame (Morrison & Gilbert, 2001). Proponents of these theories state that there are two different types of psychopathy (i.e., primary and secondary) that differ based on the affective functioning of the individual. Specifically, primary psychopaths are thought to lack affective response whereas secondary psychopaths are considered to be affectively intact. Morrison and Gilbert (2001) posit that this difference in affective responsiveness between primary and secondary psychopathy can lead secondary psychopaths to feel socially inferior to primary psychopaths. In turn, secondary psychopaths are especially vulnerable to the experience of shame. Stated differently, perceptions of social inferiority can involve concomitant low self-esteem and negative self-evaluation (Morrison & Gilbert, 2001), which are, in turn, consistent with the experience of shame (e.g., Lewis, 1971). Accordingly, this theory would suggest that features of *secondary* psychopathy may in fact be *positively* related to shame.

To date, only one study has addressed this possibility. Campbell and Elison (2005) administered a self-report measure of psychopathy to a sample of noncriminal adults in the community. Consistent with Morrison and Gilbert's (2001) theory, secondary psychopathic characteristics were related to shame responses such as withdrawal and negative self-evaluation. These results suggest that contrary to assertions that psychopathy involves a straightforward "lack of remorse" (e.g., Forth et al., 2003), the framework of guilt and shame may reveal more complex relationships among these variables. However, given that participants in the Campbell and Elison (2005) study were noncriminal adults, it is currently unknown as to whether their findings would generalize to an adolescent offender population.

### **1.2.3. Shame, Guilt, and Mental Health**

Much empirical attention has been paid to relationships among shame, guilt, and psychological symptoms. In the case of shame, a sizeable array of studies with adults clearly demonstrates that this emotion is related to a range of problems including depression, anxiety, eating disorders, post-traumatic stress disorder, suicidal ideation, and substance abuse (e.g., Andrews et al., 2000, Ashby et al., 2006, Brewin et al., 2000, Ghatavi et al. 2002, Harper & Arias, 2004, Murray et al., 2000, Sanftner et al., 1995).



Guilt, in contrast, is *not* associated with problems such as depression, anxiety, and low self-esteem (Leskela et al., 2002; Quiles & Bybee, 1997; Schaefer, 2000; Stuewig & McCloskey, 2005; Tangney, 1995; Tangney & Dearing, 2002; Tangney et al. 1991; 1992). Guilt may even serve as a protective factor against psychopathology in some cases, as it is associated with better anger management (Tangney et al., 1992), later onset of alcohol use (Tangney & Dearing, 2002), and reduced likelihood of drug and alcohol problems (Dearing et al., 2005). These latter findings may be due to guilt-related tendencies to accept responsibility and to repair problems (Tangney et al., 2007).

In its totality, this body of research indicates that shame is a risk factor for numerous psychological problems whereas guilt is unrelated or potentially protective against these problems. However, important questions remain. In particular, no research has yet been carried out to investigate these relationships among adolescent offenders. Rates of mental disorders in this population are strikingly high, with approximately 50% meeting criteria for substance abuse, 18% to 28% meeting criteria for a mood disorder, and 21% to 30% meeting criteria for an anxiety disorder (Teplin et al., 2006). Furthermore, up to 85% of adolescent offenders have a history of trauma (Wasserman et al., 2004), and approximately 10% meet criteria for post-traumatic stress disorder (Abram et al., 2007). Given aforementioned findings that shame is related to all of these disorders among noncriminal adults (Tangney et al., 2007), it is critical to determine whether this is also the case for adolescent offenders. If shame is indeed related to psychopathology in this population, it would suggest that greater focus should be placed on shame in the context of treatment.

#### **1.2.4. Developmental Differences in Guilt and Shame**

To best understand adolescents' experiences of guilt and shame, as well as how these emotions relate to psychopathic characteristics and mental health, it is important to take into account developmental differences that occur during this time period. Adolescence is a time of enormous developmental change (Grisso, 1998), which raises questions as to whether youth of differing ages have differing capacities to experience and express guilt and shame. Early theories (Hoffmann, 1978; 1990) hold that guilt may increase with age due to improvements in cognitive reasoning. It has also been posited that guilt due to transgressions appears relatively early in development, but that guilt due

to *inaction* comes later because it requires the cognitively demanding task of imagining an event that did not occur (Hoffman, 1990). More complex types of guilt, such as guilt over failure to attain one's ideals, guilt about inequities with others, and guilt over neglecting responsibilities, are also thought to increase with advances in abstract reasoning and increased understanding of external mores (Bybee & Zigler, 1991; Hoffman, 1990; Walster, Bersheid, & Walster, 1973). However, these theoretical frameworks do not discuss shame, and instead refer to "pathological feelings of guilt" (e.g., Williams & Bybee, 1994). Therefore, it is difficult to ascertain how these theories align with Lewis's (1971) theory of guilt and shame.

Empirical findings regarding developmental differences in guilt and shame are mixed. An early study indicated that guilt- and shame-proneness increased during adolescence (Tangney et al., 1992). However, this was not the case in a later study of 5<sup>th</sup>, 8<sup>th</sup>, and 11<sup>th</sup>-grade youth (Bybee, 1998), in which guilt was found to decline with age for boys but to increase for girls. Further varying findings were obtained in a recent study of 12 to 20 year-olds (Walter and Burnaford, 2006), which indicated that guilt increased with age for both genders but that shame increased only for girls. These inconsistent findings make it difficult to determine the developmental and gender differences in shame and guilt that might be anticipated for adolescents, and suggest that further research is necessary in order to elucidate these relationships. This is particularly the case for justice-involved youth given that "remorse" is heavily emphasized in the law (e.g., Duncan, 2002).

### **1.2.5. The Present Study**

In sum, remorse has long been related to the juvenile justice system vis-à-vis case law (e.g., *Hall v. State*, 1998; *R. v. C.*, 2005), legal scholarship and theory (e.g., Duncan, 2002), forensic psychological assessment instruments (e.g., Forth et al., 2003; Frick & Hare, 2001), and the popular press (e.g., "Jordan Brown", 2010). However, there are important gaps in the research literature relating to this construct. Firstly, and most fundamentally, little conceptual clarity exists regarding the nature of remorse. Remorse is frequently undefined, defined vaguely (e.g., Frick & Hare, 2001), or treated as analogous to other constructs (e.g., Borum et al., 2006). The theoretical framework of guilt and shame may help to address this issue by providing a means of better defining

“remorse” in the context of juvenile justice, but little research has yet investigated this possibility. This is especially true for offence-related and non-offence-related shame and guilt.

Secondly, given the centrality of “remorse” to adolescent psychopathic traits (Forth et al., 2003), it is important to investigate associations among guilt, shame, and psychopathy. Theories of psychopathy propose that the disorder involves a straightforward “lack of remorse” (e.g., Hare, 1991). However, the distinct nature of guilt and shame, in addition to the potentially *positive* association between shame and certain features of psychopathy (e.g., Campbell & Elison, 2005), may drive more complex relationships among these constructs. A more detailed picture of these relationships may further inform conceptualizations and assessment practices related to psychopathy (e.g., Psychopathy Checklist: Youth Version; Forth et al., 2003).

Thirdly, despite extremely high rates of psychopathology among adolescent offenders (Teplin et al., 2006) and consistent findings in the *adult* literature that shame is strongly linked to an assortment of mental health problems (Tangney et al., 2007), no research has yet investigated whether shame is related to psychopathology among *youth* in the justice system. If such relationships hold true for young offenders as they do for community adults, it would suggest that clinicians who assess and treat adolescent offenders should place a greater emphasis on interventions targeted at shame.

Finally, it is important to further understand developmental and demographic differences in guilt and shame. Findings from a small number of studies in this area demonstrate markedly inconsistent findings with respect to gender differences as well as increases and decreases in these emotions over time (Bybee, 1998; Tangney et al., 1992; Walter & Burnaford, 2006). Furthermore, no studies have yet examined developmental and demographic associations with guilt and shame among adolescent offenders. Additional research is critical to better elucidate these relationships, particularly in the case of justice-involved youth.

The present study was intended to address the aforementioned issues by examining offence-related and non-offence-related shame and guilt in a sample of adolescent offenders. Four key research questions were addressed. First, I examined

whether developmental and demographic differences exist in levels of guilt and shame. Given the inconsistency in prior empirical literature (Bybee, 1998; Tangney et al., 1991; Walter & Burnaford, 2006), these analyses were largely exploratory. However, in light of theory that capacities for guilt may increase with age and accompanying cognitive sophistication (e.g., Hoffmann, 1978; 1990), I hypothesized that older adolescents would evidence higher levels of guilt and shame than younger adolescents.

Secondly, concurrent relationships between guilt, shame, and psychopathic characteristics were examined. In light of research suggesting that psychopathy involves lack of remorse, shallow affect, and failure to accept responsibility (Hare, 1991; Frick & White, 2008), I expected that guilt would be negatively related to psychopathic traits. In light of other research indicating that shame is positively related to non-affective features of psychopathy (Campbell & Elison, 2005), I anticipated that shame would be positively related to antisocial and behavioural characteristics.

Thirdly, I investigated the relationship of guilt and shame with psychopathology. Guided by findings in the adult literature indicating that shame is associated with many mental health problems while guilt is unrelated or acts as a protective factor (Tangney et al., 2007), I anticipated a similar pattern of results in this research.

Finally, I re-examined the above relationships after controlling for offence history. Prior research has suggested that mental health problems and psychopathic characteristics may be particularly pronounced among more criminally entrenched youth (e.g., Olver et al., 2009; Teplin et al., 2006). Hence, I sought to determine whether guilt and shame would be related to each outcome of interest after accounting for youths' history of prior offending.

## **1.3. Method**

### **1.3.1. Participants**

Participants in this study were adolescents on probation in British Columbia, Canada. Demographic characteristics are presented in Table 1. Participants ranged in age from 12 to 17 ( $M = 15.88$ ,  $SD = 1.15$ ) and were mostly male ( $n = 68$ ; 70%), although

almost a third were female ( $n = 29$ ; 30%). The majority of youth identified as Caucasian ( $n = 53$ ; 55%), although a substantial proportion indicated that they were at least partly Aboriginal ( $n = 18$ ; 19%). The remainder of participants ( $n = 26$ ; 27%) identified as another ethnicity, including Asian, Black, and Hispanic. These demographic characteristics appear representative of young offenders across Canada based on figures published by Statistics Canada (Brennan, 2012). In addition, youth had an average of 2.69 index offence charges ( $SD = 3.39$ ) and 1.99 index offence convictions ( $SD = 1.66$ ) leading to their being on probation during the present study.

At the time of data analysis, 506 youth had been approached from the 11 probation offices in the Lower Mainland of BC. Of these, 458 (91%) expressed initial interest in volunteering for the study and 48 (9%) did not. Of those who expressed interest, 323 (64%) were eligible to participate and became enrolled in the study. One hundred and thirty-five youth were not eligible and did not become enrolled, most commonly because they were outside the required age range of 12 to 17 years old, resided outside of the catchment area, or were not on probation (e.g., not yet adjudicated, on bail, etc.). One hundred and twenty-three of these youths continued on to complete the third interview, which is considered the initial or baseline interview for the purposes of this study.

Of the 123 youth who participated in the initial interview, 26 did not complete an adequate number of items on measures of guilt and shame, mental health, and psychopathy (i.e., 80% or more of each measure; Downey & King, 1998) and were therefore excluded from further analyses. After removing data from these 26 participants, there was a total remaining sample of 97. To determine whether excluded youth differed systematically from youth who completed more than 80% of study measures, independent samples t-tests were used to investigate any potential differences with respect to all variables in Table 1, and chi-square analyses were used to assess potential differences in ethnicity and gender. These analyses indicated that there were no significant differences at the  $p < .05$  level between youth who completed more than 80% of measures and youth who did not.

### **1.3.2. Procedures**

Youth were recruited for the study from 11 probation offices across the Lower Mainland of British Columbia. To be eligible for participation, youth had to be on probation, reside in the Greater Vancouver Regional District, and be between the ages of 12 and 17 years old (inclusive). Information about the study was provided to youth by probation officers and research assistants. Youth participated in the present study in the context of a larger research project intended to evaluate the mental health, risks, and strengths of adolescent offenders.

Informed, active consent was obtained from youths' legal guardians, who were given information packages about the study and had this information reviewed with them via phone. Informed consent was also obtained from youth. Following explanation of study procedures, youth were required to complete an oral quiz consisting of questions about the nature of their participation. Participants who demonstrated a lack of comprehension based on any of their answers had this information reviewed with them and their knowledge was retested. Youth were required to demonstrate an adequate level of comprehension regarding all essential elements of consent in order to participate in the study. No youth were excluded from this study due to inadequate understanding of consent.

Data collection included a structured interview, completion of self-report measures, and a review of the youth's probation file. Data collection was completed by research assistants ( $N = 12$ ) who received extensive training related to study protocol and the assessment measures. This training involved two days of didactic instruction, completion of four mock risk assessment cases, and completion of an actual case while accompanied by a more experienced research assistant. Once research assistants had demonstrated adequate interrater reliability for these joint cases (i.e., agreement within 5 points of the total score on interviewer-scored measures), they were allowed to work independently.

All procedures used in the present study were in compliance with ethics requirements. Data were collected using non-identifiable participant numbers. Participants were informed that confidentiality would be maintained except in cases of imminent risk of harm to self or others, reported child abuse, or a court subpoena. Simon

Fraser University, BC Youth Justice, Youth Forensic Psychiatric Services, and the BC Ministry of Children and Family Development provided ethics approval for this research.

### **1.3.3. Measures**

#### **1.3.3.1. Guilt and Shame**

Two instruments were used to evaluate guilt and shame. The Test of Self-Conscious Affect (TOSCA-A; Tangney, 1992) was administered in order to assess these emotions as related to general, routine situations (i.e., not related to offending). The TOSCA-A includes descriptions of 15 hypothetical yet common scenarios drawn from written accounts of personal shame and guilt experiences of youth (e.g., “while playing around, you throw a ball and it hits your friend in the face”). Participants are asked to rate their shame and guilt reactions to each scenario on a five-point scale (1 = not at all likely; 5 = very likely). The response domains on which participants rate their reactions include descriptors that were previously found to be indicative of phenomenological aspects of shame (e.g., “I would feel stupid that I can’t even throw a ball”) and guilt (e.g., “I would apologize and make sure my friend feels better”).

The guilt and shame scales have demonstrated acceptable Cronbach’s alpha values (guilt = .86; shame = .80; Tangney & Dearing, 2002). In terms of validity, the guilt scale is positively related to empathy and constructive anger management strategies (Tangney, 1991, 1994, 1995; Tangney, Wagner, Fletcher, & Gramzow, 1992; Tangney, Wagner, Hill-Barlow, Marschall, & Gramzow, 1996). The shame scale is negatively related to empathy and positively related to maladaptive anger responses such as aggression (Tangney, 1991; Tangney et al., 1992, 1996b). Little research has examined the TOSCA-A in forensic samples of youth, but Robinson et al. (2007) reported that the guilt scale was consistently associated with lower levels of self-reported antisocial behaviours and attitudes among incarcerated adolescents.

In addition to the TOSCA-A, the Offense-Related Shame and Guilt Scale (ORSGS; Wright & Gudjonsson, 2007) was administered in order to assess guilt and shame as related to past offending behaviour. Because the ORSGS was introduced in the study later than the TOSCA-A, 58 of the total 97 participants completed this measure. The ORSGS includes 16 items scored on a 7-point scale (1 = not at all; 7 =

very much). Example items include “I feel no need to make amends (make up) for what I did” and “I will never forgive myself for what I have done”. Little research has been conducted with the ORSGS. However, a preliminary factor analysis of the measure using responses from incarcerated adult inmates (Wright & Gudjonsson, 2007) indicated that a two-factor guilt and shame solution provided the best fit for the data. This study provides validity evidence for the existence of separate constructs of offence-related guilt and shame.

#### **1.3.3.2. Mental Health**

The Massachusetts Youth Screening Instrument-2 (Grisso & Barnum, 2001) was used to assess mental health. The MAYSI-2 is a self-report inventory specifically designed for justice-involved youth. It consists of 52 items, each of which is scored on a *yes* or *no* basis. There is no total score, but rather seven subscale scores including Alcohol/Drug, Angry-Irritable, Depressed-Anxious, Somatic Complaints, Suicide Ideation, Traumatic Experiences, and Thought Disturbance (for boys only). There is strong evidence for the reliability and validity of the MAYSI-2 (Archer et al., 2004; 2010; Grisso & Barnum, 2006). It should be noted that no items on the MAYSI-2 refer to guilt, shame, or “remorse”. As such, there were no concerns about criterion contamination (Anastasi, 1998) with respect to this measure, and analyses were conducted using all MAYSI-2 items.

#### **1.3.3.3. Psychopathic Features**

The Psychopathy Checklist: Youth Version (PCL:YV; Forth et al., 2003) was one of two measures used to assess psychopathic traits. The PCL:YV consists of 20 items related to affective, interpersonal, behavioural, and antisocial features, and is scored by a trained rater based on interview and collateral information. Each item is scored on a 3-point scale (0 = not present; 1 = possibly or partially present; 2 = definitely present). Several factor models have been put forth to explain the structure of the PCL:YV (Harpur, Hare, & Hakstian, 1989; Cooke & Michie, 2001; Hare & Neumann, 2005), with recent research indicating that both the three- and four-factor models generally yield acceptable fit (Cauffman et al., 2009; Neumann et al., 2007; Neumann et al., 2006; Salekin et al., 2006). In this study, the four-factor model (Hare & Neumann, 2005) was used. This model consists of interpersonal, affective, lifestyle, and antisocial factors.



There is a strong body of evidence supporting the psychometric features of the PCL:YV. In regard to internal consistency, alpha coefficients range from .79 to .94 for total scores (Forth et al., 2003; Vitacco et al., 2010) and alphas for factor scores range from .50 to .82 (Andershed, Hodgins, & Tengstrom, 2007; Forth et al., 2003; Vitacco et al., 2010; Vitacco, Neumann, Caldwell, Leistico, & van Rybroek, 2006). Intraclass correlation coefficients range from .82 to .98 (Andershed et al., 2007; Cauffman et al., 2009; Das et al., 2009; Forth et al., 2003). PCL:YV scores are also correlated with externalizing psychopathology, violence, antisocial behaviour, and recidivism (Flight & Forth, 2007; Kosson et al., 2002; Kubak & Salekin, 2009; Murrie et al., 2004; Salekin, 2008; Salekin et al., 2004; Schmidt et al., 2006; Vitacco et al., 2006; 2010).

In addition to the PCL:YV, the Inventory of Callous-Unemotional Traits (ICU; Frick, 2004) was used as a self-report measure of CU traits. This measure was introduced later in the study, and therefore 56 of the total 97 participants completed it. The ICU includes 24 items that participants rate on a four-point Likert scale from 0 (not at all true) to 3 (definitely true). It includes scales for Careless (e.g., "I do not care about doing things well"), Callousness (e.g., "I do not care if I get into trouble"), Unemotional (e.g., "I express my feelings openly") and Uncaring (e.g., "I do not care who I hurt to get what I want"). Each scale includes 6 items. The items related to remorse are included in the Callousness scale (e.g., "I feel bad or guilty when I do something wrong"). In regard to the psychometric properties of the ICU, Essau et al. (2007) found that the measure was internally consistent and that scores correlated with measures of conduct problems, aggression, and psychosocial impairments. A more recent psychometric study (Kimonis et al., 2008) indicated Cronbach's alpha values of .81 for total scores and .80 for the Callousness scale, suggesting good internal consistency. In regard to validity, Kimonis et al. also found that the Callousness factor was significantly related to proactive overt aggression.

### **1.3.4. Data Analysis**

#### **1.3.4.1. Missing Data**

Missing data were examined as an initial step in data analysis. This examination was guided by the recommendations set forth by Downey and King (1998), which indicate that data should be retained if the percentage of participants with missing data

is less than 20% of the total sample and if the missing data themselves constitute less than 20% of the total instrument. Downey and King note that under these conditions, there are high correlations between original scores and imputed scores (i.e.,  $r_s > .95$ ), and coefficient alphas remain similar. They indicate that as the amount of missing data exceeds 20% (with respect to percentage of participants or percentage of missing items), correlations and coefficient alphas begin to fall.

With regard to the TOSCA-A in the present sample, missing data were observed among 6 participants (i.e., 6% of the total sample) and consisted of between 1 and 8 items (i.e., 2% to 12% of the total measure). With regard to the ORSGS, missing data were observed among 5 participants (i.e., 5% of the total measure) and consisted of between 1 and 2 items (i.e., 6% or 12% of the total measure). These data were retained because they involved less than 20% of participants and less than 20% of the total measures, therefore adhering to the guidelines indicated above. In these cases, item means were used to replace the missing item values because this method is considered a good representation of the original data in the current scenario (i.e., when the number of participants with missing data *and* the number of items missing are 20% or less; Downey & King, 1998). Furthermore, the item mean method is preferable to the person mean substitution method because it does not artificially inflate indices of scale reliability (Downey & King, 1998). Subsequent Monte Carlo studies have been conducted to compare item mean versus person mean imputation methods (e.g., Roth et al., 1999; Gottschall et al., 2012), and similarly indicate that item mean substitution results in more conservative estimates of scale reliability and has negligible impact on root mean square error and bias (i.e., systematic differences between statistics and true scores).

#### **1.3.4.2. Power Analysis**

The data analytic methods used in this study included bivariate and partial correlations, independent samples t-tests, ANOVA with three groups, and various regression equations with a maximum of three independent variables. With regard to the TOSCA-A, given that 97 participants completed the measure, statistical power was sufficient to detect medium effect sizes for these analyses using  $p = .05$  (Cohen, 1992). With regard to the ORSGS and ICU, these measures were completed by 58 and 56

participants (respectively), indicating that statistical power was sufficient to detect large effect sizes for analyses using  $p = .05$ .

#### **1.3.4.3. Internal Consistency**

Cronbach's alpha (1951) was calculated in order to address internal consistency. For the TOSCA-A, this analysis produced coefficient alphas of .89 for Guilt and .82 for Shame. These values reflect good internal consistency and are consistent with those obtained in previous research (Tangney et al., 1992). For the ORSGS, alphas were .70 for Guilt and .75 for Shame. These alphas are lower than in a prior exploratory study (Wright & Gudjonsson, 2007), but are still considered acceptable. For the PCL:YV, and consistent with prior research (e.g., Forth et al., 2003), a Cronbach's alpha of .88 was obtained. The ICU had a coefficient alpha of .75, which aligns with other studies (e.g., Kimonis et al., 2008) and indicates good internal consistency. Finally, the MAYSI-2 had a Cronbach's alpha of .87, which is in concordance with prior research (e.g., Archer et al., 2010) and demonstrates excellent internal consistency.

#### **1.3.4.4. Interrater Reliability**

To determine the interrater reliability of the PCL:YV, ten cases (10.31%) were randomly selected. For these cases, two research assistants attended the interview, reviewed file information, and made ratings independently. Subsequently, a single-rater intraclass correlation coefficient (ICC) was calculated using absolute agreement for a two-way random effects model (McGraw & Wong, 1996). This analysis produced an ICC of .80, which is considered adequate interrater reliability and is consistent with previous research (e.g., Spain et al., 2004).

## **1.4. Results**

### **1.4.1. Descriptive Statistics**

Means, standard deviations, and ranges were calculated for the TOSCA-A, ORSGS, ICU, PCL:YV, and MAYSI-2. These statistics are presented in Table 2. Mean MAYSI-2 scores were comparable to those in previous studies (e.g., Archer et al., 2004, 2010), suggesting that the severity of mental health problems among participants in the

present sample is likely similar to participants in other research. In the case of the PCL:YV, mean scores were approximately 4 to 7 points higher than in previous studies (e.g., Andershed et al., 2007; Cauffman et al., 2009, Marczyk et al., 2003; Vincent et al., 2008). These scores are sufficiently high to conduct meaningful analyses on psychopathic characteristics in the present study.

#### **1.4.2. Demographic Characteristics, Guilt, and Shame**

Analyses were undertaken to determine whether age, gender, or ethnicity had any significant relationships with guilt and shame. For age, bivariate Pearson correlations between the youth's reported age and guilt and shame scores indicated a significant inverse relationship between age and ORSGS Shame ( $r = -.29, p < .05$ ). This indicates that older youths were less likely to experience shame related to their offence. In light of this finding, supplementary correlations were subsequently calculated between age, MAYSI-2 scales, and PCL:YV scores in order to identify potential intervening variables. In other words, we investigated whether older youth were different with respect to any mental health or psychopathic characteristics that could account for their lower offence-related shame. However, none of these latter correlations were significant ( $ps > .10$ ), providing further evidence for a meaningful inverse relationship between age and offence-related shame.

For gender, an independent samples t-test revealed no significant differences between males and females on any of the four scales of guilt and shame ( $ps > .10$ ). For ethnicity, youths' reported race was first trichotomized into the categories of Caucasian, Aboriginal/partly Aboriginal, and Other/Mixed. Four one-way ANOVAs were subsequently conducted to compare youths' scores on the TOSCA-A and ORSGS scales of guilt and shame. These analyses revealed no significant relationships between ethnicity and guilt and shame scores,  $F_s < 3.0, ps > .06$ . Subsequently, ethnicity was dichotomized into the categories of Caucasian and Other/Mixed, and an independent samples t-test was conducted to investigate potential differences between these groups. Results indicated no significant differences on any of the guilt and shame scales between Caucasian youths and youths of other ethnic backgrounds ( $ps > .25$ ). In sum, these findings indicate that guilt and shame scores are not significantly related to gender or ethnicity. However, increased age was associated with less offence-related shame.

### **1.4.3. Guilt and Shame**

Correlations between the TOSCA-A and ORSGS are presented in Table 3. TOSCA-A Shame and Guilt scores were significantly related, as were ORSGS Shame and Guilt scores. Correlations were medium to large in magnitude (Cohen, 1988), which is consistent with prior research (e.g., Tangney et al., 1992; 1996a) and indicates the overlapping nature of guilt and shame. In addition, TOSCA Guilt was associated with ORSGS Guilt, suggesting that general guilt and guilt specific to an offence are related constructs. However, TOSCA-A Shame was not related to ORSGS Shame, suggesting distinctions between general propensities towards shame and shame specifically related to an offence.

### **1.4.4. Mental Health**

Due to the high correlations observed between guilt and shame (see Table 3), partial correlations were conducted between these measures and the MAYSI-2. In other words, guilt was controlled for during each analysis involving shame, and shame was controlled for during each analysis involving guilt. This approach allowed for determination of the extent to which “shame-free guilt” and “guilt-free shame” are related to mental health difficulties. The results of these analyses are presented in Table 4.

TOSCA-A Guilt scores were negatively related to the Alcohol/Drug, Angry/Irritable, Depressed/Anxious, and Traumatic Experiences subscales. These findings suggest that guilt was associated with a decreased likelihood of various mental health problems. In light of these significant relationships, four linear regression equations were conducted with TOSCA-A Guilt as the independent variable and each of the four MAYSI-2 scales as the dependent variable. To control for the effects of shame, Block 1 of each equation included TOSCA-A Shame and Block 2 included TOSCA-A Shame and TOSCA-A Guilt. The results of these analyses are presented in Table 5. After controlling for the effects of shame, TOSCA-A Guilt significantly and inversely predicted scores on the Angry/Irritable and Depressed/Anxious subscales.

TOSCA-A Shame was positively related to the Angry/Irritable, Depressed/Anxious, Somatic Complaints, Suicide Ideation, and Thought Disturbance subscales. These results suggest that shame is associated with an increased likelihood

of numerous mental health difficulties, including anger, mood and anxiety problems, unpleasant bodily symptoms, and suicidal thoughts. In addition, shame appears to be related to psychotic thoughts in boys (given that the Thought Disturbance subscale has norms for males but not females). In light of these significant relationships, five linear regression equations were conducted with TOSCA-A Shame as the independent variable and each of the five MAYSI-2 scales as the dependent variable. To control for the effects of guilt, Block 1 of each equation included TOSCA-A Guilt and Block 2 included TOSCA-A Guilt and TOSCA-A Shame. After controlling for the effects of guilt, TOSCA-A Shame significantly and positively predicted scores on the Angry/Irritable, Depressed/Anxious, Somatic Complaints, Suicide Ideation, and Thought Disturbance subscales (see Table 5).

ORSGS Guilt was negatively associated with the Angry/Irritable and Depressed/Anxious subscales, indicating that youth experiencing greater guilt related to their offence were less likely to be experiencing difficulties with anger, anxiety, or mood. Two linear regression equations were conducted with ORSGS Guilt as the independent variable and each of the two MAYSI-2 scales as the dependent variable. To control for the effects of shame, Block 1 of each equation included ORSGS Shame and Block 2 included ORSGS Shame and ORSGS Guilt. After controlling for the effects of shame, ORSGS Guilt significantly and inversely predicted scores on the Angry/Irritable and Depressed/Anxious subscales (see Table 5).

Finally, ORSGS Shame scores were positively associated with the MAYSI-2 Depressed/Anxious subscale, indicating that youth experiencing greater shame related to their offence were more likely to report problems with mood and anxiety. A linear regression equation was conducted with ORSGS Shame as the independent variable and the Depressed/Anxious subscale as the dependent variable. To control for the effects of guilt, Block 1 of the equation included ORSGS Guilt and Block 2 included ORSGS Guilt and ORSGS Shame. After controlling for the effects of guilt, ORSGS Shame significantly and positively predicted scores on the Depressed/Anxious subscale (see Table 5).

In sum, these results indicated that measures of shame were positively associated with numerous mental health difficulties. Measures of guilt, in contrast, were negatively associated with anger, mood, and anxiety problems.

#### **1.4.5. Psychopathic and Callous-Unemotional Traits**

Partial correlations among TOSCA-A, ORSGS, PCL:YV, and ICU scores are presented in Table 6. As in the case of the MAYSI-2, partial correlations allowed for determination of the degree to which “shame-free guilt” and “guilt-free shame” were related to psychopathic characteristics. For analyses involving the PCL:YV, both total scores and subscale/factor scores were examined. Prior research has provided support for both three- and four-factor models of the PCL:YV (e.g., Kosson et al., 2002; Salekin et al., 2004). In this study, the four-factor model (i.e., interpersonal, affective, behavioural, and antisocial factors; Neumann et al., 2006) was employed.

TOSCA-A Guilt was negatively related to all PCL:YV subscales and the PCL:YV Total score, indicating that psychopathic characteristics are related to a reduced propensity to experience guilt. In light of these significant relationships, five regression equations were conducted with TOSCA-A Guilt as the independent variable and each of the five PCL:YV scales as the dependent variable. To control for the effects of shame, Block 1 of each equation included TOSCA-A Shame and Block 2 included TOSCA-A Shame and TOSCA-A Guilt. The results of these analyses are presented in Table 7. After controlling for the effects of shame, TOSCA-A Guilt significantly and negatively predicted scores on all PCL:YV subscales as well as the total score.

TOSCA-A Shame scores were positively associated with the Behavioural subscale of the PCL:YV, indicating that shame is related to the behavioural features of psychopathy. In light of this significant relationship, TOSCA-A Shame was entered into a linear regression equation as the independent variable and the PCL:YV Behavioural scale was entered as the dependent variable. To control for the effects of guilt, Block 1 of the equation included TOSCA-A Guilt and Block 2 included TOSCA-A Guilt and TOSCA-A Shame. After controlling for guilt, shame significantly and positively predicted scores on the PCL:YV Behavioural subscale (see Table 7).

ORSGS Shame scores were not associated with any of the PCL:YV scales, indicating that offence-related shame was not significantly related to psychopathic characteristics. However, ORSGS Guilt scores were negatively associated with the PCL:YV Affective and Behavioural subscales as well as the PCL:YV Total score. In light of these significant relationships, three regression equations were conducted with ORSGS Guilt as the independent variable and each of the three associated PCL:YV scales as the dependent variable. To control for the effects of shame, Block 1 of each equation included ORSGS Shame and Block 2 included ORSGS Shame and ORSGS Guilt. After controlling for the effects of shame, ORSGS Guilt significantly and positively predicted scores on the PCL:YV Affective and Behavioural subscales as well as the PCL:YV Total score (see Table 7). In contrast to findings related to the PCL:YV, the ICU was not significantly related to any of the TOSCA-A or ORSGS scales. Furthermore, the direction of the observed correlations between the ICU and Guilt scales were the opposite of what was anticipated (i.e., observed correlations were positive rather than negative).

#### **1.4.6. PCL:YV “Lack of Remorse” Item Removed**

Given that the PCL:YV includes one item to assess “Lack of Remorse”, using composite scores of this instrument to examine relationships among guilt, shame, and psychopathic characteristics holds the possibility of criterion contamination (i.e., when the predictor and criterion measures overlap; Anastasi, 1998). To address this issue, scores for the “Lack of Remorse” item were deleted, and results pertaining to the PCL:YV Total score and the Affective factor (i.e., the only factor in which “Lack of Remorse” is included) were re-analyzed.

After the deletion of the “Lack of Remorse” item, TOSCA-A Guilt remained negatively related to the PCL:YV Total score ( $pr = -.38, p < .01$ ). When entered into a regression equation as the independent variable and controlling for TOSCA-A Shame in Block 1, TOSCA-A Guilt scores significantly negatively predicted PCL:YV Total scores,  $F(1, 87) = 8.17, p < .01, \beta = -0.47, R^2 = .14$ . However, in the case of the PCL:YV Affective subscale, the association with TOSCA-A Guilt became non-significant after removal of the “Lack of Remorse” item ( $pr = -.20, p = .06$ ).



The ORSGS Guilt scale remained negatively related to the PCL:YV Affective subscale ( $pr = -.38, p < .01$ ) and PCL:YV Total scores ( $pr = -.34, p = .02$ ). When entered into a regression equation as the independent variable and controlling for ORSGS Shame in Block 1, ORSGS Guilt significantly negatively predicted PCL:YV Affective scores,  $F(1, 53) = 4.61, p < .01, B = -.43, R^2 = .15$ , as well as PCL:YV Total scores,  $F(1, 53) = 3.24, p = .02, B = -.38, R^2 = .11$ .

In sum, these results indicate that even after removing the “Lack of Remorse” item, offence-related guilt remained a significant predictor of psychopathic characteristics. Non-offence-related guilt remained a significant predictor of PCL:YV Total scores, although its relationship with the Affective scale became marginally significant ( $p = .06$ ).

#### **1.4.7. Incremental Validity Beyond Offence History**

Analyses were carried out to determine whether the significant relationships described above remained significant after controlling for youths’ offence histories. Specifically, for each relationship, a linear regression equation was calculated in which Block 1 consisted of youths’ number of charges prior to the index offence (i.e., their history of offending) as well as any other required control variables (i.e., guilt was controlled in all analyses involving shame, and shame was controlled in all analyses involving guilt). Block 2 consisted of number of prior charges, control variables, and the predictive scale of interest.

The results of analyses pertaining to MAYSI-2 scales are presented in Table 8, and results pertaining to PCL:YV scales are presented in Table 9. These findings indicate that all observed relationships remained significant after controlling for youths’ offence histories.

### **1.5. Discussion**

The present study was intended to investigate the relationship of guilt and shame with psychopathology and psychopathic characteristics among adolescent offenders. A primary aim was to improve upon the limited and vague literature pertaining to the notion

of “remorse” by addressing these questions using the theoretically and empirically established framework of guilt and shame (Tangney & Dearing, 2002). Specific goals in conducting this research were to shed light on whether a) any demographic or developmental differences in guilt and shame would be observed; b) prior findings among noncriminal adults regarding psychopathology, shame, and guilt may be generalizable to adolescent offenders; and c) prior theory regarding “lack of remorse” in psychopathy would be reflected in observed empirical relationships among psychopathic characteristics, guilt, and shame.

The findings indicated that a) older youth evidenced lower levels of offence-related shame; b) shame was related to numerous mental health problems whereas guilt was negatively related to these problems; c) shame was positively related to the behavioural features of psychopathy whereas guilt was negatively related to psychopathic characteristics more broadly, and d) guilt and shame were related to each other, with the exception of offence-related and non-offence-related shame. Moreover, all predictive associations held true after controlling for youths’ offence histories. These findings, and corresponding implications for clinical practice and additional research, are discussed below.

### **1.5.1. Primary Findings**

Consistent with prior research (e.g., Luyten et al., 2002; Tangney et al., 1996a; Wright & Gudjonsson, 2007), significant associations were observed between TOSCA-A Guilt and Shame, ORSGS Guilt and Shame, and TOSCA-A and ORSGS Guilt. These findings highlight the overlapping nature of these two emotions, which is expected given their common features of self-consciousness and dysphoria (e.g., Tangney et al., 2007). However, TOSCA-A and ORSGS shame were unrelated, which suggests that offence-related shame differs from general, everyday shame. It is possible that the combination of criminal offending (being a particularly pronounced violation of society’s mores) and shame (being a particularly difficult emotion; Tangney & Dearing, 2002) represents an especially painful and distinct experience. Considering oneself to be defective and objectionable after an assault that leaves the victim with permanent injuries, for example, may be more distressing than considering oneself to be inconsiderate after forgetting a friend’s birthday. However, it is also possible that a lack of power due to the relatively

few participants who completed the ORSGS (n = 58) may have hampered the ability to detect a significant relationship in this case. Future research should replicate this analysis among a larger number of adolescent offenders in order to inform clearer conclusions about the relationship between offence-related and non-offence-related shame.

In regard to developmental differences, and contrary to hypotheses, guilt and shame did not increase with age. Instead, offence-related shame was lower among older youths. This finding was inconsistent with theory that these emotions may increase as youths grow older and experience accompanying cognitive and emotional development (Hoffmann, 1978; 1990). However, it may be difficult to draw such straightforward and linear conclusions about expected adolescent development given the enormous and complex transitions that occur in intellectual, emotional, physical, and social domains during the teenage years (Steinberg & Cauffman, 1999). It is also important to reiterate that prior empirical findings regarding developmental changes in shame and guilt are inconsistent with respect to age- and gender-related associations (Bybee, 1998; Tangney et al., 1991; Walter & Burnaford, 2006). This inconsistency (in the present study and those preceding it) suggests that much work remains to be done in order to understand developmental differences in shame and guilt. Such research could use indicators of development that may be more nuanced than age, such as perspective-taking, personal responsibility, and self-inhibition (Cauffman & Steinberg, 2000).

Given that prior studies examined community adolescents, it may also be possible that the present sample of adolescent offenders represented a unique population with respect to their emotional functioning and development. It has been noted that although antisocial youth comprise a heterogeneous group, they may evidence some consistent differences from more prosocial adolescents (Robinson et al., 2007), such as lower empathy (Frick, 2003). Furthermore, typical developmental trajectories do not necessarily apply to adolescent offenders. For instance, while most youth demonstrate increases in impulse control as they age, the opposite may be the case for justice-involved adolescents (Monahan, Steinberg, Cauffman, & Mulvey, 2009). Such potential differences between community and offender populations should be taken into account in further developmental research. There is a particular need for longitudinal studies in order to shed light on these developmental processes.

The present findings did indicate that older youth were less likely to feel shame in regard to their offence. This raises questions as to whether there may be differences between older and younger adolescents that could account for this association (e.g., older adolescents having fewer mental health problems or being less psychopathic). However, analyses indicated no significant relationships between age and mental health or psychopathy, which casts doubt on the likelihood that these latter two factors could be operating as moderating variables. Alternatively, given that shame is a destructive emotion (e.g., Tangney & Dearing, 2002), it is possible that this finding represents adaptation to current circumstances. Perhaps older youth are more able to practice coping strategies, for example, such that they do not experience as much shame in regard to their offence. Further research on age, shame, and coping may clarify this possibility.

With regard to psychopathy, guilt was negatively related to factor and total scores of the PCL:YV (Forth et al., 2003). With the exception of one factor score, these associations held true even after controlling for offending history and removing the PCL:YV “Lack of Remorse” item to address potential criterion contamination. To our knowledge, this is the first study that has empirically examined the long-held theoretical assertion that psychopathy is associated with a lack of guilt (e.g., Hare, 1991). In turn, these results provide empirical support for that aspect of psychopathy theory and also for the validity of the TOSCA-A and ORSGS. The consistency of our findings across both measures (i.e., general guilt versus offence-related guilt) is also in accordance with the notion that psychopathy involves general affective deficits across multiple domains.

In contrast, shame was positively related to the behavioural features of psychopathy. These findings are consistent with prior research indicating that such features tend to be associated with negative affect (e.g., Verona et al., 2001; Hicks & Patrick, 2006). They also align with theory regarding “primary” versus “secondary” psychopathy (Karpman, 1941; Skeem et al., 2003), which holds that shame is *positively* related to *secondary* features of psychopathy (i.e., antisocial and behavioural factors; Morrison & Gilbert, 2001). To my knowledge, the present study is the first to examine such relationships among adolescents, and these findings indicate that prior theory and research related to adults may be generalizable to youth. These results also suggest that contrary to the straightforward “lack of remorse” commonly considered to be a

hallmark of psychopathy (e.g., Cleckley, 1941), guilt and shame may operate quite differently in the context of this disorder.

It should be noted that findings related to the ICU were inconsistent with hypotheses. Specifically, the guilt and shame scales were not significantly related to this measure, and the direction of the correlations between the guilt scales and the ICU was positive rather than negative. This suggests the possibility that greater guilt may be associated with greater self-reported callous-unemotional traits, although the non-significance of these observed correlations precludes a definitive interpretation. Indeed, the unanticipated nature of these findings may be due to lack of statistical power given that relatively few participants completed the ICU (N = 56). Additional research should be undertaken to explore these relationships among a larger sample, as well as to investigate whether there are true differences between the interviewer-scored PCL:YV and the self-reported ICU with respect to their associations with shame and guilt.

With regard to mental health difficulties, the present findings indicated that shame was positively associated with several different forms of psychopathology. These included depression, anxiety, suicide ideation, and somatic complaints. These results are consistent with prior research indicating similar relationships among noncriminal, community adults (e.g., Andrews et al., 2000, Ashby et al., 2006, Brewin et al., 2000, Ghatavi et al. 2002, Harper & Arias, 2004, Leskela et al., 2002, Sanftner et al., 1995). Accordingly, these findings further underscore the harmful nature of shame (e.g., Tangney & Dearing, 2002), and suggest that its relationship with psychopathology generalizes to an adolescent offender population. Indeed, given that the central features of shame are worthlessness, powerlessness, exposure, and a sense of a defective self (Tangney et al., 2007), it is perhaps not surprising that it is related to a range of pathological symptoms in youth just as it is in adults.

Guilt, on the other hand, was negatively related to problems with anger and irritability as well as depression and anxiety. Prior research with adolescents indicates that guilt is not associated with depression (e.g., Stuewig & McCloskey, 2005), and the present results suggest that this emotion may actually protect against mood problems. These findings are also consistent with prior research indicating that guilt-prone individuals are less likely to engage in direct, indirect, and displaced aggression when

angered (Tangney et al., 1992a; 1996b). Guilt is associated with acceptance of responsibility (Tangney & Dearing, 2002) and constructive intentions after wrongdoing (Tangney et al., 2007), which are generally incompatible with the externalization of blame and destructive urges that can often accompany anger (Andrews et al., 2000). Accordingly, the present findings emphasize that guilt may be helpful in regulating anger among adolescent offenders.

### **1.5.2. Clinical Implications**

Given remarkably high rates of mental disorder among adolescent offenders (Teplin et al., 2003) and present findings that shame is linked to a variety of psychological symptoms, clinicians who assess and treat adolescent offenders may wish to place an increased focus on shame. Assessment procedures, for instance, could include administration of the TOSCA-A and the ORSGS, which take relatively little time to administer and score. Using these measures rather than simply asking youths if they feel guilty or shameful may circumvent concerns that adolescents may falsely claim to experience these emotions in order to create a more favorable impression for the evaluator (e.g., Borum et al., 2006). Also, given that the TOSCA-A and ORSGS tap into different constructs, their use would be consistent with recommendations that problems such as psychopathic traits should be assessed across various contexts (Forth et al., 2003).

In the case of intervention, shame-targeted protocols such as those included in Dialectical Behaviour Therapy (DBT; Linehan, 1993) may be helpful. DBT emphasizes different strategies for shame based on whether the emotion is justified or unjustified (Linehan, in press). Justified shame occurs when the individual will likely be rejected from a valued group if the shameful characteristic or behaviour is made public (e.g., disclosing shoplifting to one's boss and fellow employees), and corresponding treatment recommendations include problem-solving actions such as changing behaviour, seeking a new group, and avoiding disapproving groups. In contrast, unjustified shame occurs when the individual will *not* likely be rejected from a valued group if their characteristics or behaviour are made public (e.g., disclosing alcohol dependence at an Alcoholics Anonymous meeting), and recommendations in this case focus on "opposite action" to the emotion of shame. These actions include adopting a confident posture, maintaining

eye contact, and making personal characteristics or behaviour public with others who will not reject the individual. Opposite action and shame-focused problem-solving have been shown to be effective in reducing shame among adult women diagnosed with Borderline Personality Disorder (Rizvi & Linehan, 2005), and DBT as a complete treatment package has been effective for adolescents struggling with a wide variety of problems, including aggression and externalizing disorders (see Groves et al., 2012, for a review). Although these studies suggest that DBT strategies may offer a promising treatment approach for shame, additional research needs to be done in order to determine whether these strategies would be effective among shame-prone adolescent offenders.

It should be noted that for young offenders such as those in the present study, shame may quite often be justified. That is, in committing an offence that violates society's moral code, they may very well be rejected from numerous societal groups if that behaviour is made public. Therefore, rather than focusing on "opposite action," interventions may be most effective if they emphasize problem-solving for justified shame (e.g., changing behaviour to fit in with more prosocial groups; spending time with others who are aware of the offence and who will support prosocial changes while not rejecting the youth).

The present findings also suggest that guilt, being a protective factor against depression, anxiety, and anger, may be an emotion that clinicians wish to encourage. Currently, restorative justice is the therapeutic approach that most clearly suggests guilt induction given its emphasis on accountability and making amends (e.g., Umbreit & Armour, 2011). However, the primary aim of restorative justice is to meet the needs of victims rather than offenders (Braithwaite, 2002), and it has been strongly emphasized that such programs should not become offender-focused (e.g., Choi et al., 2012; Robinson & Shapland, 2008). Furthermore, it has been stated that the main function of restorative justice for offenders should be recidivism reduction (e.g., Miller et al., 2008) rather than any change in emotional functioning per se. Thus, although restorative justice encourages the behavioural correlates of guilt (Lewis, 1971) and in some cases reduces reoffending in the process (e.g., Bonta et al., 2006), it may not lead to any actual changes in this emotion among young offenders. A helpful alternative may be interventions that focus specifically on building greater awareness and understanding of guilt, such as those derived from DBT. These interventions involve exercises such as

identifying one's core values and observing how guilt arises from actions that violate those values (Linehan, 1993). Such guilt-focused therapy may be especially relevant for youth high in psychopathic characteristics in light of present findings suggesting that these youth have consistent deficits in guilt across multiple domains. Despite concerns that treatment of psychopathic clients may actually increase their ability to manipulate others for personal gain (e.g., Harris et al., 1994), or that only the behavioural features of psychopathy are amenable to treatment (e.g., Gacono, 2000), emerging evidence suggests that even the presumably deeper-seated affective psychopathic traits may respond to sufficiently intense and long-lasting therapy (Caldwell et al., 2012). Hence, as in the case of shame, additional research is needed in order to determine whether guilt-focused interventions are effective among justice-involved youth, both with and without psychopathic traits.

### **1.5.3. Limitations**

The present study should be considered in light of its limitations. First, because the ORSGS was introduced later in the study, fewer participants were able to complete it. Although significant relationships were observed between the ORSGS and several variables, this lack of participants may have undermined the ability to detect additional significant relationships. Further studies should be undertaken to investigate this measure in the context of a greater number of adolescents.

Secondly, the TOSCA-A may not fully capture the experience of an adolescent offender population. In particular, many items focus on school and family, which may not be especially salient areas for youth who have withdrawn or been expelled from school, have had alternative arrangements for education, or who have experienced significant trauma and discord within their families. An alternative version of the TOSCA has been developed for adult offender populations (TOSCA-Socially Deviant; Hanson & Tangney, 1996); additional research should be undertaken to explore the possibility of tailoring this measure to adolescent offenders.

Finally, the approach taken to investigate developmental differences in guilt and shame was also limited. Concurrent correlational analyses between age, guilt, and shame revealed no significant associations. However, further studies that use test-retest



methods with the same youth followed longitudinally may better clarify these relationships. Addressing this question is important in order to determine whether varying capacities for guilt and shame exist among youth of different ages, and consequently whether different treatment approaches could be tailored to such capacities.

Notwithstanding the above limitations, this research was also characterized by several strengths. Most foundationally, with the framework of guilt and shame (Tangney & Dearing, 2002), the present study provides a proposal for conceptualizing and assessing “remorse” that has thus far been lacking in youth justice settings. Secondly, guilt and shame were assessed in both general and offence-specific situations, allowing for a comprehensive picture of these experiences across multiple domains. Thirdly, participants were adolescents on probation in the community, which constitutes a unique contribution to a literature that has predominantly focused on youth in custody. Fourthly, data collection procedures were comprehensive and involved an interview, self-report measures, interviewer-scored measures, and a file review. Finally, the present findings shed light on questions that have yet been unexamined with respect to guilt, shame, and adolescent offenders; and in particular the associations between these emotions, mental health, and psychopathic characteristics.

#### **1.5.4. Future Directions**

In addition to aforementioned issues related to study limitations, this study highlights other important needs for further research. Guilt and shame should be studied among adolescent offenders in custody, who may be at higher risk for psychopathology (Teplin et al., 2006) and who may have more pronounced psychopathic characteristics (Forth et al., 2003). Also, in the midst of the robust associations between shame and psychopathology observed in this study and numerous others (Tangney et al., 2007), questions arise concerning the nature and mechanisms of these associations. In particular, it is possible that moderator variables such as hopelessness or cognitive style may play a role in these relationships. This seems particularly conceivable given the fundamental, stable, and global nature of shame thoughts suggesting that positive change is impossible (e.g., “I am a defective person”). Further research should test moderation and mediational models using measures of cognitive style and hopelessness

in order to gain a clearer picture of the nature of these relationships. Further, given the negative association between guilt and anger problems, studies are also needed to elucidate the mechanisms of this relationship. Examining relationships between guilt and other positive characteristics such as resiliency (e.g., Search Institute, 2004) and protective factors (e.g., Borum et al., 2006) may assist in answering these questions.

Finally, there is a clear need for research on the efficacy and effectiveness of interventions targeted at shame and guilt. The suggestions offered above represent an extrapolation of existing DBT treatment protocols, but there is little evidence to guide these recommendations except for one study with adult females diagnosed with BPD (Rizvi & Linehan, 2005). Given the importance of shame and guilt as suggested by a burgeoning body of research, including the present study, the next step is to develop evidence-based procedures for ameliorating the harmful effects of shame while maximizing the helpful effects of guilt.

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## **2. Chapter 2. Remorse and Recidivism among Adolescent Offenders**

### **2.1. Abstract**

Remorse has long been considered an influential factor in reoffending among adolescents. However, the nature of this construct has not yet been clearly articulated, and little research has examined whether it is related to recidivism. The present study was intended to address these issues by investigating relationships between remorse and reoffending in a sample of adolescent offenders (N = 97) using the theoretically and empirically established framework of guilt and shame (Tangney & Dearing, 2002). Findings indicated that guilt was negatively related to recidivism, and provided incremental validity beyond established risk factors for offending as well as existing measures of “remorse”. In contrast, shame and externalization of blame were positively related to recidivism. Like guilt, externalization of blame provided incremental validity in the prediction of recidivism beyond established risk factors for offending as well as existing measures of “remorse”. These results suggest that assessment of guilt, shame, and externalization of blame may be of greater utility than “remorse”, and also underscore these features as potentially important treatment targets for adolescent offenders.

## 2.2. Introduction

The construct of remorse has long been theoretically linked to criminal offending among youth. A sizeable body of research on adolescent psychopathic characteristics (e.g., Edens, Campbell, & Weir, 2007; Forth, Kosson, & Hare, 2003; Gretton, Hare, & Catchpole, 2004; Vincent, Odgers, McCormick, & Corrado, 2008) and “callous-unemotional traits” (e.g., Frick & White, 2008) consistently suggests that lack of remorse is of critical importance in a constellation of features that are associated with particularly severe and chronic criminal behaviour (e.g., Salekin, 2008). Similarly, case law in Canada (e.g., *R. v. C.*, 2005) and the United States (Duncan, 2002; *Hall v. State*, 1998) has promulgated the notion that lack of remorse is a legitimate reason for more punitive sentencing. These views are even reflected in contemporary journalism (e.g., “Jordan Brown”, 2010; “Remorseful Killer”, 2010), which consistently espouses the idea that youth who do not express remorse are poor candidates for rehabilitation. Yet despite these enduring, often strongly-purported beliefs, the definition of remorse is nebulous and little research has examined whether it is actually linked to offending. The purpose of the present study was to address these issues by proposing an alternative measurement strategy for remorse and by empirically examining its relationship to recidivism among adolescent offenders.

### 2.2.1. *Remorse and the Law*

Remorse is relevant to the law in terms of what is considered an acceptable response to the commission of a crime. The painful affective state associated with remorse can be viewed as an appropriate form of punishment for a transgression, and subsequent acceptance of responsibility and repentance are seen as just repair of the damage done to victims and society (Murphy, 1997; Sarat, 1999; Wuthnow, 1999). Thus, remorse is desired, and *lack* of remorse casts the offender in a highly unfavorable light. In fact, it has been argued that the remorseless offender may as well have actually committed two crimes: the first being the offence itself, and the second being a failure to feel sorry about it (Etzioni, 1997).

These theoretical notions regarding the relevance of remorse to the legal system are borne out extensively in juvenile case law. Duncan (2002) cites over two hundred

cases in the United States, many of which occurred in appellate court, in which remorse was considered relevant to sentencing decisions (e.g., *Hall v. State*, 1998; *State v. Richardson*, 1996). Likewise, the inferred presence of remorse has also been used as partial justification to retain youths in juvenile court rather than implementing transfer to adult court (e.g., *In re Appeal*, 1986). Similar patterns can be observed in Canadian Supreme Court cases; *R. v. C.* (2005), for example, cites “remorse [expressed] to the probation officer” (p. 24) as a mitigating factor in sentencing. Likewise, *R. v. L.* (1989) notes evidence indicating “insensitivity and lack of remorse” (p. 9) in the context of a decision to transfer a youth to adult court. Thus, these cases suggest that the presence of remorse may contribute to leniency, whereas lack of remorse may lead to more punitive sentencing.

The Canadian *Youth Criminal Justice Act* (YCJA, 2003), the guiding legislation regarding adolescent offending in Canada, does not include explicit reference to remorse in the same manner as the aforementioned cases. Nevertheless, the YCJA reflects extant theory regarding remorse by mandating that young offenders acknowledge responsibility and seek reparation for criminal behaviour. The YCJA Declaration of Principle, for example, states that measures taken against juvenile offenders should “encourage the repair of harm done to victims and the community” (s. 3[1]), and the principles of youth sentencing include “any reparation made by the young person to the victim or the community” (s. 38[3]). The emphasis on reparation in these precepts is consistent with theory linking remorse to the law in terms of repentance (Murphy, 1997; Sarat, 1999). Similarly, the YCJA mandates that pre-sentence reports include an examination of “willingness to make amends... and the willingness of the young person to avail himself or herself of [community] services or facilities” (s. 40[d]). Willingness to make amends generally requires that the individual take responsibility for the transgression beforehand (e.g., Tangney, 1992), which in turn aligns with the theoretical notion that remorse requires acceptance of responsibility (Wuthnow, 1999). Therefore, remorse appears to play a role in federal legislation as well as case law.

### **2.2.2. Remorse, Guilt, and Shame**

Despite the aforementioned cases – and hundreds more – in which remorse is mentioned (Duncan, 2002), the definition of this construct remains unclear. A

comprehensive search of the LexisNexis and QuickLaw databases revealed no juvenile case law in which a description of remorse is laid out. Beyond the law per se, forensic psychological science related to remorse refers to vague phrases such as “feeling bad” (e.g., Frick & Hare, 2001), making it difficult to determine the emotion or experience that is at issue beyond a generally unpleasant affective state. Forensic psychological assessment instruments reflect this lack of clarity; varying defined items to assess remorse are included on the *Structured Assessment of Violence Risk in Youth* (SAVRY; Borum et al., 2006), the *Youth Level of Service/Case Management Inventory* (YLS/CMI; Hoge et al., 2002) and the *Psychopathy Checklist: Youth Version* (PCL:YV; Forth et al., 2003). For example, the PCL:YV item “Lack of Remorse” indicates that this construct can be determined “in many ways” (p. 35), including “repeatedly engag[ing] in activities that are clearly harmful to others” (p. 35), “bragg[ing] about his/her antisocial acts” (p. 35), or the rater’s “indirect assessment of his/her perceptions concerning the seriousness or consequences of his/her behavior for others” (p. 35). The SAVRY item “Low Empathy/Remorse,” on the other hand, combines remorse with the construct of empathy and may be rated based on indicators such as “truthful admission” (p. 81) of crimes or “fleeting expressions of emotional distress or sadness” (p. 81). Thus, based on these measurement approaches, a young offender’s remorse could conceivably be inferred based on evidence including confessions, minimal sadness, bragging about crime, repeated criminal behaviour, or the inability to correctly articulate the emotions of another person (i.e., empathy; Eisenberg et al., 2005). This lack of consistency should be concerning to researchers, clinicians, and justice system players alike, particularly given that notions about remorse can play a role in profoundly life-altering legal decisions such as transfer to adult court (e.g., *In re Appeal*, 1986).

To address this fundamental issue, it is proposed here that a useful means of defining remorse may be the framework of guilt and shame (Lewis, 1971). Supported by a wide array of research (Tangney & Dearing, 2002; Tangney, Stuewig & Mashek, 2007; Tracy & Robins, 2006), this framework indicates that the emotion of guilt is focused on a specific event or behaviour (e.g., “I *did* that bad *thing*”) whereas the emotion of shame is focused on a negative evaluation of the *self* as a consequence of the event or behaviour (e.g., “I *did* that bad thing and therefore I am a *bad person*”).

Guilt and shame are similar in some respects, but critically different in others. In particular, the two emotions share common features such as self-consciousness and dysphoria (Tangney et al., 2007), and tend to be moderately correlated (e.g., Tangney, 1995; Tangney et al., 1992a; 1992b). However, guilt is considered to be an adaptive and helpful emotion, whereas shame tends to have destructive effects (Tangney & Dearing, 2002). Specifically, guilt motivates reparative effort such as confessions, apologies, and attempts to right the wrong that was done (Tangney et al., 1996a). It serves as a protective factor against anger problems (Tangney et al., 1992) and drug and alcohol abuse (Tangney & Dearing, 2002; Dearing et al., 2005). Shame, in contrast, is associated with the perception of a defective, objectionable self (Tangney, 1995; Tangney et al., 1996a). It prompts urges to hide and disappear (Lindsay-Hartz, 1984), and is a risk factor for psychopathology such as depression, dysregulated anger, substance abuse, and suicidal ideation (e.g., Andrews et al., 2000, Stuewig & McCloskey, 2005; Tangney et al., 1996b). In addition, shame is strongly related to the tendency to externalize blame to others (Tangney et al., 1992a; 2007), which is associated with an increase in hostile, humiliated fury (Lewis, 1971; Scheff, 1987).

The framework of guilt and shame offers a theoretical foundation, phenomenology, and research base that are far more developed than those of “remorse.” In addition, this framework can be readily extrapolated to forensic contexts: criminal behaviour may elicit guilt focused on the event (e.g., that *assault was a bad thing* to do), shame focused on the self (e.g., *I am a bad person* for committing that assault), or some combination thereof. Indeed, the potential relevance of these emotions to offending has been reflected in the development of the Offence-Related Shame and Guilt Scale (ORSGS; Wright & Gudjonsson, 2007), which was created based on the notion that criminal offences, being social and moral transgressions, could be especially potent triggers of guilt and shame. Initial research on the ORSGS (Wright & Gudjonsson, 2007; Wright et al., 2008) provides support for the factor structure and internal consistency of this measure. However, no research has yet examined the association between the ORSGS and recidivism among adolescent offenders.

### **2.2.3. Remorse and Recidivism**

Despite legal assumptions that lack of remorse acts as a risk factor for recidivism (e.g., *R. v. C.*, 2005), little research to date has examined associations among shame, guilt, and offending. Most research has been conducted with community samples, studies with offenders are rare, and studies with adolescent offenders are scarcer still. Nevertheless, findings thus far provide support for the notion that the framework of guilt and shame could be useful for better elucidating associations between “remorse” and reoffending among youth.

With regard to community samples, studies of adults (Tibbets, 2003) and adolescents (Stuewig & McCloskey, 2005; Tangney & Dearing, 2002) have consistently demonstrated that shame is unrelated to previous and concurrent criminal behaviour whereas guilt is negatively related to these outcomes. These findings suggest that guilt may be a protective factor for offending while shame may not play an important role in this regard. However, the fact that these studies were conducted with community samples limits generalizability to offenders, and lack of examination of recidivism limits conclusions about any risk or protective role played by guilt and shame.

In a more recent study of adult inmates, Tangney et al. (2011) examined the association of shame and guilt with various psychological and behavioural correlates known to be related to crime. Results indicated that guilt was negatively related to factors such as offence severity, number of convictions, and psychopathic characteristics, further underscoring the potential role of guilt as a protective factor against offending. In contrast, shame was *positively* related to what the authors termed “criminogenic cognitions” (i.e., failure to accept responsibility, notions of entitlement, negative attitudes toward authority, short-term orientation, and insensitivity to the impact of crime). Although it is unclear as to whether these thought patterns are actually criminogenic (i.e., related to offending), *notions of entitlement* and *short-term orientation* bear similarity to psychopathic characteristics such as grandiose sense of self-worth and impulsivity (Forth et al., 2003), which are related to offending vis-à-vis psychopathy (e.g., Vincent et al., 2008). In turn, these findings suggest that shame – in contrast to guilt – may be *positively* related to risk of offending. However, as in the case of the community studies reviewed above (e.g., Tibbets, 2003), the fact that recidivism was not examined



in this study precludes any firm conclusions in this regard. In addition, given that the sample consisted of adults, it is unclear as to whether the findings are applicable to young offenders.

There have been only two studies thus far that have addressed the issue of how adolescent offenders' experiences of guilt and shame may be related to offending. In the first study, Robinson et al. (2007) examined concurrent relationships between guilt, self-reported aggression (e.g., getting in fights) and antisocial attitudes (e.g., "police usually treat you dirty") among incarcerated adolescents. Findings indicated that guilt was related to lower levels of aggression and antisocial attitudes, whereas shame was weakly but positively related to higher levels of these outcomes. Thus, these findings are similar to those obtained among adult inmates with respect to the possible role of guilt as a protective factor and shame as a risk factor for offending (Tangney et al., 2011). However, this study did not examine recidivism and focused only on concurrent relationships.

In the second study, which was longitudinal and prospective in design, Hosser et al. (2008) asked a sample of 1243 incarcerated youthful offenders to self-report their levels of guilt and shame at the beginning of their prison term. After a median follow-up period of approximately two years, youths' recidivism rates were assessed. Results indicated that feelings of guilt were associated with lower rates of recidivism, whereas feelings of shame were associated with higher rates. Thus, buttressed by the sample of young offenders and the examination of recidivism data, these findings present a more definitive picture of guilt as a protective factor and shame as a risk factor for reoffending among youth. They also suggest that, contrary to the widely-held notion of a unified construct of "remorse" that operates in a unidirectional manner (i.e., more remorse leads to less reoffending and vice versa; Borum et al., 2006; Forth et al., 2003; *R. v. C.*, 2005), there are two distinct emotions (i.e., guilt and shame) that may reduce or exacerbate youths' likelihood of continued violation of the law.

The study by Hosser et al. (2008) has a number of notable strengths, including a prospective longitudinal design, a large number of participants (N = 1243), and a lengthy follow-up period (median = 23.6 months; maximum = 78.4 months). However, it is also characterized by several limitations that suggest important needs for additional research.

First, most participants in this study were aged 18 to 21, which is considered the age of majority in many North American jurisdictions (e.g., YCJA, 2003). Therefore, there is a need to study adolescents who fall within the legal definition of the word, both to draw clearer inferences about guilt and shame among this age group as well as to produce findings that are relevant to the law.

Secondly, there are problems inherent in the measure of guilt and shame used by Hosser et al., which consisted of two questions in which participants were asked to rate the frequency with which they experienced shame and guilt over the past 7 days. These problems include a lack of preceding empirical evidence that youths have sufficient insight into and understanding of guilt and shame to be able to report these emotions accurately, a failure to assess any aspects of these constructs beyond their frequency, limited reliability arising from a single item for each construct, and a lack of attention as to whether the emotions were experienced in the context of the youth's offence or not. Thus, there is a need for research that employs theoretically informed and evidence-based measures of guilt and shame rather than self-report, encompasses multiple items tapping each construct, and that also assesses potential differences between offence-related and non-offence-related shame and guilt.

Thirdly, Hosser et al. may not have controlled for some important risk factors for recidivism. In particular, the researchers controlled for age, offence type, participation in therapy, IQ, socioeconomic status before imprisonment, parents' criminal history, and self-reported drug addiction. However, meta-analytic findings (e.g., Cottle et al., 2001) have highlighted other well-established risk factors for recidivism that were not controlled for by Hosser et al., including peer delinquency, substance abuse problems, and age at first contact with the law. Thus, there is a need for further research examining relationships between shame, guilt, and recidivism while also controlling for empirically supported risk factors for reoffending.

Finally, both Hosser et al. (2008) and Robinson et al. (2007) studied only incarcerated offenders. Although this is not a limitation per se, it suggests a need to understand more about adolescent offenders in the community. Such youths have greater opportunities to recidivate than their jailed counterparts given that their freedom

is less restricted, thus further emphasizing the importance of better understanding risk and protective factors that could influence their offending behaviour.

#### **2.2.4. The Present Study**

The purpose of the present study was to address the limitations just described, as well as the more foundational problem of definitional vagueness related to “remorse”, by examining relationships among guilt, shame, and recidivism among adolescent offenders. A primary aim was to contribute to the existing research base by a) administering theoretically informed and empirically supported measures of guilt and shame; b) examining both offence-related and non-offence-related guilt and shame; c) assessing the “externalization of blame” aspect of shame that is considered an important feature of this emotion (e.g., Tangney, 1992); d) recruiting a sample of young offenders aged 12-17; e) studying adolescent offenders in the community; f) employing a longitudinal design; g) controlling for established risk factors for adolescent offending in the analyses; and h) examining the predictive validity of guilt and shame beyond existing items to assess remorse, as measured by risk assessment tools including the SAVRY, YLS/CMI, and PCL:YV. Consistent with prior findings that guilt acts as a protective factor against recidivism whereas shame acts as a risk factor (Hosser et al., 2008), I hypothesized that a similar pattern of results would emerge from this research. In addition, given that externalization of blame is an important feature of shame (e.g., Tangney et al., 2007), I expected that this characteristic would also act as a risk factor for recidivism. Finally, I anticipated that shame, externalization of blame, and guilt would add incremental validity beyond other established risk factors for offending, and existing measures of “remorse”, in the prediction of recidivism.

There are several implications of this research. Firstly, it may suggest whether Lewis’s (1971) theoretical framework of guilt and shame can be usefully applied to adolescent offending. In turn, this may help to advance theory on “remorse” that has thus far been lacking in this context. Secondly, the results may inform assessment practices in youth justice settings. As previously noted, the PCL:YV (Forth et al., 2003), SAVRY (Borum et al., 2006), and YLS/CMI (Hoge et al., 2002) all include varyingly defined items to assess remorse, and findings from the present study may indicate possible improvements to such procedures intended to capture the nature of this

construct. Moreover, if guilt, shame, or externalization of blame add incremental validity in the prediction of recidivism beyond these items, this would provide evidence in favor of more detailed assessment of guilt and shame. Finally, examining guilt and shame may suggest corresponding treatment interventions. If guilt acts as a protective factor against offending while shame or externalization of blame act as risk factors, for example, clinicians who treat young offenders may wish to provide therapy to reduce shame and to foster capacities for guilt.

## **2.3. Method**

### **2.3.1. Participants**

Participants in this study were adolescents on probation in British Columbia, Canada. Demographic characteristics are presented in Table 10. Participants ranged in age from 12 to 17 ( $M = 15.88$ ,  $SD = 1.15$ ) and were mostly male ( $n = 68$ ; 70%), although almost a third were female ( $n = 29$ ; 30%). The majority of youth identified as Caucasian ( $n = 53$ ; 55%), although a substantial proportion indicated that they were at least partly Aboriginal ( $n = 18$ ; 19%). The remainder of participants ( $n = 26$ ; 27%) identified as another ethnicity, including Asian, Black, and Hispanic. These demographic characteristics appear representative of young offenders across Canada (Brennan, 2012). Youth had an average of 2.69 index offence charges ( $SD = 3.39$ ) and 1.99 index offence convictions ( $SD = 1.66$ ) leading to their being on probation during the present study.

At the time of data analysis, 506 youth had been approached from the 11 probation offices in the Lower Mainland of BC. Of these, 458 (91%) expressed initial interest in volunteering for the study and 48 (9%) did not. Of those who expressed interest, 323 (64%) were eligible to participate and became enrolled in the study. The remaining one hundred and thirty-five youth were ineligible and did not become enrolled, most commonly because they were outside the required age range of 12 to 17 years old, resided outside of the catchment area, or were not on probation (e.g., not yet adjudicated, on bail, etc.). One-hundred and twenty-three youth continued on to complete the baseline interview for this study.

Of the 123 youth who participated in the initial interview, 26 did not complete an adequate number of items on measures of guilt, shame, self-reported offending, and established risk factors (i.e., 80% or more of each measure; Downey & King, 1998) and were therefore excluded from further analyses. Thus, there was a total remaining sample of 97. To determine whether excluded youth differed systematically from youth who completed more than 80% of study measures, independent samples t-tests were used to investigate any potential differences with respect to all variables in Table 10, and chi-square analyses were used to assess potential differences in ethnicity and gender. These analyses indicated that there were no significant differences at the  $p < .05$  level between youth who completed more than 80% of measures and youth who did not.

### **2.3.2. Attrition**

The current study is a 6-month longitudinal study with two follow-up periods (i.e., 3 months and 6 months). Thus, samples of youth at each time point differ due to attrition and missed interviews. Eight youth did not complete the 3-month follow-up (i.e., an in-person interview was not completed and there was no official file information available), resulting in a sample size of 89 and a retention rate of 92% for this time point. Nineteen youth did not complete the 6-month interview, resulting in a sample size of 78 and a retention rate of 80% for this time point. Because of these withdrawals, attrition analyses were conducted in order to determine whether youth who remained in the study differed systematically from youth who did not. Independent samples t-tests were used to investigate any potential differences with respect to all variables in Table 1 as well as all measures used in this study (e.g., TOSCA-A, ORSGS, etc.). In addition, chi-square analyses were used to assess potential differences in ethnicity and gender. These analyses indicated that there were no significant differences at the  $p < .05$  level between youth who remained in the study and those who did not.

### **2.3.3. Procedures**

Youth were recruited for the study from 11 probation offices across the Lower Mainland of British Columbia. To be eligible for participation, youth had to be on probation, reside in the Greater Vancouver Regional District, and be between the ages of 12 and 17 years old (inclusive). Information about the study was provided to youth by

probation officers and research assistants. Youth participated in the present study in the context of a larger research project intended to evaluate the mental health, risks, and strengths of adolescent offenders.

Informed, active consent was obtained from youths' legal guardians, who were given information packages about the study and had this information reviewed with them via phone. Informed consent was also obtained from youth. Following explanation of study procedures, youth were required to complete an oral quiz consisting of questions about the nature of their participation. Participants who demonstrated a lack of comprehension based on any of their answers had this information reviewed with them and their knowledge was retested. Youth were required to demonstrate an adequate level of comprehension regarding all essential elements of consent in order to participate in the study. All youth in the present study met this criterion and none were excluded.

Data collection included a structured interview, completion of self-report measures, and a review of the youth's probation file. This process occurred at baseline as well as at the two follow-up interviews (i.e., 3 months and 6 months after baseline). Data collection was completed by research assistants ( $N = 12$ ) who received extensive training related to study protocol and the assessment measures. Training involved two days of didactic instruction, completion of four mock risk assessment cases, and completion of an actual case while accompanied by a more experienced research assistant. Once research assistants had demonstrated adequate interrater reliability for these joint cases (i.e., within 5 points of the total score of each measure), they were allowed to work independently.

All procedures used in the present study were in compliance with ethics requirements. Data were collected using non-identifiable participant numbers. Participants were informed that confidentiality would be maintained except in cases of imminent risk of harm to self or others, reported child abuse, or a court subpoena. Simon Fraser University, BC Youth Justice, Youth Forensic Psychiatric Services, and the BC Ministry of Children and Family Development provided ethics approval for this research.

## **2.3.4. Measures**

### **2.3.4.1. Guilt and Shame**

The Test of Self-Conscious Affect (TOSCA-A; Tangney, 1992) was administered in order to assess guilt, shame, and externalization of blame as related to general, routine situations (i.e., not related to offending). The TOSCA-A includes descriptions of 15 hypothetical yet common scenarios drawn from written accounts of personal shame and guilt experiences of youth (e.g., “while playing around, you throw a ball and it hits your friend in the face”). Participants are asked to rate their shame, guilt, and externalization of blame reactions to each scenario on a five-point scale (1 = not at all likely; 5 = very likely). The response domains on which participants rate their reactions include descriptors that were previously found to be indicative of phenomenological aspects of shame (e.g., “I would feel stupid that I can’t even throw a ball”), guilt (e.g., “I would apologize and make sure my friend feels better”), and externalization of blame (e.g., “I would think that maybe my friend needs more practice catching”).

The guilt and shame scales have demonstrated acceptable Cronbach’s alpha values (guilt = .86; shame = .80; Tangney & Dearing, 2002). Values for the externalization of blame scale have not been reported in previous research, although this scale achieved good internal consistency in the present study (see Data Analysis section below). In terms of validity, the guilt scale is positively related to empathy and constructive anger management strategies (Tangney, 1991, 1994, 1995; Tangney, Wagner, Fletcher, & Gramzow, 1992; Tangney, Wagner, Hill-Barlow, Marschall, & Gramzow, 1996). The shame scale is negatively related to empathy and positively related to maladaptive anger responses such as aggression (Tangney, 1991; Tangney et al., 1992, 1996b). The externalization scale is positively related to shame and hostility (Tangney et al., 1992a). Little research has examined the TOSCA-A in forensic samples of youth, but Robinson et al. (2007) reported that the guilt scale was consistently associated with lower levels of self-reported antisocial behaviours and attitudes among incarcerated adolescents.

In addition to the TOSCA-A, the Offense-Related Shame and Guilt Scale (ORSGS; Wright & Gudjonsson, 2007) was administered in order to assess guilt and shame as related to past offending behaviour. Unlike the TOSCA-A, the ORSGS does

not allow for assessment of externalization of blame. Because this measure was introduced later in the study than the TOSCA-A, 58 of the total 97 participants completed it. The ORSGS includes 16 items scored on a 7-point Likert scale (1 = not at all; 7 = very much). Example items include “I feel no need to make amends (make up) for what I did” and “I will never forgive myself for what I have done”. Little research has been conducted with the ORSGS. However, a preliminary factor analysis of the measure using responses from incarcerated adult inmates (Wright & Gudjonsson, 2007) indicated acceptable internal consistency and a factor structure that aligned with previous theory (i.e., separate constructs of guilt and shame; Tangney & Dearing, 2002).

#### **2.3.4.2. Offending**

Offending was measured via both self-report and official records. Official records consisted of youths’ probation files, which were examined for police or court documentation reflecting criminal charges. These charges were summed to create a total frequency of offending score (i.e., count data consisting of number of charges).

Self-report consisted of the Self-Report of Offending (SRO; Huizinga et al., 1991). This measure includes items to assess aggressive offences (e.g., “Beaten up or physically attacked somebody so badly that they probably needed a doctor?”) as well as income-related offences (e.g., “Stolen something from a store (shoplifted)?”). In the present study, youth coded responses on a three-point scale in order to obtain information on offending frequency (0 = Never, 1 = 1 time, 2 = 2 or more times). Therefore, this measure captures offending frequency but is not count data per se. The SRO is used frequently in studies of adolescent delinquency and offending and has demonstrated good psychometric properties (Knight et al., 2004).

Official records and self-report allowed for a total of four measures of offending in the present study: 1) income-related offences on the SRO (10 items), 2) violent offences on the SRO (10 items), 3) total self-reported offending on the SRO (23 items), and 4) total number of official charges. Frequency of self-reported offending exceeded the total number of official charges in 36% of cases (N = 32) at the 3-month follow-up, and in 27% of cases (N = 21) at the 6-month follow-up (see Table 11). In contrast, the number of official charges exceeded self-reported offending in only 1% of cases (N = 1) at the 3-month follow up, and in 3% of cases (N = 2) at the 6-month follow-up. Consistent with



prior research (Farrington et al., 2007), correlations between number of official charges and total self-reported offending were nonsignificant, with self-report typically far exceeding official charges.

Available offending data for youth at each follow-up point are indicated in Table 11. If youth self-reported offending but official records contained no charges, their self-report was used. Likewise, if official records indicated offending but the youth did not, official records were used. In some cases, only self-report or official records were available. In those cases, whatever information available was retained.

#### **2.3.4.3. Established Risk Factors for Offending**

Due to the modest sample size and limited statistical power in the present study, established risk factors for adolescent offending were selected based on strong empirical prediction in meta-analytic findings (Cottle et al., 2001) and subsequent empirical support. These factors included age at first contact with the law (Dahlberg & Simon, 2006; Douglas et al., 2008), substance abuse (Reppucci et al., 2002; Douglas et al., 2008; Grisso, 2004), and delinquent peers (Knight et al., 2004; Moffitt et al., 1996). Age at first contact with the law was assessed via youths' self-report of when they had first been arrested by police. Substance abuse was assessed using the Alcohol/Drug subscale of the Massachusetts Youth Screening Instrument-2 (MAYSI-2; Grisso & Barnum, 2001). The MAYSI-2 is a self-report inventory specifically designed for justice-involved youth, and consists of items scored on a *yes* or *no* basis. There is strong evidence for the reliability and validity of the MAYSI-2 as a measure (Archer et al., 2010; Grisso & Barnum, 2006) as well as for the Alcohol/Drug scale specifically (Archer et al., 2004; Grisso et al., 2001). Finally, the presence of delinquent peers was evaluated with the Delinquent Peers Scale (DPS; Thornberry et al., 1994). This measure consists of 8 items that assess the proportion of the youth's friends that are involved in delinquent activities (e.g., theft; assaults). The DPS has good internal consistency (Le & Stockdale, 2005; Thornberry et al., 1994).

#### **2.3.4.4. Measures of "Remorse"**

The current measures of remorse examined were individual items on the SAVRY (Borum et al., 2006), YLS/CMI (Hoge et al., 2002), and PCL:YV (Forth et al., 2003). All

three measures were scored by trained research assistants based on both file information and interviews. The SAVRY is a measure designed to assess risk for violence among justice-involved youth, and includes an item to assess “Low Empathy/Remorse.” This item is scored on a three-point scale, with 0 indicating an absence of the characteristic, 1 indicating partial presence, and 2 indicating definite presence of the characteristic. The measure as a whole has strong psychometric properties (Olver et al., 2009; Welsh et al., 2008).

The PCL:YV is an instrument designed to assess psychopathic characteristics among youth, and includes an item to assess “Lack of Remorse.” As in the case of the SAVRY, this item is scored on a 3-point scale. The PCL:YV has good psychometric properties and has been shown to predict recidivism in a number of studies (Forth, 2005).

Finally, the YLS/CMI is an instrument to assess youths’ risk for general recidivism and service needs, and includes an item to assess “Inadequate Guilt Feelings.” This item is scored on a dichotomous, absent or present basis. The YLS/CMI has adequate interrater agreement and internal consistency (Catchpole & Gretton, 2003; Hoge, 2005; Marczyk, Heilbrun, Lander, & DeMatteo, 2003; Schmidt, Hoge, & Gomes, 2005), and is significantly related to reoffending (Schmidt et al., 2005).

### **2.3.5. Data Analysis**

#### **2.3.5.1. Missing Data**

Missing data were examined as an initial step in data analysis. This examination was guided by the recommendations set forth by Downey and King (1998), which indicate that data should be retained if the percentage of participants with missing data is less than 20% of the total sample and if the missing data themselves constitute less than 20% of the total instrument. Downey and King note that under these conditions, there are high correlations between original scores and imputed scores (i.e.,  $r_s > .95$ ), and coefficient alphas remain similar. They indicate that as the amount of missing data exceeds 20% (with respect to percentage of participants or percentage of missing items), correlations and coefficient alphas begin to fall.

With regard to the TOSCA-A in the present sample, missing data were observed among 6 participants (i.e., 6% of the total sample) and consisted of between 1 and 8 items (i.e., 2% to 12% of the total measure). With regard to the ORSGS, missing data were observed among 5 participants (i.e., 5% of the total measure) and consisted of between 1 and 2 items (i.e., 6% or 12% of the total measure). These data were retained because they involved less than 20% of participants and less than 20% of the total measures, therefore adhering to the guidelines indicated above. In these cases, item means were used to replace the missing item values because this method is considered a good representation of the original data in the current scenario (i.e., when the number of participants with missing data *and* the number of items missing are 20% or less; Downey & King, 1998). Furthermore, the item mean method is preferable to the person mean substitution method because it does not artificially inflate indices of scale reliability (Downey & King, 1998). Subsequent Monte Carlo studies have been conducted to compare item mean versus person mean imputation methods (e.g., Roth et al., 1999; Gottschall et al., 2012), and similarly indicate that item mean substitution results in more conservative estimates of scale reliability and has negligible impact on root mean square error and bias (i.e., systematic differences between statistics and true scores).

#### **2.3.5.2. Power Analysis**

The data analytic methods used in this study included bivariate and partial correlations, independent samples t-tests, and various regression equations with a maximum of five independent variables. As noted, 97 participants completed the TOSCA-A at baseline, and 58 of these participants completed the ORSGS. Eighty-nine youth completed the 3-month follow-up and 78 completed the 6-month follow-up. Thus, for the ORSGS, statistical power was sufficient to detect large effect sizes for analyses using  $p = .05$ . For the TOSCA-A at baseline and the 3-month follow-up, statistical power was sufficient to detect medium effect sizes for partial correlations, t-tests, and regression equations with up to four independent variables using  $p = .05$  (Cohen, 1992). For regression equations with five independent variables at the 3-month follow-up, and for all analyses at the 6-month follow-up, power in analyses with the TOSCA-A was sufficient to detect large effect sizes.

### **2.3.5.3. Normality of Outcome Measures**

There was substantial positive skew on both self-reported and official offending variables. For example, initial SRO Total scores for the 3-month follow-up had a skewness of 1.77 and kurtosis of 3.09, whereas normally distributed data have skewness and kurtosis values between 0 and +/- 1 (Osborne, 2002). To address skew on *self-reported* offending variables, a square root transformation was conducted after setting the minimum value at 1. The square root transformation produced distributions that more closely approximated a normal distribution (i.e., skewness and kurtosis for transformed scores ranged between 0 and +/- 1.2).

A square root transformation was *not* used on *official* records of offending given that such procedures are considered inappropriate for count data (i.e., number of charges; Vives et al., 2006). Instead, Poisson regression was used to analyze official offending because this method is intended for positively-skewed count data (e.g., Agresti, 2002; Loeys et al., 2012).

### **2.3.5.4. Internal Consistency**

Cronbach's alpha (1951) was calculated in order to address internal consistency. For the TOSCA-A, this analysis produced coefficient alphas of .89 for Guilt, .82 for Shame, and .83 for Externalization. These values reflect good internal consistency and, in the case of Guilt and Shame, are consistent with those obtained in previous research (e.g., Tangney et al., 1992; Tangney & Dearing, 2002). For the ORSGS, alphas were .70 for Guilt and .75 for Shame. These alphas are lower than in a prior exploratory study (Wright & Gudjonsson, 2007), but are still considered acceptable.

Coefficient alpha values were .84 for the MAYSI-2 Drug/Alcohol subscale and .94 for the Delinquent Peers scale. These values are consistent with prior research (e.g., Archer et al., 2010; Thornberry et al., 2004) and indicate excellent internal consistency. For the SRO, coefficient alpha values ranged from .72 to .89 (see Table 4), indicating good to excellent internal consistency (George & Mallery, 2003).

### **2.3.5.5. Interrater Reliability**

Interrater reliability was determined for "remorse" items on the SAVRY, YLS/CMI, and PCL:YV given that these measures are scored by research assistants. Ten cases

(10.31%) were randomly selected for examination of interrater reliability. For the SAVRY and PCL:YV, single-rater intraclass correlation coefficients (ICC) were calculated using absolute agreement for a two-way random effects model (McGraw & Wong, 1996). This analysis produced ICCs of .62 for PCL:YV “Lack of Remorse” and .74 for SAVRY “Low Empathy/Remorse”, indicating adequate interrater reliability. For the YLS/CMI, kappa was calculated given that the “Inadequate Guilt Feelings” item is scored on a dichotomous basis. This analysis produced a kappa of .71, indicating adequate interrater reliability.

## **2.4. Results**

### **2.4.1. Descriptive Statistics**

Means, standard deviations, and ranges were calculated for the TOSCA-A, ORSGS, measures of established risk factors for adolescent offending (i.e., Delinquent Peers scale, MAYSI-2 Drug/Alcohol Use, and age at first contact with the law), and items to assess remorse (i.e., on the SAVRY, PCL:YV, and YLS/CMI). These statistics are presented in Table 12. Mean MAYSI-2 Drug/Alcohol Use scores were comparable to those in previous studies of adolescent offenders (e.g., Archer et al., 2004, 2010), suggesting that the severity of substance abuse problems among participants in the present sample is likely similar to participants in other research. Descriptive data were also calculated for measures of offending. The results of these analyses are presented in Table 13. Approximately half of youth offended at each time point, indicating that rates of recidivism were relatively high and sufficient for meaningful analyses.

### **2.4.2. Bivariate Relationships among Guilt, Shame, and Externalization**

Correlations between the TOSCA-A and ORSGS are presented in Table 14. TOSCA-A Shame and Guilt scores were significantly related, as were ORSGS Shame and Guilt scores. Correlations were medium to large in magnitude (Cohen, 1988), which is consistent with prior research (e.g., Tangney et al., 1992; 1996) and indicates the overlapping nature of guilt and shame. In addition, TOSCA Externalization was associated with TOSCA Shame, aligning with previous research suggesting that

externalization of blame is an important feature of shame (e.g., Tangney et al., 1996). However, Externalization was not associated with ORSGS Shame, suggesting that this construct may bear more similarity to general propensities towards shame rather than shame specifically related to an offence.

### **2.4.3. Demographic Variables and Offending**

Associations among age, gender, and each offending variable were examined in order to determine whether any significant relationships exist that would need to be controlled for in subsequent analyses. Pearson bivariate correlations were calculated in the case of age, and t-tests were conducted in the case of gender. These analyses revealed no significant associations among age, gender, and any offending variable.

### **2.4.4. Guilt, Shame, Externalization, and Self-Reported Offending**

A series of linear regressions were used to determine whether shame, guilt, or externalization of blame predicted frequency of self-reported reoffending at 3 and 6 months. Due to intercorrelations among guilt, shame, and externalization (see Table 14), these variables were controlled as needed in Block 1 of each regression equation. Specifically, when guilt was the independent variable, shame was controlled. When shame was the independent variable, guilt was controlled. Finally, when externalization was the independent variable, shame was controlled.

The results of these analyses are presented in Table 15. TOSCA-A Guilt and ORSGS Guilt were significantly and inversely predictive of all forms of self-reported offending at both 3 and 6 months. These findings suggest that both offence-related and non-offence related guilt acted as protective factors against various types of self-reported recidivism.

TOSCA-A Shame was not related to any measure of self-reported offending. However, ORSGS Shame was significantly and positively predictive of income-related offending at 6 months, and TOSCA-A Externalization was significantly and positively predictive of all forms of self-reported offending at both 3 and 6 months. These results suggest that while *non-offence-related* shame did not appear to act as a risk factor for recidivism, *offence-related* shame acted as a risk factor for recidivism related to financial

gain. Furthermore, the externalization of blame that is often characteristic of shame appeared to act as a risk factor for recidivism more broadly.

#### **2.4.5. *Guilt, Shame, Externalization, and Official Records of Offending***

A series of Poisson regressions were used to determine whether shame, guilt, or externalization of blame predicted frequency of official recidivism at 3 and 6 months. These results are presented in Table 16. Neither measure of shame, TOSCA-A Externalization, or TOSCA-A Guilt were predictive of official reoffending. However, ORSGS Guilt was significantly and inversely predictive of official recidivism at 3 months, indicating that youth experiencing greater guilt related to their offence were less likely to accrue additional charges within this time period.

#### **2.4.6. *Incremental Validity***

##### **2.4.6.1. *Incremental Validity Beyond Established Risk Factors for Adolescent Offending***

Given that guilt, shame, and externalization of blame all predicted recidivism as detailed above, it was important to determine whether these associations held true after controlling for other established risk factors for offending. As indicated previously, the established risk factors examined included age at first contact with the law, drug and alcohol problems, and delinquent peers (e.g., Cottle et al., 2001). The initial step undertaken in this process was to calculate exploratory correlations in order to determine if these risk factors were associated with offending in the present sample. The results of these analyses are indicated in Table 17. Results indicated that all three risk factors were associated with all of the self-reported offending variables, and as such, subsequent analyses included all variables.

Next, hierarchical multiple regression analyses were conducted on outcomes for which the scale in question was predictive. For each regression equation, Block 1 included all established risk factors for offending as well as any required control variables (i.e., guilt was controlled for in all equations in which shame was the independent variable, and shame was controlled for in all equations in which guilt or externalization was the independent variable). Block 2 included established risk factors

for offending, required control variables, *and* each predictive scale of interest (i.e., TOSCA-A Guilt, TOSCA-A Externalization, ORSGS Guilt, and ORSGS Shame, in separate equations in order to evaluate their respective predictive power). The results of these analyses are indicated in Tables 18 and 19. It should be noted that incremental validity analyses could not be conducted with respect to *official* records of offending (i.e., the relationship between offence-related guilt and official charges at 3 months) because the Poisson regression used for this analysis does not allow for a hierarchical approach. Therefore, it is unclear as to whether offence-related guilt explains significant additional variance beyond other risk factors in the prediction of *official* records of offending.

With regard to *self-reported* offending, TOSCA-A Guilt explained significant additional variance beyond established risk factors in the prediction of *total* and *violent* recidivism at both the 3- and 6-month follow-up periods. In the case of *total* offending at 3 months, age at first contact with the law, drug and alcohol problems, and delinquent peers together accounted for 33% of the variance, while TOSCA-A Guilt scores alone accounted for an additional 5% of variance. In the case of *violent* offending at 3 months, established risk factors accounted for 35% of the variance while TOSCA-A Guilt scores alone accounted for an additional 7% of variance. For *total* offending at 6 months, established risk factors accounted for 28% of the variance while TOSCA-A Guilt scores alone accounted for an additional 5% of variance. Finally, in the case of *violent* offending at 6 months, established risk factors accounted for 21% of the variance while TOSCA-A Guilt scores accounted for an additional 6% of variance.

ORSGS Guilt explained significant additional variance beyond established risk factors for offending in the prediction of *total* self-reported recidivism at the 3-month follow-up. In particular, age at first contact with the law, drug and alcohol problems, and delinquent peers together accounted for 49% of the variance in total self-reported offending, while ORSGS Guilt alone accounted for an additional 7% of variance.

Finally, TOSCA-A Externalization also accounted for significant additional variance beyond established risk factors in the prediction of *total* self-reported offending at the 6-month follow-up. Specifically, established risk factors together accounted for 33% of the variance in total self-reported offending, while TOSCA-A Externalization scores alone accounted for an additional 6% of variance.



In sum, these results indicate that non-offence-related guilt provided incremental validity beyond established risk factors for offending in the prediction of total and violent recidivism at both follow-up periods. Furthermore, offence-related guilt and externalization of blame also added incremental validity beyond established risk factors in the prediction of total recidivism.

#### **2.4.6.2. Incremental Validity Beyond Existing Measures of “Remorse”**

It was also important to determine whether the predictive power of TOSCA-A Guilt, TOSCA-A Externalization, ORSGS Guilt, and ORSGS Shame with respect to recidivism would hold true after controlling for existing measures of remorse; in particular, single items on the PCL:YV (“Lack of Remorse”), SAVRY (“Low Empathy/Remorse”), and YLS/CMI (“Inadequate Guilt Feelings”). As an initial step in this analysis, exploratory correlations were calculated between these items and every measure of self-reported offending.

The results of these analyses are presented in Table 20. PCL:YV “Lack of Remorse” was related to all offending variables at 3 months as well as total and income-related offending at 6 months, and subsequently was retained for analysis with respect to these variables. SAVRY “Low Empathy/Remorse” was related to total and violent offending at 3 months and to total and income-related offending at 6 months. YLS/CMI “Inadequate Guilt Feelings” was not related to any offending variables at any time point, and was subsequently excluded from further analysis.

Next, hierarchical multiple regression analyses were conducted. Each measure of “remorse” was tested in separate regression equations. For each equation, Block 1 included the measure of “remorse” (i.e., PCL:YV “Lack of Remorse” or SAVRY “Low Empathy/Remorse”) and any required control variables (i.e., guilt was controlled for in all equations in which shame was the independent variable, and shame was controlled for in all equations in which guilt or externalization was the independent variable). Block 2 included the measure of “remorse”, required control variables, *and* each predictive scale of interest (i.e., TOSCA-A Guilt, TOSCA-A Externalization, ORSGS Guilt, and ORSGS Shame, in separate equations in order to evaluate their respective predictive power). The results of analyses pertaining to PCL:YV “Lack of Remorse” are indicated in Tables

21 and 22, and the results of analyses pertaining to SAVRY “Low Empathy/Remorse” are presented in Tables 23 and 24.

TOSCA-A Guilt explained significant additional variance beyond PCL:YV “Lack of Remorse” in all outcomes examined. For the 3-month follow-up period, PCL:YV “Lack of Remorse” accounted for 11% of the variance in *total* self-reported offending, while TOSCA-A Guilt accounted for an additional 13% of variance. In the case of *income-related* offending, PCL:YV “Lack of Remorse” accounted for 7% of the variance, while TOSCA-A Guilt accounted for an additional 6% of variance. In the case of *violent* offending, PCL:YV “Lack of Remorse” accounted for 11% of the variance, with TOSCA-A Guilt accounting for an additional 16% of variance. For the 6-month follow-up period, PCL:YV “Lack of Remorse” accounted for 6% of the variance in *total* self-reported offending while TOSCA-A Guilt accounted for an additional 10% of variance. Finally, in the case of *income-related* offending, PCL:YV “Lack of Remorse” accounted for 6% of the variance while TOSCA-A Guilt accounted for an additional 6% of variance.

Likewise, TOSCA-A Externalization also accounted for significant additional variance beyond PCL:YV “Lack of Remorse” in all outcomes examined. For the 3-month follow-up period, PCL:YV “Lack of Remorse” accounted for 11% of the variance in *total* self-reported offending, while TOSCA-A Externalization accounted for an additional 7% of variance. In the case of *income-related* offending, PCL:YV “Lack of Remorse” accounted for 6% of the variance, while TOSCA-A Externalization accounted for an additional 6% of variance. In the case of *violent* offending, PCL:YV “Lack of Remorse” accounted for 11% of the variance, with TOSCA-A Guilt accounting for an additional 5% of variance. For the 6-month follow-up period, PCL:YV “Lack of Remorse” accounted for 6% of the variance in *total* self-reported offending while TOSCA-A Externalization accounted for an additional 10% of variance. Finally, in the case of *income-related* offending, PCL:YV “Lack of Remorse” accounted for 7% of the variance while TOSCA-A Externalization accounted for an additional 7% of variance.

ORSGS Shame did not account for any additional variance beyond PCL:YV “Lack of Remorse” in the prediction of income-related offending at 6 months. In contrast, ORSGS Guilt *did* explain incremental variance in the prediction of total and violent offending at 3 months as well as total and income offending at 6 months. Specifically, for

the 3-month follow-up, PCL:YV “Lack of Remorse” accounted for 12% of the variance in *total* self-reported offending, while ORSGS Guilt accounted for an additional 11% of variance. In the case of *violent* offending, PCL:YV “Lack of Remorse” accounted for 13% of the variance, while ORSGS Guilt accounted for an additional 7% of variance. For the 6-month follow-up period, PCL:YV “Lack of Remorse” accounted for 6% of the variance in *total* self-reported offending while ORSGS Guilt accounted for an additional 10% of variance. Finally, in the case of *income-related* offending, PCL:YV “Lack of Remorse” accounted for 7% of the variance while ORSGS Guilt accounted for an additional 7% of variance.

With respect to the SAVRY, TOSCA-A Guilt explained significant additional variance beyond the “Low Empathy/Remorse” item in all outcomes examined. For the 3-month follow-up period, SAVRY “Low Empathy/Remorse” accounted for 6% of the variance in *total* self-reported offending, while TOSCA-A Guilt accounted for an additional 15% of variance. In the case of *violent* offending, SAVRY “Low Empathy/Remorse” accounted for 8% of the variance, while TOSCA-A Guilt accounted for an additional 17% of variance. For the 6-month follow-up period, SAVRY “Low Empathy/Remorse” accounted for 5% of the variance in *total* self-reported offending while TOSCA-A Guilt accounted for an additional 11% of variance. Finally, in the case of *income-related* offending, SAVRY “Low Empathy/Remorse” accounted for 3% of the variance while TOSCA-A Guilt accounted for an additional 6% of variance.

TOSCA-A Externalization also accounted for significant additional variance beyond SAVRY “Low Empathy/Remorse” in several outcomes. For the 3-month follow-up period, SAVRY “Low Empathy/Remorse” accounted for 3% of the variance in *total* self-reported offending, while TOSCA-A Externalization accounted for an additional 6% of variance. For the 6-month follow-up period, SAVRY “Low Empathy/Remorse” accounted for 2% of the variance in *total* self-reported offending while TOSCA-A Externalization accounted for an additional 11% of variance. Finally, in the case of *income-related* offending, SAVRY “Low Empathy/Remorse” accounted for 3% of the variance while TOSCA-A Externalization accounted for an additional 6% of variance.

ORSGS Guilt explained significant additional variance beyond SAVRY “Low Empathy/Remorse” in all outcomes examined. For the 3-month follow-up period, SAVRY

“Low Empathy/Remorse” accounted for 2% of the variance in *total* self-reported offending, while ORSGS Guilt accounted for an additional 13% of variance. In the case of *violent* offending, SAVRY “Low Empathy/Remorse” accounted for 6% of the variance, while ORSGS Guilt accounted for an additional 13% of variance. For the 6-month follow-up period, SAVRY “Low Empathy/Remorse” accounted for 3% of the variance in *total* self-reported offending while ORSGS Guilt accounted for an additional 17% of variance. Finally, in the case of *income-related* offending, SAVRY “Low Empathy/Remorse” accounted for 4% of the variance while TOSCA-A Guilt accounted for an additional 11% of variance.

Finally, ORSGS Shame accounted for significant additional variance beyond SAVRY “Low Empathy/Remorse” in the prediction of income-related offending at 6 months. Specifically, SAVRY “Low Empathy/Remorse” accounted for 2% of the variance in this outcome and ORSGS Shame accounted for an additional 9% of variance.

## 2.5. Discussion

The purpose of the present study was to investigate the relationship of remorse with recidivism among adolescent offenders. A primary aim was to improve upon limitations related to the construct of “remorse” by addressing this question using the theoretically and empirically established framework of guilt and shame (Tangney & Dearing, 2002). Specific goals in conducting this research were to shed light on whether a) guilt would act as a protective factor and shame would act as a risk factor with respect to offending; b) such relationships would hold true after controlling for other established risk factors for offending; and c) such relationships would also hold true after controlling for existing measures of “remorse”. With regard to guilt, the findings indicated that both offence-related and non-offence-related guilt were associated with lower risk of recidivism. Furthermore, both forms of guilt had incremental validity beyond established risk factors for adolescent offending and existing measures of “remorse” in the prediction of recidivism. With regard to shame, the findings indicated that offence-related shame was associated with higher risk of income-related reoffending and also explained significant additional variance beyond an existing measure of “remorse” with respect to this outcome. Furthermore, the externalization of blame that is closely related to shame

was positively associated with multiple forms of reoffending and had incremental validity beyond established risk factors for offending and existing measures of “remorse” in the prediction of recidivism. These findings, and corresponding implications for clinical practice and additional research, are discussed below.

### **2.5.1. Primary Findings**

Consistent with prior research in forensic and non-forensic contexts (Hosser et al., 2008; Robinson et al., 2007; Stuewig & McCloskey, 2005; Tangney & Dearing, 2002; Tangney et al., 2011), guilt emerged as a clear protective factor against recidivism in the present study. This was true of offence-related and non-offence related guilt, both of which also provided incremental validity beyond established risk factors for adolescent offending in the prediction of recidivism. These results align with literature indicating that guilt motivates efforts toward reparation and making amends (e.g., Tangney & Dearing, 2002), which are behaviours generally inconsistent with repeated criminal offending.

However, these findings also extend those in previous studies. Specifically, examination of adolescent offenders aged 12 to 17 indicates that the protective effects of guilt observed among non-offender community samples (e.g., Tibbets, 2003) and adult inmates (Hosser et al., 2008; Tangney et al., 2011) may be generalizable to justice-involved youth. In addition, the present collection of recidivism data within a prospective design suggests that *concurrent* inverse associations between guilt and antisocial attitudes (e.g., Robinson et al., 2007; Tangney et al., 2011) may also apply to *predictive* relationships between guilt and criminal behaviour.

Also consistent with hypotheses was the finding that offence-related shame acted as a risk factor for income-related recidivism. This result aligns with Hosser et al. (2008), whose results similarly indicated that shame was predictive of reoffending among young adult offenders. However, *inconsistent* with hypotheses, *non-offence-related* shame was *unrelated* to all measures of recidivism examined. This raises the question as to why offence-related shame appears to be criminogenic whereas non-offence-related shame does not. One possible explanation may be the fundamental, stable, and global nature of shame thoughts (e.g., Tangney et al., 2007), which could become especially potent – and evoke related behaviour – when tied to an offence. For example, a youth who

commits a shoplifting offence might experience a shame-filled negative self-evaluation related to the crime (e.g., “I’m a terrible person for stealing that thing”), which could then become more fundamental, stable, and global (e.g., “I’m a no-good thief”), and prompt behaviour consistent with the cognition (e.g., recidivism by stealing). The same pattern may not be true for *non-offence-related* shame, where the associated urges to withdraw (Lewis, 1971), hide (Tangney et al., 2007), and disappear (Lindsay-Hartz, 1984), may not engender the kind of thoughts and behaviour needed to break the law. Stated differently, the offence-related shameful thought “I’m a no good thief” could more readily lead to recidivism than the non-offence-related shameful thought “I’m an idiot who failed the test”. Indeed, previous studies of adult, non-offender samples indicate that non-offence-related shame is unrelated to recidivism (e.g., Stuewig & McCloskey, 2005; Tibbets, 2003).

Although these differing forms of shame behaved in different ways in the present study, findings indicated that a characteristic closely related to this emotion – externalization of blame – was a clear risk factor for multiple forms of recidivism. As in the case of guilt, externalization of blame had incremental validity beyond established risk factors and existing measures of “remorse” in the prediction of reoffending. It could be the case that recidivism becomes far more likely if one is able to continually blame others for misfortunes and to attribute the unpleasant consequences of offending behaviour entirely to others.

Finally, findings indicated that offence-related guilt was inversely predictive of *official* records of offending. This finding was consistent with hypotheses, and also aligns with results concerning guilt and *self-reported* offending. It is possible that additional significant relationships with official offending were not observed due to low base rates, which reduce statistical power (e.g., Cohen, 1992). As noted, however, official records tend to underestimate true rates of recidivism (e.g., Farrington et al., 2007). Therefore, the measure of self-reported offending used in the present study may be a more sensitive indicator of recidivism.

### **2.5.2. Clinical Implications**

Currently, prevailing assessment approaches include both guilt and shame as part of a larger putative construct of “remorse.” The SAVRY item “Low Empathy/Remorse” (Borum et al., 2006), for example, includes anchors such as “refusal to accept responsibility for actions” (p. 81) as well as “blaming of others” (p. 81). However, acceptance of responsibility is characteristic of guilt, whereas blaming of others is characteristic of shame and externalization (Tangney & Dearing, 2002). Similarly, other proposed behavioural indicators of “remorse” include covering the face (Robinson et al., 1994), apologizing (Weisman, 2004), or verbalizations such as “I’m so clumsy” (Corwin et al., 2012), despite that covering the face and saying “I’m so clumsy” suggest the withdrawal and self-criticism typical of shame (e.g., Lindsay-Hartz, 1984), whereas apologizing suggests efforts at reparation typical of guilt (Tangney & Dearing, 2002).

Given that the present findings provided evidence for the *protective* effects of guilt as well as the *risk* effects of shame and externalization, the above approaches may not facilitate the most accurate determination of recidivism risk. The results obtained in this study suggest that rather than combining characteristics of guilt and shame in efforts to assess “remorse,” clinicians may wish to distinguish clearly between these emotions and to note their differential effects on the likelihood of reoffending. Standardized assessment of guilt, shame, and externalization (i.e., using the TOSCA-A) would likely be an asset in this task.

These recommendations are further supported by current findings that existing measures of remorse tended to be outperformed by the lengthier measures of guilt and shame employed in this study. Of course, such existing measures consisted only of single items, and in the present study we compared them to detailed instruments with a greater number of items (i.e., the TOSCA-A and ORSGS). However, our finding that these longer instruments strongly predict recidivism suggests that this level of detail may be justifiable. Single items may not be sufficient to assess a construct that has long resisted definition (Duncan, 2002), appears to influence youths’ criminal behaviour beyond even well-established risk factors for recidivism (i.e., based on the present

findings), and plays a role in legal decisions as monumental as transfer to adult court (e.g., *In re Appeal*, 1996).

Further clarity with respect to “remorse” may also be called for in the context of the justice system. Despite numerous case law examples indicating that “remorse” is associated with more lenient sentencing practices (e.g., *Hall v. State*, 1998; *In re Appeal*, 1986; *R v. C.*, 2005; *State v. Richardson*, 1996), it remains unclear as to what referents were taken by the decision-maker as indicators of “remorse.” It is entirely possible, for instance, that indicators of both guilt and shame were indiscriminately considered in a manner similar to that of current psychological assessment approaches (e.g., Borum et al., 2006). It should be noted that ultimate sentencing decisions involve more than just psychological variables (Melton et al., 2007) and must take into account sentencing principles including accountability, rehabilitation, community protection, and willingness to make amends (e.g., YCJA, 2003). However, to the extent that “remorse” is relevant to sentencing principles such as community protection vis-à-vis recidivism risk, it is important to be clear about what is taken as evidence of “remorse” and to be accurate about its likely impact on reoffending. For instance, if a *shameful* offender is considered to be “remorseful” based on the behavioural indicators noted above (e.g., covering the face; Robinson et al., 1994), sentencing that offender more leniently may not actually hew to the sentencing principle of community protection given that shame is *positively* related to risk. Thus, in a manner similar to clinicians performing psychological assessments, justice system players may find it most useful to avoid the notion of “remorse” and to instead evaluate any shame and guilt that may be relevant to the legal principle at hand.

### **2.5.3. Treatment Recommendations**

Given that guilt emerged as a clear protective factor against recidivism, this may be an emotion that clinicians wish to foster. Currently, there is no known evidence-based treatment for increasing guilt. However, interventions that build awareness of this emotion and the factors that prompt it may be helpful. Dialectical Behaviour Therapy (DBT; Linehan, 1993), for instance, allows for a focus on mindfully identifying guilt, clarifying one’s values and the actions that violate them, and repairing harm after such an action has taken place. In addition, restorative justice approaches are also relevant to



guilt given their emphasis on making amends (e.g., Umbreit & Armour, 2011). However, such programs may be limited by a focus on meeting the needs of victims rather than offenders (Braithwaite, 2002).

“Re-integrative shaming theory” (RST; Braithwaite, 1989) may also inform therapy relevant to guilt. The central notion underlying RST is that “the offender is treated as a good person who has done a bad deed” (Braithwaite, 2000, p. 282), thus maintaining a focus on the *action* rather than the *self* that is consistent with Lewis’s (1971) conceptualization of guilt. Thus, RST could be viewed as consistent with the notion that guilt acts a protective factor against reoffending, and treatment approaches based on this model may be helpful.

Dialectical Behaviour Therapy, restorative justice, and RST approaches could also be relevant to addressing the risk factors of shame and externalization of blame. DBT (Linehan, 1993), for instance, prescribes specific skills and therapeutic procedures to manage shame (e.g. Rizvi & Linehan, 2005). This approach also emphasizes learning to accept consequences gracefully after one has committed a harmful act (i.e., rather than attempting to foist those consequences on others, as would likely occur in the course of externalization). Likewise, restorative justice approaches encourage being accountable (Choi et al., 2012), which runs contrary to externalizing blame to others. Finally, RST’s emphasis on the offender having committed a harmful deed (Braithwaite, 1989; 2000) suggests a need for that offender to accept responsibility for their actions.

An important caveat to the potential relevance of these treatment approaches is that apart from some limited research on restorative justice among adults (Bonta, 2006), there has been no empirical examination of the effects of a guilt or shame-focused therapy on recidivism among adolescents. As such, there is a need to conduct research on the efficacy and effectiveness of these interventions before any concrete recommendations can be made.

#### **2.5.4. Limitations**

The present study should be considered in light of its limitations. First, there was a relatively small sample size, particularly with regard to the ORSGS. Additional research should investigate this measure among a larger number of adolescents. With

greater statistical power, it may be possible to detect additional significant relationships that were not observed in the current data. This may also assist in clarifying differences between offence-related and non-offence-related shame, which are important to uncover given that the two were differentially related to recidivism in this study.

Secondly, the follow-up periods were relatively brief (3 and 6 months). Although many significant associations were observed within this time frame, it did not allow for longer-term assessment of the effects of guilt and shame on recidivism. Further research should strive to include longer follow-up periods in order to address this question.

Thirdly, changes in guilt, shame, and externalization of blame over time were not assessed, and as such, it is important for further research to investigate the stability of these constructs. Of particular relevance may be the issue of whether offence-related guilt maintains equal potency as a protective factor as the length of time from the offence increases. Researchers addressing this question may also wish to investigate how factors such as offence severity and victim characteristics may influence the predictive power of offence-related guilt.

Fourthly, the present study included assessment of the incremental validity of measures of guilt, shame, and externalization of blame beyond single items of remorse. As previously noted, one could argue that single items are very unlikely to outperform lengthier measures. However, this analysis remains important because single, inconsistently-defined items reflect the current state of the art in assessment of "remorse." The present findings suggest that more detailed assessment of clearly defined constructs may result in improved determinations of risk.

Finally, the TOSCA-A may not be particularly resonant for an adolescent offender population. Many items focus on school and family, which may not be especially salient areas for youth who have withdrawn or been expelled from school, have had alternative arrangements for education, or who have experienced significant trauma and discord within their families. An alternative version of the TOSCA has been developed for adult offender populations (TOSCA-Socially Deviant; Hanson & Tangney, 1996); additional research should be undertaken to explore the possibility of tailoring this measure to adolescent offenders and whether it is likewise predictive of recidivism.

### **2.5.5. Strengths**

Notwithstanding the above limitations, the present study is also characterized by several strengths. Most foundationally, with the framework of guilt and shame (Tangney & Dearing, 2002), this research provides a proposal for conceptualizing and assessing “remorse” that has thus far been lacking in youth justice settings. This suggests that the theory originally proposed by Lewis (1971) may be relevant and useful in this context.

Secondly, guilt and shame were assessed in both general and offence-specific situations, allowing for a comprehensive picture of these experiences across multiple domains. Thirdly, recidivism data were obtained in the context of a truly prospective, longitudinal design, which extends prior research that examined only concurrent and retrospective offending (e.g., Tibbets, 2003) as well as cognitions and attitudes that may not be reflective of actual criminal behaviour (e.g., Robinson et al., 2007). Fourthly, the adolescent offender sample in this study builds on a literature that has primarily focused on adults (e.g., Tibbets, 2003) and non-offender community samples (e.g., Tangney & Dearing, 2002). Fifthly, data collection procedures were comprehensive and involved an interview, self-report measures, interviewer-scored measures, and a file review.

### **2.5.6. Future Directions**

In addition to aforementioned issues related to study limitations, this study highlights other important needs for further research. In particular, given that guilt acted as a protective factor and shame and externalization of blame acted as risk factors for recidivism, questions arise regarding the nature and mechanisms of these associations. For instance, is it the desire to make amends, the focus on external behaviour, acceptance of responsibility, or some combination of these features (and perhaps others) that leads guilt to protect against recidivism? Likewise, in regard to externalization of blame, are associated fury and humiliation (e.g., Scheff, 1987) responsible for increased recidivism, or is it perhaps due to a lack of inhibition given that negative consequences of behaviour are attributed to others rather than the self? Finally, in terms of offence-related shame, are criminogenic thoughts primarily responsible for recidivism (as speculated above), or are there additional features of this experience that are important to consider (e.g., isolating oneself from prosocial others)? Future studies

using mediational models may better elucidate these issues, and in turn allow for more detailed policy and practice recommendations.

Finally, there is a need for research on the efficacy and effectiveness of interventions targeted at guilt and externalization of blame. As noted, such interventions exist (e.g., Braithwaite, 2000; Linehan, 1993; Umbreit & Armour, 2011), but evidence is scant concerning their effects on recidivism among adolescent offenders. Relevant research is the first step toward implementing strategies that may reduce adolescent offending and its associated harm to individuals and society.

## 2.6. References

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### **3. Chapter 3. General Discussion**

The two preceding chapters describe a longitudinal investigation of remorse among adolescent offenders. Remorse was defined using the framework of guilt and shame (e.g., Tangney & Dearing, 2002), and these emotions were differentiated based on whether they were related to an offence or to life circumstances more generally. Guided by this framework, ninety-seven youth on probation in British Columbia, Canada, were followed for a period of 6 months.

Chapter 1 details concurrent relationships among guilt, shame, psychopathy, and other forms of psychopathology (e.g., depression and anxiety; drug and alcohol problems). Developmental differences in guilt and shame were also examined. First, in terms of psychopathy, results indicated that measures of guilt were inversely related to all factors of psychopathy whereas measures of shame were positively related only to the behavioural features of this disorder. This finding aligns with results in the adult literature (e.g., Campbell & Elison, 2005) and suggests that psychopathy may not be characterized by a unidirectional “lack of remorse” as indicated in previous theory and research (e.g., Hare, 1991; Forth, Kosson, & Hare, 2003). Second, in terms of other forms of psychopathology, the results indicated that shame was positively related to numerous mental health problems (i.e., anger/irritability, depression/anxiety, somatic complaints, suicide ideation, and thought disturbance) whereas guilt was negatively related to some of these problems (i.e., anger/irritability; depression/anxiety). These findings are consistent with studies of adult and non-offender samples (e.g., Andrews et al., 2000), and highlight the importance of shame as a treatment target for adolescent offenders. Finally, with regard to developmental differences, older youth were found to report less shame related to their offence. This may indicate increased use of coping among older youth, although additional research is needed to clarify this issue.

Chapter 2 describes predictive relationships among guilt, shame, and offending at 3- and 6-month follow-up periods. Findings indicated that offence-related and non-

offence-related guilt were significantly and *inversely* related to multiple forms of self-reported offending at both time periods. Offence-related shame was *positively* predictive of income-related offending, and the externalization of blame that is considered a central feature of shame (Tangney & Dearing, 2002) was positively related to more numerous forms of recidivism. After controlling for the effects of other established risk factors for adolescent offending (e.g., drug and alcohol problems), non-offence-related guilt added incremental validity in the prediction of recidivism at 3 and 6 months, offence-related guilt added incremental validity at 3 months, and externalization of blame added incremental validity at 6 months. Finally, after controlling for the effects of existing measures of “remorse” (i.e., single items on risk and personality assessment measures), offence-related guilt, non-offence-related guilt, offence-related shame, and externalization of blame all added incremental validity in the prediction of recidivism at both follow-up periods.

These results paint a picture of guilt and shame as constructs that are highly distinct, but both relevant to the treatment and management of adolescent offenders. Shame appears to act as a risk factor for recidivism and numerous forms of psychopathology, and the externalization of blame that accompanies this emotion appears to act as a risk factor for recidivism. Guilt, on the other hand, appears to protect against some forms of psychopathology and against numerous forms of recidivism. These findings highlight several additional avenues for further research.

### **3.1. Future Directions for Research**

#### **3.1.1. *Conceptual Clarity***

At a fundamental level, the field remains unclear with respect to the nature of remorse. This lack of clarity is evidenced in part by the variability in language used to describe the phenomenon; such terms include regret, compunction, contrition, repentance (Proeve & Tudor, 2010), compassion (Sanders, 1968), shame, grief, pity, dread (Smith, 1759/1853), significant loss (Switzer, 1988), and emotional distress (Corwin et al., 2012). Thus, in order to establish that the same construct is being discussed and investigated, there is a need to establish a consistent conceptual

approach that is communicated with a consistent language. Although further research on the phenomenology of the above terms may reveal important dimensions of “remorse”, the framework of guilt and shame (Lewis, 1971; Tangney & Dearing, 2002) currently offers the most extensive theoretical background and empirical support for its relevance to this construct. Pending the results of additional phenomenological studies, the language, theory, and research of guilt and shame may provide the optimal means of communicating about and investigating “remorse”.

As noted in Chapter 2, similar clarity is also required with respect to proposed behavioural indicators of remorse. Within the adult literature, it has been asserted that such indicators include pulling down the corners of the mouth, looking at the floor, and covering the face (Robinson et al., 1994). Proposed verbal indicators include apologies (Weisman, 2004) as well as statements such as “I’m so clumsy”, “I feel terrible”, or simply “I’m sorry” (Corwin et al., 2012). These indicators may reflect quite different aspects of guilt and shame, yet all appear to be indiscriminately categorized as “remorse”. For instance, looking at the floor or covering the face (Robinson et al., 1994) and verbal statements such as “I’m so clumsy” (Corwin et al., 2012) suggest the withdrawal and negative self-evaluation that are typical of shame (Lewis, 1971; Lindsay-Hartz, 1984). In contrast, proposed verbal indicators such as apologies (Weisman, 2004) suggest the desire for reparation that is a cardinal feature of guilt (Tangney & Dearing, 2002). Given that shame and guilt are differentially related to psychopathology and recidivism based on the results of the present study and others (e.g., Andrews et al., 2000; Hosser et al., 2008; Tangney et al., 2011), failure to categorize verbal and behavioural indicators correctly may run the risk of an inaccurate determination of treatment needs and recidivism risk. Thus, the need for conceptual clarity extends beyond descriptive language to additional clinical indicators.

### **3.1.2. Assessment**

Greater conceptual clarity should, in turn, inform research regarding the refinement of practices for assessing “remorse”. A replication of the current study may be a helpful initial step in this regard. This study is the first piece of prospective research in which relationships among guilt, shame, psychopathology, and recidivism were examined among adolescent offenders under the age of 18, and it is essential to

determine whether the current results hold true in other samples and when studied by other researchers. This is particularly the case given the relatively small number of participants who completed the ORSGS (N = 58) due to this measure being introduced later in the study. If findings from the present study are indeed replicated, this would provide evidence in favour of incorporating the TOSCA-A and ORSGS into standard assessment batteries when “remorse” is a question at hand.

Assessment research should also address the need for a measure of non-offence-related guilt and shame that is tailored to adolescent offenders. As noted in the previous two chapters, the TOSCA-A was developed primarily for adolescents without a forensic history, and certain aspects of its content may not resonate fully with adolescent offenders (e.g., items related to school and family functioning). A different measure, the TOSCA-Socially Deviant (TOSCA-SD; Hanson & Tangney, 1996) was developed for an *adult* forensic population, and researchers may wish to investigate the use of this measure with youth. Such research could compare the psychometric properties of the TOSCA-A and TOSCA-SD, compare the psychometric properties of the TOSCA-SD with youth versus adults, or compare different versions of the TOSCA-SD if any items are adjusted to better reflect the experience of adolescents. The culmination of this research would ideally be a measure of non-offence-related guilt and shame that could be administered in combination with a measure of offence-related guilt and shame (e.g., the ORSGS) to obtain the most valid picture of an adolescent offender’s affective functioning.

Studies may also be conducted to explore changes to item content on existing measures designed to assess “remorse”. The Psychopathy Checklist: Youth Version (PCL:YV; Forth et al., 2003) and the Structured Assessment of Violence Risk in Youth (SAVRY; Borum et al., 2006), for example, are clinician-scored measures that include single items to evaluate “remorse”. Findings from the present study indicate that the TOSCA-A and ORSGS provide incremental validity in the prediction of offending beyond both items, and this finding warrants further investigation. It may be the case, for example, that when “remorse” items on the PCL:YV and SAVRY are revised to more directly capture guilt and/or shame, the TOSCA-A and ORSGS no longer explain significant additional variance in offending. Such findings would, in turn, suggest whether

assessment efforts should be directed toward changes to existing measures or the introduction of additional ones (i.e., the TOSCA-A and ORSGS).

Finally, assessment research should clarify how, if at all, behavioural and verbal indicators of “remorse” should be taken into account. As described above, such indicators could potentially reflect guilt or shame, yet they are treated as though they are the same construct (Corwin et al., 2012). Research should investigate how observable behaviours align with responses on psychometrically supported assessment measures such as the TOSCA-A and ORSGS, which may help assessors distinguish which behaviours indicate guilt and which indicate shame. The results of the present study suggest that such efforts would assist in more accurately identifying treatment needs and recidivism risk.

### **3.1.3. *Developmental Differences in Shame and Guilt***

Additional research should be undertaken to elucidate how shame and guilt may change over the span of adolescence. As noted in Chapter 1, a small number of studies have attempted to address this question using age and grade level, with inconsistent results (e.g., Bybee, 1998; Walter & Burnaford, 2006). Age was also used as an indicator of development in the present study, with results indicating that older youth were less likely to experience shame related to their offence. However, researchers in the field of adolescent development have argued that age may not adequately capture youths’ “maturity of judgment” (Steinberg & Cauffman, 1999), which includes the capacities of personal responsibility, perspective-taking, and self-inhibition (Cauffman & Steinberg, 2000).

All three of these characteristics could be highly relevant to guilt and shame. The ability to accept personal responsibility, for example, is a defining feature of guilt (Tangney & Dearing, 2002), and is thought to underlie the protective effects of guilt against anger problems (Tangney et al., 2007). Perspective-taking could be equally important vis-à-vis victim empathy. Stated differently, it would be very difficult to experience guilt or shame related to any transgression if one could not first adopt the perspective of the party who was wronged and to have some understanding of the suffering involved. Finally, self-inhibition could be relevant to guilt and shame in terms of

their expression. For example, a less mature youth might impulsively express lack of remorse in large part because of inability to self-inhibit (e.g., “why should I feel bad? He started it!”), whereas a more mature youth might be better able to reflect and adequately express the experience at hand (e.g., “he started it, but I feel guilty for hitting him back”).

Thus, due to the relevance of personal responsibility, perspective-taking, and self-inhibition to guilt and shame, future research should ideally incorporate these characteristics as measures of development. Currently, lack of remorse impacts legal decisions (e.g., *R. v. C.*, 2005) and is used widely in the popular press as a means of vilifying young offenders (e.g., “Jordan Brown”, 2010) with no apparent regard for the age of the youth. Developmental research on guilt and shame that is based on empirically-supported indicators of maturity may indicate whether legal expectations of remorse should differ based on youths’ level of development.

Additionally, further research should investigate the protective effects of offence-related guilt versus non offence-related guilt over lengthier follow-up periods. In the present study, both forms of guilt were found to be protective against recidivism after 6 months, but it is possible that emotions related to an index offence may become less potent (and less protective) as memory of that event becomes more distant. Additional longitudinal research may assist in clarifying this possibility.

#### **3.1.4. Identifying Intervening Variables**

The results of the present study suggest the possibility of mediating or moderating variables that could further clarify our findings. Guilt acted as a protective factor against recidivism, for example, yet the reasons for this are not empirically clear. It could be the case, for instance, that youth who experience guilt have better self-inhibition skills (e.g., Cauffman & Steinberg, 2000) that allow them to control impulses to offend. Alternatively, perhaps youth who express guilt are offered more treatment programming, and such programs help youths to avoid recidivism. Yet another possibility is that the acceptance of responsibility and drive for restitution that are characteristic of guilt (Tangney & Dearing, 2002) lead youths to engage in reparative behaviours that are incompatible with reoffending (e.g., volunteering or other community service).

Similar questions arise in the case of shame. Perhaps the negative, self-punitive cognitive style associated with this emotion (e.g., Tangney et al., 2007) accounts for its association with numerous forms of psychopathology. Or perhaps the withdrawal behaviours associated with shame (Lindsay-Hartz, 1984) prevent youths from engaging in the behavioural activation, problem-solving, and distress tolerance that are often critical to good mental health (e.g., Linehan, 1993). The multitudinous possible explanations for our findings invite further research in which potential intervening variables are captured and measured. In turn, the results of this research could better inform treatment efforts (e.g., if reparative behaviour mediates or moderates the association between guilt and offending, such behaviour could be facilitated at sentencing or during post-disposition treatment).

### **3.1.5. Treatment**

Given the helpful effects of guilt and the harmful effects of shame identified in the present study, research is needed to evaluate interventions related to these problems. As noted in the previous two chapters, treatments such as Dialectical Behaviour Therapy (DBT; Linehan, 1993), re-integrative shaming (e.g., Braithwaite, 1989), and restorative justice (e.g., Choi et al., 2012) all target guilt to some degree. There are comparatively fewer treatments that are specifically intended to address shame, although the DBT-based “opposite action to shame” protocol (i.e., identifying behavioural urges associated with shame and acting opposite to them; Rizvi & Linehan, 2005) may be relevant.

The impact of these treatments on levels of shame and guilt among adolescent offenders has not yet been studied, and such research is needed. These studies should involve regular re-assessment of guilt and shame over the course of treatment in order to determine whether therapy is facilitating desired changes. Dismantling research designs may also be helpful in differentiating efficacious versus non-efficacious aspects of treatment.

### **3.1.6. Conclusions**

The essential contribution of the present study was a proposed disentanglement of the nebulous concept of “remorse”, which allowed for the subsequent identification of a risk factor (i.e., shame) and a protective factor (i.e., guilt). For centuries and across



numerous disciplines, remorse has sparked creative imagination (e.g., Hawthorne, 1947; Shakespeare, 1992), scholarly debate (e.g., Proeve & Tudor, 2010), fervent emotional responses (e.g., “Jordan Brown”, 2010), and monumental legal decisions (Brooks & Reddon, 2003). The results of this research now offer a potential pathway for the idea of remorse to mitigate the harm caused by adolescent offending and to improve the lives of justice-involved youth who need support.

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## **Appendices**

## Appendix A.

### Tables for Chapter 1

**Table 1. Demographic characteristics**

	N	%	M	SD
Age (years)	97	100.00	15.88	1.15
Gender				
Male	68	70.10		
Female	29	29.90		
Ethnicity				
Caucasian	53	54.64		
Aboriginal	18	18.56		
Mixed/Other	26	26.80		
# of Index Charges			2.69	3.39
# of Index Convictions			1.99	1.66
Type of Index Charges				
Nonsexual Violence	59	60.2		
Sexual Violence	3	3.1		
Property Offence	31	31.6		
Drug Offence	4	4.1		
Other	31	31.6		
# of Previous Charges			5.42	5.96
# of Previous Convictions			3.15	3.01

**Table 2. Descriptive characteristics of measures**

	Mean	SD	Minimum	Maximum	Range
TOSCA-A Shame ( <i>n</i> = 97)	35.11	8.69	15	53	38
TOSCA-A Guilt ( <i>n</i> = 97)	49.50	11.65	15	71	56
ORSGS Shame ( <i>n</i> = 58)	24.17	8.70	8	50	42
ORSGS Guilt ( <i>n</i> = 58)	31.19	7.13	15	47	32
ICU ( <i>n</i> = 56)	31.03	7.64	17	48	31
PCL:YV ( <i>n</i> = 97)	20	6.22	11	29	18
MAYSI-2 Subscales ( <i>n</i> = 97)					
Alcohol/Drug Use	2.89	2.68	0	8	8
Angry-Irritable	3.53	2.80	0	9	9
Depressed/Anxious	1.59	1.76	0	7	7
Somatic Complaints	2.64	1.85	0	6	6
Suicide Ideation	.43	1.09	0	5	5
Thought Disturbance (boys only)	.40	.71	0	3	3
Traumatic Experiences	2.04	1.57	0	5	5

Note. Higher scores indicate greater shame, guilt, psychopathic characteristics, and mental health difficulties.

**Table 3. Correlations among TOSCA-A and ORSGS Scores**

	TOSCA-A Shame ( <i>n</i> = 97)	TOSCA-A Guilt ( <i>n</i> = 97)	ORSGS Shame ( <i>n</i> = 58)	ORSGS Guilt ( <i>n</i> = 58)
TOSCA-A Shame	-	.57**	.13	.20
TOSCA-A Guilt		-	-.06	.32*
ORSGS Shame			-	.45**
ORSGS Guilt				-

Note. \*\* =  $p < .01$ ; \* =  $p < .05$ .

**Table 4. Partial Correlations between TOSCA-A, ORSGS, and MAYSI-2 Scales**

Guilt and Shame Scales				
	TOSCA-A Shame <sup>a</sup> (n = 97)	TOSCA-A Guilt <sup>b</sup> (n = 97)	ORSGS Shame <sup>c</sup> (n = 58)	ORSGS Guilt <sup>d</sup> (n = 58)
MAYSI-2 Scale (n = 97)				
Alcohol/Drug	.17	-.25*	.11	-.29
Angry/Irritable	.44**	-.45**	.21	-.41*
Depressed/Anxious	.50**	-.39**	.43**	-.39*
Somatic Complaints	.34**	-.04	-.10	.11
Suicide Ideation	.43**	-.16	.24	-.12
Thought Disturbance	.40**	-.23	-.18	-.14
Traumatic Experiences	.21	-.31**	-.00	-.17

<sup>a</sup> Controlling for TOSCA-A Guilt.

<sup>b</sup> Controlling for TOSCA-A Shame.

<sup>c</sup> Controlling for ORSGS Guilt.

<sup>d</sup> Controlling for ORSGS Shame.

Note. \* =  $p < .05$ ; \*\* =  $p < .01$ .

**Table 5. Linear Regressions for TOSCA-A, ORSGS, and MAYSI-2 Scales**

Relationship	Step 1: Control Variable		Step 2: TOSCA-A/ORSGS Scale			
	B	R <sup>2</sup>	b	SE b	$\beta$	$\Delta R^2$
TOSCA-A Guilt <sup>a</sup>						
MAYSI-2 Drug/Alcohol	-.01	.01	-.04	.03	-.17	.02
MAYSI-2 Angry/Irritable	.05	.02	-.10	.03	-.43**	.13**
MAYSI-2 Depressed/Anxious	.07**	.10**	-.06	.02	-.41**	.11**
MAYSI-2 Traumatic Experiences	.01	.00	.03	.02	-.20	.03
TOSCA-A Shame <sup>b</sup>						
MAYSI-2 Angry/Irritable	-.21*	.04*	.12	.04	.39**	.10**
MAYSI-2 Depressed/Anxious	-.09	.01	.11	.02	.55**	.21**
MAYSI-2 Somatic Complaints	.18	.03	.06	.03	.27*	.05*

MAYSI-2 Suicide Ideation	.00	.00	.05	.01	.38**	.10**
MAYSI-2 Thought Disturbance	-.02	.00	.04	.01	.50**	.16**
ORSGS Guilt <sup>c</sup>						
MAYSI-2 Angry/Irritable	.01	.00	-.16	.05	-.46**	.17**
MAYSI-2 Depressed/Anxious	.06*	.09*	-.08	.03	-.36*	.10**
ORSGS Shame <sup>d</sup>						
MAYSI-2 Depressed/Anxious	-.03	.02	.09	.03	.47**	.18**

<sup>a</sup> Controlling for TOSCA-A Shame

<sup>b</sup> Controlling for TOSCA-A Guilt.

<sup>c</sup> Controlling for ORSGS Shame.

<sup>d</sup> Controlling for ORSGS Guilt.

Note. \* =  $p < .05$ ; \*\* =  $p < .01$ .

**Table 6. Partial Correlations between TOSCA-A, ORSGS, PCL:YV, and ICU Scores**

	Guilt and Shame Scales			
	TOSCA-A Shame <sup>a</sup> ( $n = 97$ )	TOSCA-A Guilt <sup>b</sup> ( $n = 97$ )	ORSGS Shame <sup>c</sup> ( $n = 58$ )	ORSGS Guilt <sup>d</sup> ( $n = 58$ )
Psychopathy/CU Traits Scales ( $n = 97$ )				
PCL:YV Interpersonal	.05	-.25**	-.01	-.20
PCL:YV Affective	-.01	-.22*	.14	-.42**
PCL:YV Behavioural	.23*	-.37**	.22	-.29*
PCL:YV Antisocial	.03	-.29**	.19	-.10
PCL:YV Total	.11	-.37**	.24	-.35**
ICU Total	-.02	.09	-.10	.20

<sup>a</sup> Controlling for TOSCA-A Guilt.

<sup>b</sup> Controlling for TOSCA-A Shame.

<sup>c</sup> Controlling for ORSGS Guilt.

<sup>d</sup> Controlling for ORSGS Shame.

Note. \* =  $p < .05$ ; \*\* =  $p < .01$ .



**Table 7. Linear Regressions for TOSCA-A, ORSGS, and PCL:YV Scales**

Relationship	Step 1: Control Variable		Step 2: TOSCA-A/ORSGS Scale			
	<i>B</i>	R <sup>2</sup>	<i>b</i>	SE <i>b</i>	$\beta$	$\Delta R^2$
<b>TOSCA-A Guilt<sup>a</sup></b>						
PCL:YV Interpersonal	-.11	.01	-.05	.02	-.31*	.06*
PCL:YV Affective	-.16	.03	-.05	.02	-.26*	.05*
PCL:YV Behavioural	.00	.00	-.09	.02	-.45**	.14**
PCL:YV Antisocial	-.16	.02	-.08	.03	-.35**	.09*
PCL:YV Total	-.13	.02	-.29	.08	-.45**	.14**
<b>TOSCA-A Shame<sup>b</sup></b>						
PCL:YV Behavioural	-.31**	.09**	.07	.03	.26*	.05*
<b>ORSGS Guilt<sup>c</sup></b>						
PCL:YV Affective	-.08	.01	-.12	.04	-.48**	.18**
PCL:YV Behavioural	.08	.01	-.10	.04	-.33*	.09*
PCL:YV Total	.08	.01	-.36	.14	-.39*	.12*

<sup>a</sup> Controlling for TOSCA-A Shame.

<sup>b</sup> Controlling for TOSCA-A Guilt.

<sup>c</sup> Controlling for ORSGS Shame.

Note. \* =  $p < .05$ ; \*\* =  $p < .01$ .

**Table 8. Linear Regressions after Controlling for Offence History: MAYSI-2 Scales**

Relationship	Step 1: Control Variables			Step 2: TOSCA-A/ORSGS Scale			
	$\beta$	$\beta$	R <sup>2</sup> (Total Step 1)	<i>b</i>	SE <i>b</i>	$\beta$	$\Delta R^2$
<b>TOSCA-A Guilt<sup>a</sup></b>							
MAYSI-2 Angry/Irritable	.15	.03	.02	-.10	.03	-.43**	.12**
MAYSI-2 Depressed/Anxious	.33**	.03	.10**	-.06	.02	-.40**	.11**
<b>TOSCA-A Shame<sup>b</sup></b>							
MAYSI-2 Angry/Irritable	-.20	.00	.02	.12	.04	.39**	.10**
MAYSI-2 Depressed/Anxious	-.08	.02	.01	.11	.02	.55**	.21**

MAYSI-2 Somatic Complaints	.18	-.11	.03	.06	.03	.27*	.05*
MAYSI-2 Suicide Ideation	.04	-.12	.02	.05	.02	.39*	.10*
MAYSI-2 Thought Disturbance	.03	-.04	.00	.04	.01	.52**	.17**
<b>ORSGS Guilt<sup>c</sup></b>							
MAYSI-2 Angry/Irritable	.05	-.10	.01	-.16	.05	-.46**	.16**
MAYSI-2 Depressed/Anxious	.32*	-.08	.10	-.08	.03	-.35*	.10*
<b>ORSGS Shame<sup>d</sup></b>							
MAYSI-2 Depressed/Anxious	-.13	-.02	.02	.09	.03	.49**	.18**

<sup>a</sup> Controlling for TOSCA-A Shame.

<sup>b</sup> Controlling for TOSCA-A Guilt.

<sup>c</sup> Controlling for ORSGS Shame.

<sup>d</sup> Controlling for ORSGS Guilt.

Note. \* =  $p < .05$ ; \*\* =  $p < .01$ .

**Table 9. Linear Regressions after Controlling for Offence History: PCL:YV Scales**

Relationship	Step 1: Control Variables			Step 2: TOSCA-A/ORSGS Scale			
	Guilt/Shame $\beta$	Offence History $\beta$	R <sup>2</sup> (Total Step 1)	<i>b</i>	SE <i>b</i>	$\beta$	$\Delta R^2$
<b>TOSCA-A Guilt<sup>a</sup></b>							
PCL:YV Interpersonal	-.11	.27**	.09*	-.04	.02	-.25*	.04*
PCL:YV Behavioural	.00	.43**	.19**	-.07	.02	-.37**	.09**
PCL:YV Antisocial	-.16	.48**	.29**	-.06	.03	-.25*	.04*
PCL:YV Total <sup>b</sup>	-.14	.55**	.32**	-.21	.06	-.35**	.08**
<b>TOSCA-A Shame<sup>c</sup></b>							
PCL:YV Behavioural	-.24**	.40**	.24**	.06	.03	.22*	.03*

ORSGS Guilt <sup>d</sup>							
PCL:YV Affective <sup>b</sup>	- .12	.36**	.13*	-.08	.03	-.42**	.14**
PCL:YV Behavioural	.01	.43**	.19**	-.09	.04	-.31*	.08*
PCL:YV Total <sup>b</sup>	-.01	.52**	.27**	-.29	.11	-.34*	.09*

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<sup>a</sup> Controlling for TOSCA-A Shame.

<sup>b</sup> PCL:YV "Lack of Remorse" item removed.

<sup>c</sup> Controlling for TOSCA-A Guilt.

<sup>d</sup> Controlling for ORSGS Shame.

Note. \* =  $p < .05$ ; \*\* =  $p < .01$ .

## Appendix B.

### Tables for Chapter 2

**Table 10. Participant Characteristics**

	N	%	M	SD
Age (years)	97	100.00	15.88	1.15
Gender				
Male	68	70.10		
Female	29	29.90		
Ethnicity				
Caucasian	53	54.64		
Aboriginal	18	18.56		
Mixed/Other	26	26.80		
# of Index Charges			2.69	3.39
# of Index Convictions			1.99	1.66
Type of Index Charges				
Nonsexual Violence	59	60.2		
Sexual Violence	3	3.1		
Property Offence	31	31.6		
Drug Offence	4	4.1		
Other	31	31.6		
# of Previous Charges			5.42	5.96
# of Previous Convictions			3.15	3.01

**Table 11. Distribution of Offending by Type**

	3-Month Follow-Up (N = 89)		6-Month Follow-Up (N = 78)	
	N	%	N	%
Self-report and official records were the same	12	13.48	13	16.67
Self-report exceeded official offending	32	35.96	21	26.92
Official offending exceeded	1	1.12	2	2.56

self-reported offending				
Only official report was available	15	16.85	9	11.54
Only self-reported offending was available	26	29.21	33	42.31
Both were available	48	53.93	42	46.15

**Table 12. Descriptive Characteristics of Measures**

	Mean	SD	Minimum	Maximum	Range
TOSCA-A Shame ( <i>n</i> = 97)	35.11	8.69	15	53	38
TOSCA-A Guilt ( <i>n</i> = 97)	49.50	11.65	15	71	56
TOSCA-A Externalization ( <i>n</i> = 97)	39.16	10.03	15	66	51
ORSGS Shame ( <i>n</i> = 58)	24.17	8.70	8	50	42
ORSGS Guilt ( <i>n</i> = 58)	31.19	7.13	15	47	32
Age at First Contact with the Law*	13.23	2.02	7	17	10
Delinquent Peers	3.71	1.69	2	8	6
MAYSI-2 Alcohol/Drug Use ( <i>n</i> = 97)	2.89	2.68	0	8	8
PCL:YV "Lack of Remorse"	.92	.72	0	2	2
SAVRY "Low Empathy/Remorse"	.91	.70	0	2	2
YLS/CMI "Inadequate Guilt Feelings"	.42	.50	0	1	1

Note. \* = Age at first contact with the law was measured in years.

**Table 13. Recidivism: Descriptive Data**

	M	SD	N Offended (%)	Coefficient Alpha
<b>3 Month Follow-up (N = 89)</b>				
SR Violent Offending	1.49	2.46	49 (55.06)	.74
SR Income Offending	2.03	2.84	56 (62.92)	.72
SR Total Offending	3.71	4.86	64 (71.91)	.80
Total Official Offending	2.75	2.57	15 (16.85)	
<b>6-Month Follow-Up (N = 78)</b>				
SR Violent Offending	1.28	2.90	26 (33.33)	.86
SR Income Offending	1.95	3.00	33 (42.31)	.76

Total SR Offending	3.48	5.96	39 (50.00)	.89
Total Official Offending	2.42	1.56	12 (15.38)	

Note. SR = Self-report.

**Table 14. Correlations among TOSCA-A and ORSGS Scores**

	TOSCA-A Shame (n = 97)	TOSCA-A Guilt (n = 97)	TOSCA-A Externalization (n = 97)	ORSGS Shame (n = 58)	ORSGS Guilt (n = 58)
TOSCA-A Shame	-	.57**	.55**	.13	.20
TOSCA-A Guilt		-	.09	-.06	.32*
TOSCA-A Externalization			-	-.02	-.22
ORSGS Shame				-	.45**
ORSGS Guilt					-

Note. \*\* =  $p < .01$ ; \* =  $p < .05$ .

**Table 15. Linear Regressions for Self-Reported Offending**

Measure <sup>a</sup>	3 Month Follow-up Period			6 Month Follow-up Period		
	<i>b</i>	SE <i>b</i>	$\beta$	<i>b</i>	SE <i>b</i>	$\beta$
<b>TOSCA-A Guilt<sup>b</sup></b>						
Total Offending	-.04	.01	-.48**	-.04	.01	-.44**
Income Offending	-.02	.01	-.34*	-.01	.01	-.35*
Violent Offending	-.03	.01	-.52**	-.02	.01	-.42**
<b>TOSCA-A Shame<sup>c</sup></b>						
Total Offending	.02	.02	.13	.03	.02	.22
Income Offending	.01	.01	.12	.02	.01	.25
Violent Offending	.01	.01	.12	.01	.01	.17
<b>TOSCA-A Externalization<sup>b</sup></b>						
Total Offending	.04	.01	.37**	.05	.01	.44**
Income Offending	.02	.01	.33*	.03	.01	.31**

Violent Offending	.02	.01	.32*	.03	.01	.39**
<b>ORSGS Guilt<sup>d</sup></b>						
Total Offending	-.05	.02	-.47**	-.06	.02	-.47**
Income Offending	-.03	.01	-.39*	-.04	.02	-.43*
Violent Offending	-.03	.01	-.45**	-.04	.02	-.38*
<b>ORSGS Shame<sup>e</sup></b>						
Total Offending	.03	.02	.26	.04	.02	.30
Income Offending	.02	.01	.22	.03	.01	.33*
Violent Offending	.02	.01	.27	.02	.01	.23

<sup>a</sup> Self-reported offending scores were transformed using a square root transformation.

<sup>b</sup> Controlling for TOSCA-A Shame.

<sup>c</sup> Controlling for TOSCA-A Guilt.

<sup>d</sup> Controlling for ORSGS Shame.

<sup>e</sup> Controlling for ORSGS Guilt.

Note. \* =  $p < .05$ ; \*\* =  $p < .01$ .

**Table 16. Poisson Regressions for Official Offending**

Measure	3-Month Follow-Up		6-Month Follow-Up	
	$\beta$	SE $\beta$	$\beta$	SE $\beta$
TOSCA-A Guilt	.01	.01	-.01	.01
TOSCA-A Shame	.01	.02	.00	.02
TOSCA-A Externalization	.00	.01	.00	.01
ORSGS Guilt	-.06**	.02	-.00	.02
ORSGS Shame	-.02	.02	.04	.03

Note. \*\* =  $p < .01$ .

**Table 17. Correlations between Offending Variables and Risk Factors for Offending**

Offending Type <sup>a</sup>	Risk Factors for Offending		
	Age at First Arrest	Alcohol/Drug Use (MAYSI-2)	Delinquent Peers
Self-Reported Offending at 3 Months			

Total Offending	-.41**	.46**	.47**
Income Offending	-.35**	.39**	.38**
Violent Offending	-.44**	.46**	.48**
<b>Self-Reported Offending at 6 Months</b>			
Total Offending	-.43**	.42**	.31**
Income Offending	-.45**	.47**	.28*
Violent Offending	-.35**	.32*	.30**

Note. \* =  $p < .05$ ; \*\* =  $p < .01$

**Table 18. Hierarchical regressions Controlling for Risk Factors for Offending: 3-Month Follow-Up**

Measure <sup>a</sup>	Risk Factors for Offending: Step 1 <sup>b</sup>			$R^2$	Step 2 <sup>b</sup>	
	Age at First Arrest	Alcohol/Drug Use (MAYSI-2)	Delinquent Peers		Measure	$\Delta R^2$
<b>TOSCA-A Guilt<sup>c</sup></b>						
Total Offending	-.18	.27*	.30**	.38**	-.31*	.05*
Income Offending	-.17	.21	.24*	.25**	-.18	.02
Violent Offending	-.21	.25*	.30**	.42**	-.36**	.07**
<b>TOSCA-A Externalization<sup>c</sup></b>						
Total Offending	-.19	.23	.27*	.37**	.22	.04
Income Offending	-.18	.18	.21	.20**	.21	.03
Violent Offending	-.22	.23	.28*	.37**	.17	.02
<b>ORSGS Guilt<sup>d</sup></b>						
Total Offending	-.50**	-.13	.42**	.56**	-.33*	.07*
Income Offending	-.48**	-.24	.38**	.45**	-.33	.07
Violent Offending	-.39*	.02	.38**	.49**	-.25	.04

<sup>a</sup> Self-reported offending scores were transformed using a square root transformation.

<sup>b</sup> Values reported are standardized beta coefficients.

<sup>c</sup> Controlling for TOSCA-A Shame.

<sup>d</sup> Controlling for ORSGS Shame.

Note. \* =  $p < .05$ ; \*\* =  $p < .01$



**Table 19. Hierarchical Regressions Controlling for Risk Factors for Offending: 6-Month Follow-Up**

Measure <sup>a</sup>	Risk Factors for Offending: Step 1 <sup>b</sup>			<i>R</i> <sup>2</sup>	Step 2 <sup>b</sup>	
	Age at First Arrest	Alcohol/Drug Use (MAYSI-2)	Delinquent Peers		Measure	$\Delta R^2$
<b>TOSCA-A Guilt<sup>c</sup></b>						
Total Offending	-.30*	.24*	.07	.33**	-.30*	.05*
Income Offending	-.32**	.30*	.12	.33**	-.20	.02
Violent Offending	-.26*	.20	.17	.27**	-.32*	.06*
<b>TOSCA-A Externalization<sup>c</sup></b>						
Total Offending	-.29*	.23	.12	.33**	.27*	.05*
Income Offending	-.31	.27*	.09	.34**	.22	.03
Violent Offending	-.25*	.16	.14	.24**	.23	.04
<b>ORSGS Guilt<sup>d</sup></b>						
Total Offending	-.42*	.04	.29	.42**	-.26	.03
Income Offending	-.42*	.13	.25	.39**	-.17	.01
Violent Offending	-.34	.03	.28	.29**	-.20	.02
<b>ORSGS Shame<sup>e</sup></b>						
Income Offending	-.42*	.13	.25	.39**	.04	.00

<sup>a</sup> Self-reported offending scores were transformed using a square root transformation.

<sup>b</sup> Values reported are standardized beta coefficients.

<sup>c</sup> Controlling for TOSCA-A Shame.

<sup>d</sup> Controlling for ORSGS Shame.

<sup>e</sup> Controlling for ORSGS Guilt.

Note. \* =  $p < .05$ ; \*\* =  $p < .01$ .

**Table 20. Correlations between Offending Variables and Measures of Remorse**

Offending Type <sup>a</sup>	Measures of Remorse		
	PCL:YV "Lack of Remorse" <sup>b</sup>	SAVRY "Low Empathy/Remorse"	YLS/CMI "Inadequate Guilt Feelings" <sup>c</sup>
<b>Self-Reported Offending at 3 Months</b>			
Total Offending	.33**	.25*	.08

Income Offending	.27*	.20	.02
Violent Offending	.31**	.26*	.08
<b>Self-Reported Offending at 6 Months</b>			
Total Offending	.25*	.25*	.00
Income Offending	.26*	.27*	.05
Violent Offending	.15	.13	-.17

<sup>a</sup> Scores were transformed using a square root transformation.

<sup>b</sup> Pearson bivariate correlations were calculated given that this item is scored on a 3-point scale.

<sup>c</sup> Spearman correlations were calculated given that this item is scored on a 2-point scale.

**Table 21. Hierarchical Regressions Controlling for PCL:YV “Lack of Remorse”: 3-Month Follow-Up**

Measure <sup>a</sup>	Measures of Remorse: Step 1 <sup>b</sup>		Step 2 <sup>b</sup>	
	PCL:YV “Lack of Remorse”	R <sup>2</sup>	Measure	ΔR <sup>2</sup>
<b>TOSCA-A Guilt<sup>c</sup></b>				
Total Offending	.23*	.24**	-.43**	.13**
Income Offending	.21	.13*	-.30*	.06*
Violent Offending	.21*	.27**	-.48**	.16**
<b>TOSCA-A Externalization<sup>c</sup></b>				
Total Offending	.25*	.18**	.31*	.07*
Income Offending	.21	.12*	.28*	.06*
Violent Offending	.25*	.16**	.26*	.05*
<b>ORSGS Guilt<sup>d</sup></b>				
Total Offending	.18	.23*	-.39*	.11*
Income Offending	.16	.16	-.32	.07
Violent Offending	.13	.20*	-.40*	.07*

<sup>a</sup> Scores were transformed using a square root transformation.

<sup>b</sup> Values reported are standardized beta coefficients.

<sup>c</sup> Controlling for TOSCA-A Shame.

<sup>d</sup> Controlling for ORSGS Shame.

Note. \* =  $p < .05$ ; \*\* =  $p < .01$ .

**Table 22. Hierarchical Regressions Controlling for PCL:YV “Lack of Remorse”: 6-Month Follow-Up**

Measure <sup>a</sup>	Measures of Remorse: Step 1 <sup>b</sup>		Step 2 <sup>b</sup>	
	PCL:YV “Lack of Remorse”	R <sup>2</sup>	Measure	ΔR <sup>2</sup>
<b>TOSCA-A Guilt<sup>c</sup></b>				
Total Offending	.23	.16*	-.40**	.10*
Income Offending	.20	.12*	-.31*	.06*
<b>TOSCA-A Externalization<sup>c</sup></b>				
Total Offending	.15	.16*	.38**	.10**
Income Offending	.19	.14*	.33*	.07*
<b>ORSGS Guilt<sup>d</sup></b>				
Total Offending	.13	.21*	-.42*	.12*
Income Offending	.07	.17*	-.41*	.11*
<b>ORSGS Shame<sup>e</sup></b>				
Income Offending	.07	.17	.33	.08

<sup>a</sup> Self-reported offending scores were transformed using a square root transformation.

<sup>b</sup> Values reported are standardized beta coefficients.

<sup>c</sup> Controlling for TOSCA-A Shame.

<sup>d</sup> Controlling for ORSGS Shame.

<sup>e</sup> Controlling for ORSGS Guilt.

*Note.* Violent offending was not examined in this set of regressions because PCL:YV “Lack of Remorse” was not significantly correlated with this outcome.

*Note.* \* =  $p < .05$ ; \*\* =  $p < .01$ .

**Table 23. Hierarchical Regressions Controlling for SAVRY “Low Empathy/Remorse”: 3-Month Follow-Up**

Measure <sup>a</sup>	Measures of Remorse: Step 1 <sup>b</sup>		Step 2 <sup>b</sup>	
	SAVRY “Low Empathy/Remorse”	R <sup>2</sup>	Measure	ΔR <sup>2</sup>
<b>TOSCA-A Guilt<sup>c</sup></b>				
Total Offending	.23*	.21**	-.45**	.15**
Violent Offending	.24*	.25**	-.49**	.17**
<b>TOSCA-A Externalization<sup>c</sup></b>				
Total Offending	.23*	.09*	.31*	.06*
Violent Offending	.24*	.08	.25	.04

<b>ORSGS Guilt<sup>d</sup></b>				
Total Offending	.28	.15*	-.42*	.13*
Violent Offending	.23	.19*	-.42*	.13*

<sup>a</sup> Scores were transformed using a square root transformation.

<sup>b</sup> Values reported are standardized beta coefficients.

<sup>c</sup> Controlling for TOSCA-A Shame.

<sup>d</sup> Controlling for ORSGS Shame.

Note. \* =  $p < .05$ ; \*\* =  $p < .01$ .

**Table 24. Hierarchical Regressions Controlling for SAVRY “Low Empathy/Remorse”: 6-Month Follow-Up**

Measure <sup>a</sup>	Measures of Remorse: Step 1 <sup>b</sup>		Step 2 <sup>b</sup>	
	SAVRY “Low Empathy/Remorse”	R <sup>2</sup>	Measure	ΔR <sup>2</sup>
<b>TOSCA-A Guilt<sup>c</sup></b>				
Total Offending	.23	.16**	-.40**	.11**
Income Offending	.27*	.09*	-.31*	.06*
<b>TOSCA-A Externalization<sup>c</sup></b>				
Total Offending	.23	.11**	.38**	.09**
Income Offending	.27*	.09*	.31*	.06*
<b>ORSGS Guilt<sup>d</sup></b>				
Total Offending	.14	.20*	-.49*	.17*
Income Offending	.10	.11*	-.46*	.15*
<b>ORSGS Shame<sup>e</sup></b>				
Income Offending	-.03	.11*	.34*	.09*

<sup>a</sup> Self-reported offending scores were transformed using a square root transformation.

<sup>b</sup> Values reported are standardized beta coefficients.

<sup>c</sup> Controlling for TOSCA-A Shame.

<sup>d</sup> Controlling for ORSGS Shame.

<sup>e</sup> Controlling for ORSGS Guilt.

Note. \* =  $p < .05$ ; \*\* =  $p < .01$ .