

2016

The Relationship Between Juvenile Sex Offender Registration and Depression in Adulthood

Sharon E. Denniston
Walden University

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Walden University
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Abstract

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Adulthood

by

Sharon E. Denniston

MCIS, Cleveland State University

BSNMT, Ferris State University

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Public Policy and Administration

Walden University

January 2016

Abstract

Accounts of sexual abuse appear daily in the media. Rightfully, this issue demands attention. Juveniles may be victims; they may also be offenders who are subject to sex offender registration and notification (SORN) policies. Growing research finds that SORN policies fail to achieve intended public policy outcomes. Little is known, however, about the unintended consequences of SORN for juvenile offenders. This study contributed to a more comprehensive understanding of the effects of these policies on this population. Merton's concept of manifest and latent functions of "purposive social action" and an alternate non-criminogenic form of Lemert's secondary deviance proposition provided the theoretical framework. Research questions focused on whether a relationship exists between sex offender registration for a juvenile offense and severity of depression in current and former registrants after maturation into adulthood, and whether the relationship persists. A quantitative causal-comparative study was conducted using self-reported survey data from a non-probability sample of 59 registrants. Multiple regression analysis found SORN had a significant positive predictive relationship to severity of depression in adults currently registering for a juvenile offense as compared to former registrants, and the control group of those never registered, as measured by the Public Health Questionnaire-9. A significant persistent depressive effect was not found in former registrants. Findings validate concerns that SORN may have iatrogenic effects for juvenile offenders; these findings also suggest that alternate, non-criminogenic forms of secondary deviancy appear to be associated with this policy. This understanding of the net effects of SORN informs policy decision makers and has social change implications for future sexual abuse prevention policies that may have greater likelihood of efficacy.

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Dedication

To Mom and Dad: I thank you for being my staunchest supporters. You always took great interest in my doctoral work, encouraging me every step of the way, especially Mom (a former professor) who spent many hours proofreading my work. I'm so glad I finished when you could both celebrate with me, and witness that your investment in me paid off.

To my family: Tom, I thank you for your support in never questioning why I was up so late or why I didn't fix dinner, and for trying hard to allow me quiet time while I studied or wrote. To my sons, Chris and Evan: I thank you for your loving and unrelenting words of faith in me when you tell people, even still, "My mom can do anything." I feel humbly honored every time you say that, especially now that you are both older and wiser. In doing so, you motivated me to "practice what I preach." I hope that what I have accomplished continues to inspire you to keep striving to become the very best that you can be in life.

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Chapter 1: Introduction to the Study

Introduction

In evaluating the success of juvenile sex offender registration policy, not only should the policy be assessed to determine if it is achieving intended policy outcomes but also whether the policy has subsequent unintended impacts on society (Marsh & McConnell, 2010). While the growing body of research indicates juvenile sex offender registration is not achieving its intended outcome, further scholarly exploration is needed to determine if this juvenile justice policy has adverse unintended consequences, or latent effects, on society. Recidivism rates of juvenile sex offenders who were required to register and those who were not are similar, indicating such policy has no deterrent effect and is not achieving intended public safety goals (Caldwell & Dickinson, 2009; Letourneau & Armstrong, 2008; Letourneau Bandyopadhyay, Armstrong, & Sinha, 2010). Significant to this finding is that Letourneau and Armstrong (2008) found the recidivism rate of *both* groups to be so low (2% or less) that comparative analysis was unable to be conducted.

Given the questionable efficacy of juvenile sex offender registration policy, the assessment of whether it has adverse unintended consequences for registered juvenile offenders becomes that much more important. Mental health issues such as depression may potentially be such a consequence of officially labeling juveniles as “sex offenders.” In determining whether a relationship exists between juvenile sex offender registration and latent depression in adulthood in current and former registrants, the potential for a number of positive social change implications may be realized.

Findings of this study contribute to the body of empirically-based knowledge that informs legislative decision-making on sex offender registration and related policies, and provides information that factors into the net effect of such policies. In addition, the outcome of this study may potentially impact the early and on-going mental health services provided by the juvenile justice system to juveniles who commit a sexual offense and are subject to sex offender registration, as well as the interactions of those who work in the criminal justice system as they interface with these individuals.

Included in this chapter are (a) background information summarizing the research literature and gaps in the research, (b) the problem statement and purpose of this study, (c) the research questions that were answered and related hypotheses, (d) the theoretical framework that guided this study, (e) the nature of the study, (f) operational definitions, (g) assumptions, (h) limitations, (i) delimitations, and (j) the significance of this study to public policy and positive social change.

Background

It is not unusual for juveniles who sexually offend to be subjected to sex offender registration and notification (SORN) policies premised on adult models with statutory offense-based foundations. The conception of juvenile offenders as simply “miniature adults” is cause for concern. The first federal sex offender registration and notification policy, the Jacob Wetterling Crimes Against Children and Sexually Violent Offender Registration Act of 1994 (the “Jacob Wetterling Act”), was intended for adult offenders, and as such did not include juvenile offenders if they were not convicted in adult court (1994). Subsequent to the implementation of the act, however, state laws have been

increasingly amended to require sex offender registration of a juvenile offender found delinquent of a sexual offense, designating them as a “sex offender.” In addition, these laws have proliferated into the creation of secondary laws that place further requirements and restrictions on individuals for whom registration is required—laws that also often encompass juvenile offender registrants. Ironically, increasing sanctions toward juvenile sex offenders has occurred at a time when juvenile sexual arrests were declining (Puzzanchera, 2013b). In legislative responses to acts of sexual violence, sometimes occurring with atypical policy-making speed, caution and careful consideration is needed regarding potential impacts to juveniles subjected to SORN policies. “There is no benefit if we create more victims in our attempt to save children” (Berkowitz, 2010, p. 229).

SORN policies were created with the intended purpose of protecting the public by preventing future criminal sexual acts by persons believed to pose a serious threat to public safety, especially children (Adam Walsh Child Protection and Safety Act, 2006). A number of assumptions are thought to drive increased sanctions of juvenile sex offenders: the belief that juvenile offenders have high sexual recidivism rates; that they are more like adult offenders than their peers; that juvenile sexual crimes are on the rise; and that registration of juveniles committing sexual offenses will substantially reduce future sexually violent crime (Caldwell, 2007; Caldwell, 2010; Letourneau & Miner, 2005; Spice, Viljoen, Latzman, Scalora, & Ullman, 2013). Researchers argue, however, that these assumptions are not supported by empirical evidence (Letourneau & Miner, 2005).

Multiple meta-analysis studies support low rates of sexual recidivism by juvenile offenders. An analysis of 63 studies by Caldwell (2010) that varied on a number of factors, including level of supervision and type of treatment provided, found a weighted mean recidivism rate of 7.1% for new sexual offenses over an average follow-up of 59 months. Meta-analysis of nine studies of youth receiving treatment for sexually abusive behavior found mean sexual recidivism rates of 7.4%, again over an average follow-up of 59 months (Reitzel & Carbonell, 2006). Carpentier, Silovsky, and Chaffin (2006) found sexual recidivism rates of 2 to 10% at average follow-up of 10 years in their meta-analysis of recidivism.

Numerous studies found that sex offender registration of juvenile offenders has no moderating effect on the reduction of sexual offending recidivism rates, which are already very low (Batastini, Hunt, Present-Koller, & DeMatteo, 2011; Caldwell & Dickinson, 2009; Caldwell, Ziemke, & Vitacco, 2008; Letourneau & Armstrong, 2008; Letourneau et al., 2010; Letourneau, Bandyopadhyay, Sinha, & Armstrong, 2009b). This finding is also echoed in adult offender studies that explored the effects of SORN laws (Sandler, Freeman, & Socia, 2008; Sperber, Lowenkamp, Carter, & Allman, 2010; Tewksbury & Jennings, 2010).

Negative collateral consequences impacting housing and families resulting from sex offender labeling and registration of adult offenders, or offenders in general, has been the focus of a number of studies, and such consequences have been found to occur (Harris, Lobanov-Rostovsky, & Levenson, 2010; Levenson & Cotter, 2005a, 2005b;

Levenson & Tewksbury, 2009; Mercado, Alvarez, & Levenson, 2008; Tewksbury, 2005; Zgoba, Levenson, & McKee, 2009).

Few studies exist regarding the unintended or collateral consequences of juvenile sex offender registration policies. Several were found to have an adverse unintended impact on plea decisions and the resulting charge upon which a juvenile is subsequently adjudicated (Calley, 2008; Letourneau, Armstrong, Bandyopadhyay, & Sinha, 2013; Letourneau, Bandyopadhyay, Sinha, & Armstrong, 2009a; Letourneau, Levenson, Bandyopadhyay, Armstrong, & Sinha, 2010). As a result, juvenile status, and the type of service and treatment provided are impacted, potentially altering outcomes (Calley, 2008). Comartin, Kernmith, and Miles (2010) studied the impact of sex offender registration of juvenile and young adult offenders on families, finding that registrants and family members experience social isolation and ostracism.

No studies were found that focused specifically on the potential mental health impacts of sex offender registration on juvenile offender registrants. The questionable efficacy of such policies elevates the need to explore whether unintended consequences potentially exist that are alternate forms of secondary deviance related to juvenile sex offender registration; and if so, whether they have a persistent effect when registration is discontinued.

Problem Statement

Nearly every day issues related to sexual abuse are found in the media in the United States. Rightfully, this issue demands attention. Juveniles are involved on both sides of it—as victims, and as offenders subjected to sex offender registration and

notification policies. However, the growing body of evidence indicates a low recidivism rates for juvenile offenders and the failure of SORN policies to effectively predict future sexual offending and thereby achieve intended outcomes (Batastini et al., 2011; Caldwell & Dickinson, 2009; Caldwell et al., 2008; Letourneau & Armstrong, 2008; Letourneau et al., 2009b; Letourneau et al., 2010). These findings provide impetus for further scholarly inquiry into the net effect of juvenile sex offender registration. Lacking in the existing literature are studies of whether such policies may have unintended consequences to the mental health of youthful offenders, specifically, depression.

Purpose of the Study

The purpose of this study was to gain a more comprehensive understanding of the effects of sex offender registration policy by exploring, using quantitative comparative analysis methods, whether a relationship exists between juvenile sex offender registration and latent depression in current and former registrants who have matured into adulthood, and whether there is a persistent effect to this relationship. This study specifically explores this after the developmental transition from adolescence to adulthood has occurred. The independent variable is juvenile sex offender registration, represented by the registration status (currently-registered, formerly registered, and never-registered), and the dependent variable studied is depression, as measured by the Public Health Questionnaire-9 (PHQ-9). Demographic, historical, and general variables served as variables that were controlled. These included (a) gender, (b) race/ethnicity, (c) relationship status, (d) years of education, (e) income, (f) history of family psychiatric problems, (g) history of substance abuse, (h) history of child abuse or neglect (as a

victim), (i) history of sexual abuse (as a victim), (j) learning or physical disability, (k) taking medication for mental or emotional health, (l) having experienced confinement for more than 30 days, (m) criminal history (determined from number of offenses adjudicated and/or convicted), and (n) parent incarceration while participant was a child. Registration-related data provided new potential predictor variables, and included (a) age when first registered, (b) length of time registered to date, (c) court of first offense requiring registration (juvenile or adult), (d) whether registration information is available to the public, (e) whether any offense requiring registration was a felony, (f) whether sexually related offenses were part of one or multiple cases brought before the court, (g) designated registration risk level, (h) length of registration requirement, (i) length of time since a former registrant last had to register, and (j) housing dependency.

Giving shape and focus to the purpose of this study, the research questions defined what the data collection specifically attempts to answer (Creswell, 2009).

Research Questions and Hypotheses

Changes in the independent variable, juvenile sex offender registration status (current, former, and never-registered), provided the basis for the comparative analysis of the relationship to depression in adulthood that is embodied in these research questions (RQ) and hypotheses (*H*). A persistent depressive effect after the sex offender registrant label for a juvenile offense was removed is explored by RQ3.

RQ1: Do adults who are currently required to register as a sex offender for a juvenile offense have higher severity of depression scores than adults in the general population who have never been required to register as a sex offender?

H_01 : Current sex offender registration for a juvenile offense does not significantly predict higher severity of depression scores in adulthood, than in adults in the general population who have never registered, after controlling for depression-related covariates.

H_11 : Current sex offender registration for a juvenile offense significantly predicts higher severity of depression scores in adulthood, than in adults in the general population who have never registered, after controlling for depression-related covariates.

RQ2: Do adults who were formerly required to register as a sex offender for a juvenile offense have higher severity of depression scores than adults in the general population who have never been required to register as a sex offender?

H_02 : Former sex offender registration for a juvenile offense does not significantly predict higher severity of depression scores in adulthood, than in adults in the general population who have never registered, after controlling for depression-related covariates.

H_12 : Former sex offender registration for a juvenile offense significantly predicts higher severity of depression scores in adulthood, than in adults in the general population who have never registered, after controlling for depression-related covariates.

RQ3: Do adults who are currently required to register as a sex offender for a juvenile offense have higher severity of depression scores than adults who formerly were required to register as a sex offender for a juvenile offense?

H_03 : Current sex offender registration for a juvenile offense does not significantly predict higher severity of depression scores in adulthood, than in adults who formerly

registered as a sex offender for a juvenile offense, after controlling for depression-related covariates.

*H*₁₃: Current sex offender registration for a juvenile offense significantly predicts higher severity of depression scores in adulthood, than in adults who formerly registered as a sex offender for a juvenile offense, after controlling for depression-related covariates.

These hypotheses were independently tested by comparing mean depression scores of three sets of two criterion groups that were based on the independent variable (registration status):

1. Currently-registered vs. Never-registered (*H*₁ comparison to control group)
2. Formerly-registered vs. Never-registered (*H*₂ comparison to control group)
3. Currently-registered vs. Formerly-registered (*H*₃ analyzed persistent effect)

Theoretical Framework

The theoretical framework of this study borrowed from Robert Merton's law of unintended consequences, which maintains that consequences of purposive social action can yield both manifest (intended) and latent (unintended) functions, or outcomes (1936), and Lemert's concept of secondary deviance resulting from societal labeling (1951). Merton asserted that decision-making requires specific knowledge of many details, and that the action taken to address an issue is dependent on the degree to which key factors are present that restrict the ability of those taking action to anticipate the consequences of that action (1936). These factors include lack of adequate knowledge, ignorance of

known facts, resource availability, thinking errors, the desire for immediate consequences, basic values, and public perceptions (1936).

Expanding on the work of Mead in 1934 related to societal influence on individual self-image (1964) and Tannebaum's work on societal response to juvenile delinquency (1938), Lemert studied the sociology of deviance (1951). These concepts later provided the foundation for labeling theorists such as Becker who believed that deviance is a consequence of how others react to a person's behavior (1963). Lemert asserted that the stigma of labeling encourages a deviant identity that ultimately becomes the individual's "master status," which then results in an unintended consequence of secondary deviance (Becker, 1963; Lemert, 1951). Link, Sampson and Laub focused on the social processes that might explain why deviant labeling results in secondary deviance, proposing that it was due to blocked access to structured opportunities and conventional resources (Link, 1982, 1987; Link, Struening, Cullen, Shrout, & Dohrenwend, 1989; Sampson & Laub, 1995, 1997).

A postulate of labeling theory relates to *secondary* deviancy and maintains that deviant labeling creates negative consequences for the person labeled that can lead to secondary deviant criminal behavior (Lemert, 1967; Tittle, 1975b). Typically studies related to secondary deviance measure the criminogenic effect of labeling. Given that research indicates that juvenile offenders required to register as a "sex offender" have low rates of sexual recidivism, this study built upon labeling theory by instead examining other potential forms of unintended consequences and secondary deviance that result from being labeled as a sex offender registrant for a juvenile offense. Impacts to mental

health—specifically depression, were explored. By having focused on differences between groups of adults who: (a) are currently registered as a sex offender for a juvenile offense, (b) formerly registered as a sex offender for a juvenile offense, and (c) have never had to register as a sex offender, this study sought to answer the question of whether unintended consequences, or latent secondary deviant effects exist related to severity of depression as a result of juvenile sex offender registration, and whether this persists even when an individual is legally no longer classified as a sex offender registrant.

Merton's concept of unintended consequences has no theoretical postulates. It provides a paradigm that guides functional analysis of consequences of social action. More detailed information about this concept, labeling theory, secondary deviance, and labeling theory's secondary deviance postulate will be discussed in Chapter 2. Supporting concepts related to the evolution of the juvenile justice system, the history of sex offender registration laws, recidivism, policy efficacy, consequences of juvenile sex offender registration, and depression are also reviewed.

Nature of the Study

In studying the relationship between juvenile sex offender registration (the independent variable) and depression in adulthood (the dependent variable), with demographic, historical, and general variables previously mentioned, the application of the treatment, juvenile sex offender registration, could not be experimentally tested with random groups of individuals because it is impossible to legally control or manipulate which juveniles are ordered to receive the treatment. Therefore a non-experimental

quantitative methodological approach using an ex post facto design was utilized for this study. This design approach is common to social research, and has been used in numerous studies that examine the impacts of policy, criminal behavior, and psychological effects (Bernburg & Krohn, 2003; Bernburg, Krohn, & Rivera, 2006; Chioqueta & Stiles, 2006; Horon, McManus, Schmollinger, Barr, & Jimenez, 2013; Jeglic, Mercado, & Levenson, 2012; Palmer & Binks, 2008).

The ex post facto design approach used in this study allowed for statistical analysis of between-group data obtained from a self-administered on-line survey completed by adults from a convenience sample from throughout the United States that were either (a) current juvenile sex offender registrants, (b) former juvenile sex offender registrants, or (c) persons who have never been a sex offender registrant. Between-group analysis using multiple regression permitted the exploration of whether potential unintended consequences exist related to severity of depression by contrasting characteristics and differential effects across criterion groups representing differential treatment (Tuckman & Harper, 2012).

Definition of Terms

For the purposes of this study, the following definitions apply:

Delinquent: See Juvenile Delinquent.

Former Juvenile Sex Offender Registrant: A person who at any time in the past was a Juvenile Sex Offender Registrant but is no longer legally required to comply with sex offender registration requirements.

Juvenile: “A person who has not attained his eighteenth birthday” as defined in 18 U.S.C. § 5031 of the Federal Juvenile Delinquency Act of 1938.

Juvenile Delinquency: A violation of the laws of the United States, or any U.S. state that was committed by a person prior to his eighteenth birthday that would have been a crime if committed by an adult, and resulted in an adjudication or conviction. This definition was adapted from 18 U.S.C. § 5031 of the Federal Juvenile Delinquency Act of 1938 to include the laws of any U.S. state, and the requirement that the person was adjudicated or convicted.

Juvenile Delinquent: A person who commits an act of juvenile delinquency.

Juvenile Offense: A criminal offense that was committed when the person had not attained their eighteenth birthday.

Juvenile Sexual Offense: A sexual offense that was committed when the person had not attained their eighteenth birthday, regardless of whether that offense resulted in an adjudication or conviction or required sex offender registration.

Juvenile Sex Offender: A person required to comply with any U.S. state or federal sex offender registration law *solely* for a juvenile offense.

Juvenile Sex Offender Registrant: See Juvenile Sex Offender.

Sex Offender: A person adjudicated or convicted of a “sex offense” (a term used in 42 U.S.C. § 16911 of the Adam Walsh Child Protection and Safety Act of 2006), that is required to comply with any U.S. state or federal sex offender registration law, or is otherwise ordered by the court, or required by law, to comply. This definition is adapted

from 42 USCS § 16911 of the act to include adjudications and only those persons whose offense requires registration—elements of the definition implied throughout the act.

Sex Offender Registrant: See Sex Offender.

Sex Offense/Sexual Offense: Any criminal offense involving unlawful sexual conduct (Garner, 2009a). For the purpose of this study, this includes those criminal offense statutes for which registration is typically required as specified in U.S. state or federal sex offender registration laws.

Depression: A serious medical illness characterized by deep feelings of sadness, despair, low self-esteem, and self-reproach, or a marked loss of interest or pleasure in activities negatively affecting how one feels, thinks, and acts (American Psychiatric Association, 2014; Stedman, 2006) . The Public Health Questionnaire-9 (PDQ-9) was used to measure depression in this study.

Assumptions

A self-report study was used to provide for greater accessibility by juvenile sex offender registrants to the diagnostic instrument. Further, by having kept participation anonymous and by preserving confidentiality, it is believed that a greater number of participants completed the self-report survey. It is assumed that participants responded honestly to the survey questions regarding their status as a juvenile sex offender as well as their criminal history and depression. This assumption is made for several reasons: participation was voluntary and anonymous, participants were reminded to answer honestly, and participants were permitted to withdraw from the study at any time. Action taken to support these assumptions was essential to the validity of the data.

Limitations

Identification of causality of depression from sex offender registration is limited by the need to use non-experimental ex post-facto data (Tuckman & Harper, 2012). Internal validity is reduced because treatment cannot be controlled by the researcher, and therefore certainty that the characteristics of the criterion group have caused depression cannot be determined. However, while causality is ambiguous in non-experimental ex post facto studies comparing groups such as this one, this research design can identify whether depression is *potentially* caused by juvenile sex offender registration in current and former registrants, and provides insight to future studies that explore potential causation of the resulting characteristics (2012).

Because participants were not randomly selected, a selection bias could have posed a threat to internal validity. This threat was reduced by controlling for variables to minimize differences between groups.

Results were limited to the accuracy of the PHQ-9 instrument used to assess the incidence and severity of depression. This instrument has been found to be a reliable and valid tool for screening depression in a number of populations (Amtmann et al., 2014; Crane et al., 2010; Kroenke, Spitzer, & Williams, 2001; Rathore et al., 2014; Wang et al., 2014), but none were found using the population of those who committed sexual offenses as a juvenile, or even for of those who were delinquent as a juvenile.

Lastly, limitations that could result from personal bias were addressed directly. For more than 10 years I have worked as a juvenile advocate for youth with disabilities and youth who have been involved in the juvenile justice system, including youth subject

to sex offender registration laws. When professionals working in fields related to sexual offender registration initially learned of my dissertation topic, many urged me to conduct a qualitative study because of my access to this population and the likelihood that juvenile offender registrants would share information with me that they might not share with others. However, I deliberately chose to do a quantitative study to minimize assumptions regarding researcher bias that is of greater concern in qualitative studies due to the subjective analysis of findings. Further, bias was prevented by (a) making subject participation voluntary and anonymous to me, (b) assuring survey instructions and questions did not imply any particular outcome, (c) conducting a quantitative study that documented findings obtained from strict adherence to rigorous standards of quantitative analysis, and (d) controlling for variables so that results were authentic and unbiased.

I cannot inform the readers of this study that I have been a juvenile advocate for many years without also informing them that I have been a systems analyst for far more. As an analyst, I knew all too well the importance of objectivity and rigor if the most accurate findings were to be obtained. I remained completely open to the outcome of this study, and made no assumptions as to the result—instead yielding to findings obtained from rigorous analysis of the data. The SPSS (Statistical Package for the Social Science) software was used to objectively perform this. We gain nothing in our attempt to create more effective policies and to achieve sexual abuse prevention goals if we are not honest with ourselves about the facts upon which these efforts are predicated, including the functional consequences thereof.

Scope and Delimitations

The scope of this study limited the age of current and former juvenile sex offender registrants who are now adults to those between 21 and 39 years old. Juvenile offenders were studied because very few studies of unintended consequences of sex offender registration for this population exist. The target age range for participants was from 21 to 39 years of age. Age 21 was selected as the lower age because it required juvenile offenders to have been an adult for at least three years. Age 39 was selected as the upper age because it was approximately 21 years ago that U.S. states began enacting laws requiring juvenile offenders to register as sex offenders, and if the individual was just under 18 years of age at the time of their offense (the maximum age for which an individual is considered to be a juvenile offender in this study) 21 years ago, they would be approximately 39 years of age at the time of this study. It follows then that the control population of those never registered was between the same ages.

This study was further delimited by the convenience sample that was primarily obtained from members of advocacy, mental health, and legal organizations, and word-of-mouth, responding to the self-administered survey questionnaire. While the study was open to all eligible participants, most were likely to have learned of it either directly through the organizations or through persons affiliated with the organizations. In addition, the study was delimited by a response method that required the internet to return survey data for this research.

The scope of this research was limited to only the study of potential depressive effects of juvenile sex offender registration, using the theoretical lens of latent

effects/unintended consequences and labeling and secondary deviance theory with respect to public policy.

The potential generalizability of this study was improved by the fact that this study solicited participants through advocacy organizations that exist throughout the United States. In addition, the internet provided a mechanism for participants to respond to the survey from all over the U.S.

The analysis of rational choice theory also examines the consequences of a purposive action. However, that analysis would have been limited to the foreseeable intended consequences of that action, where there are testable predictions (Linares, 2009). It fails to consider the unintended consequences of that action, as is significant to this study. In forgoing that consideration, rational choice theory does not contribute to the “net balance of the aggregate of consequences” that Merton (1967) suggests is essential to objective, comprehensive functional analysis of a purposive action.

Significance of the Study

Integral to the policymaking process is an accurate view of policy informed by the study of policy outcomes (Meier, 1994). While existing research has studied the justification of sex offender registration policies and has evaluated *intended* policy outcomes, the significance of this study is that it uniquely focused on exploring potential *unintended* policy outcomes. By identifying whether juvenile sex offender registration has a relationship to latent iatrogenic effects such as depression, this study has potential policy implications by contributing to a better understanding of policy outcomes and a more accurate view of juvenile sex offender registration policy, providing a stronger

knowledge-base for the creation of future policies intended to reduce sexual abuse that have greater likelihood of efficacy. In addition, this study promotes social mindfulness of the need to examine juvenile justice policies in general for their mental health impacts.

Merton's concept of manifest and latent functions (unintended consequences) enjoins decision-makers to "not confuse the subjective categories of motivation with the objective categories of function" when taking purposive social action (Merton, 1967, p. 115). Regardless of the findings in this study, by exploring the "unintended and unrecognized consequences" (1967, p. 111), or functions, of juvenile sex offender registration, findings positively inform the *objective functional consequences* and contribute to a more comprehensive understanding of the "net effect" of this policy—information that demands consideration when making adjustments and adaptations to future related policy as well as justice and mental health interventions.

Further, in challenging economic times, it is prudent to question the appropriateness of existing policies, especially if they carry high price-tags to implement and administer, evidence of efficacy is lacking, empirical evidence does not justify need, and if unintended consequences are found to create further deviance that increases individual harm and places greater burden on society.

Most importantly, the results of this study contribute to positive social change by informing the way in which societal responses, such as juvenile sex offender registration, may impact the health and well-being of children, so that future responses might effectively further the prevention of sexual abuse, while at the same time safeguarding against potential harm to the very class of individuals they seek to protect—children.

Summary

Public policies should not only be examined to determine if they are achieving their intended purpose, but also whether they result in unintended consequences. With the efficacy of juvenile sex offender registration policies questionable, the responsibility to study the potential unintended consequences and secondary deviant effects of labeling juveniles as “sex offenders” becomes even more significant. Very little research was found that addressed unintended consequences of these policies; virtually no research was found examining the latent effects of such policies in adulthood on individuals who committed juvenile offenses. This study contributed to a better understanding of the net effect of these policies by examining ex post facto data obtained from current and former juvenile sex offender registrants, and those who were never subject to registration, to determine if a relationship exists between registration and depression.

Chapter 2 provides a more in-depth look at the literature related to unintended consequences of purposive social action, labeling theory, secondary deviance, and labeling theory’s secondary deviance postulate, as well as supporting concepts that include the emergence of the juvenile justice system, the evolution of sex offender registration laws, recidivism, juvenile sex offenders as a unique subgroup, trends in juvenile sexual offending arrest, policy efficacy, unintended consequences of juvenile sex offender registration, adulthood, and depression.

Chapter 2: Literature Review

Introduction

The growing body of research suggests that public policies requiring juvenile sexual offender registration are not achieving their intended outcome, yet little has been done to determine if these juvenile justice policies have adverse latent effects, or unintended consequences, on individuals directly impacted by them, and indirectly on society. In consideration of the questions raised in Chapter 1, Chapter 2 draws from classical and peer-review research to lay the foundation necessary to fulfill the purpose of this study—to gain a more comprehensive understanding of the effects of sex offender registration policy by exploring whether a relationship exists between juvenile sex offender registration and latent depression after current and former registrants have matured into adulthood, and whether there is a persistent effect to this relationship. Research completed up to ten years ago has been included in this review to supplement either a sparsity of current studies on a topic, or where a substantial contribution to knowledge provided support or guidance for later research. For example, in the years immediately preceding and after the passage of the federal Adam Walsh Child Protection and Safety Act of 2006, a significant number of scholarly research studies emerged related to juvenile sexual offending.

In addressing the problem, this literature review begins with an overview of the general perspectives in sociological theory. This is followed by a review of the classical writings regarding the concept of unintended consequences of purposive social action, and labeling theory, deviance, and secondary deviance. The research related to this

concept and theory as applied to policy, juveniles, and sexual offending is reviewed. A history of the emergence and purpose of the United States juvenile justice system and the evolution and premise of juvenile sexual offender registration laws is provided as background for the review of peer-reviewed research and government crime statistics related to juvenile sexual offender recidivism, criminal trends in juvenile sexual offending, efficacy of juvenile sexual offender registration laws, and known unintended consequences of juvenile sex offender registration. A brief discussion of the meaning of adulthood is provided. Lastly, scholarly medical literature about the mental health condition of depression is provided along with the consequences of depression.

Literature Search Strategy

Electronic databases used to compile literature for this study include EBSCO, ProQuest, LexisNexis Academic, SAGE, UMI ProQuest Digital, NCBI Database, PubMed, Taylor and Francis Online, and Proquest Dissertation & Theses. Keywords used for searches included *juvenile sex/sexual offender*, *juvenile sex/sexual offender registration*, *sex/sexual offender registration*, *juvenile sex/sexual offender registration and recidivism*, *sex/sexual offender registry*, *sex/sexual offender registry laws*, *labeling theory*, *labeling theory and delinquency*, *labeling theory and juvenile sex offender*, *deviance*, *secondary deviance*, *secondary deviance and delinquency*, *alternate secondary deviance*, *non-criminogenic secondary deviance*, *depression*, *depression and delinquency*, *depression and sex offender registration*, *depression and impacts*, *unintended consequences and policy*, *unintended consequences and sex/sexual offender registration*, *latent function and sex/sexual offender registration*, *juvenile justice policy*,

efficacy and juvenile sex offender registration and policy, and federal sex offender registration.

Theoretical Foundation

Introduction

Merton's (1967) concept of unintended consequences of purposive social action, and labeling theory's secondary deviance proposition introduced by Lemert (1951) provide the theoretical framework for this study. A review of the classic literature for this concept and theory followed by peer-reviewed research utilizing, testing, and/or exploring them is provided. This section begins by first providing a brief introduction to two major perspectives of sociological theory that provide the foundation for this study of unintended consequences, labeling theory, and secondary deviance.

Perspectives of Sociological Theory

Three major perspectives of sociological theory provide a lens from which the world is viewed—conflict, structural-functionalism, and symbolic interactionism (Mooney, Knox, & Schacht, 2007). The latter two of these are reviewed in this chapter because of their relationship to Merton's law of unintended consequences, labeling theory, and Lemert's secondary deviance proposition.

Structural-functionalist perspective. In evaluating the social world through a structural-functionalist perspective, society is viewed as “a system of interconnected parts that work together in harmony to maintain a state of balance and social equilibrium” (Mooney et al., 2007, p. 9). The interconnectedness of these parts and their mutual

influence on each other is the focus of this perspective. Parsons and Merton each contributed significantly to the development of structural functionalism.

Parsons (1951) believed four functional imperatives defined the interrelated activities, or function, of a system in fulfilling a system's need for stability: adaptation, goal attainment, integration, and latency or pattern maintenance. These imperatives relate to four subsystems that Parsons defined as comprising an "action system" by which the real world can be analyzed: (a) a subsystem that handles adaptive functions necessary to adjust to the external world, (b) a personality subsystem that functions to define goals and mobilize resources to attain them, (c) a social subsystem that handles integrative functions of component parts, and (d) a cultural subsystem whose latent function provides actors with norms, values, and motivation to act (1951, 1971).

Merton described social elements in terms of their effect on society, which are either functional or dysfunctional. He defined these effects as functions that are "manifest or latent"; manifest if they are "intended and recognized by participants in the system," and latent if they are "neither intended nor recognized" (1967, p. 105). Merton urged that these effects be studied with the same methods of empirical inquiry as the natural sciences. Where Parsons' view of structural functionalism had a conservative bias because it focused on *functional* consequences, Merton focused on the need to also conduct analysis of *unintended* consequences, including those that are dysfunctional. Because Parson's perspective ignored *dysfunctional* consequences, critics believed it was unable to accommodate social change, resulting in its rejection by sociologists (Calhoun, 2012). Merton's work, however, found relevance in subfields such as the sociology of

deviance (2012), and thus his structural-functionalist concept of manifest and latent function, or unintended consequences, contributed to the theoretical framework of this study and is discussed in further detail.

Symbolic interactionist perspective. The symbolic interactionist perspective is concerned with small groups and the social-psychological dynamic of the group's members (Blumer, 1969). Patterns of action and interaction at a micro level are thought to define groups and society. Human behavior and its consequences are believed to be influenced by the symbolic interactions of the group which ascribe meaning to conditions, events, and even people. This social interaction between group members, including how members are labeled, shapes an individual's identity and self-concept. This perspective recognizes that humans have the capacity for thought and therefore have the ability to direct their actions, and make choices that inform their interactions (1969).

The human capacity to think provides the basis for the theoretical orientation of symbolic interactionism (Blumer, 1969). Thinking is embedded in the mind, which is differentiated from the physiological brain (1969). The mind is developed by the continuing process of socialization, consciousness, stimulus and response, which allows individuals to learn meanings and symbols which provide the key elements of symbolic interactionism (1969). It is the understanding of these meanings and symbols that impacts individual human social action and the social interaction between groups of individuals. This understanding is also what enables humans to choose which meanings they accept or reject.

Symbolic interactionism was first coined by Blumer in 1937 (1969), but it was Mead who contributed the most to sociological theory rooted in this theoretical perspective. Mead expanded on the concept of “looking-glass self” introduced by Cooley in 1902, which asserted that, as humans, we imagine how others see and judge us, and what we *imagine* contributes to how we see ourselves. Similarly, Mead’s theory of social self posited that social groups led to the development of self-conscious mental states in which individuals form attitudes based on the attitude of the group (Mead, 1964).

While Merton, as a structural-functionalist, was concerned with the function or consequence of a social interaction at a macro level, Mead as a symbolic interactionist, was concerned with the function or response to a social interaction at a micro level. Gestures and language are symbols that play an important role in symbolic interaction and the elicitation of a specific response.

In discussing how behavior patterns may be impacted by situations, Thomas noted:

The expressions of public opinion, the rise of common attitudes, the establishment of group morale...and the formulation of more deliberate policies have also a situational origin—one in which the situation is weighted with pre-established attitudes, with conflicts arising over definitions of situations and influenced by the propaganda of word, print, and gesture. (1966, pp. 166-167)

In keeping with this, he urged the study of behavior-forming situations.

Another sociological theory representative of symbolic interactionism is labeling theory introduced by Becker (1963). In conjunction with Lemert’s concept of secondary

deviancy, labeling theory contributes to the theoretical foundation of this study, and is discussed in more detail later in this chapter.

Unintended Consequences

The concept of “unanticipated consequences of purposive social action” was introduced by Merton in 1936 (1936, p. 894). Typically, “intended and anticipated outcomes of purposive action...are always, in the very nature of the case, relatively desirable to the actor, though they may seem axiologically negative to the outside observer” (1936, p. 895). Purposive actions have motives, and represent a choice on the part of the actor (a person, organization, or structural institution such as the legislature) imposing a social action or social control that results in a range of consequences. The decision is assumed to be rational. Where sufficient knowledge exists in the decision making process consequences may be anticipated. Where choices are limited, decisions are made based on the information at hand, and while the choice may intend to achieve a specific outcome, that outcome may not be obtained (1936).

When decisions are made with only partial knowledge, a wider range of unexpected outcomes may occur (Merton, 1936). This may simply be due to inadequate availability of knowledge, or to ignorance of knowledge--even when it exists. The later may occur when decisions on purposive action require immediate attention. When decisions are made using partial knowledge, they tend to reflect opinion and estimation rather than existing scientific knowledge (1936).

“Imperious immediacy of interest” also contributes to errors in the anticipation of consequences (Merton, 1936, p. 901). It occurs when an actor focuses so greatly on

immediate consequences of a desired result that they fail to consider other potential consequences of their action.

In addition to lack of adequate available knowledge, ignorance of known facts, and imperious immediacy of interest, correct anticipation of consequences when taking social action is also limited by factors such as resource availability, thinking errors, basic values, and public perceptions (Merton, 1936).

“Manifest and latent functions” was a term used by Merton to differentiate “conscious motivations for social behavior [(those that are manifest)] and its objective consequences [(those that are latent functions)]” (1957, p. 60). This concept of functional analysis implores researchers to look beyond whether an action achieves its manifest or intended purpose, to objectively observe the latent unintended functions as well—including those consequences that are dysfunctional. In taking this functional approach, a social structure, or system, has value only to the extent that it functions to achieve some collective satisfactory end (LaPiere, 2007).

In differentiating manifest and latent functions, the subjective motivations or intentions of an action on social behavior are distinctly independent of the functions or objective consequences realized from that action, and must not be confused (Merton, 1967). This distinction provides a number of heuristic purposes.

Heuristically, the distinction between motives and consequence (manifest and latent function) support systematic observation and later analysis of social policies that endure even when their intended purpose has not been achieved (Merton, 1967). The concept focuses the attention of sociologists in directions that contribute most to

theoretical development. When latent functions are discovered, significant contributions to sociological knowledge are realized because unintended and unrecognized social and psychological consequences are brought to light. It precludes “naïve moral judgments” as substitutes for sociological analysis (1967). Merton warned:

Since moral evaluations in a society tend to be largely in terms of the manifest consequences of a practice or code, we should be prepared to find that analysis in terms of latent functions at times runs counter to prevailing moral evaluations. For it does not follow that the latent functions will operate in the same fashion as the manifest consequences which are ordinarily the basis of these judgments. (1967, p. 125)

The concept of manifest and latent function supports the analysis of the *context* of social structures in fulfilling social functions. Lastly, the concept supports analysis of the wide range of functions within the “political machine” relating to diverse subgroups (1967, p. 127).

Oriented in a structural-functionalist view, Merton’s concept of manifest and latent function informs the functional analysis of sociological problems. This analysis requires the alliance of theory, method, and data. He believed that functional analysis practitioners tended to focus more on theoretic formulations or on data that supports a functional frame of reference, than on methods (Merton, 1967). Empirically oriented disciplines, however, are more fully served by research methods that include logic, *and* which align data with the requirements of theory while using substantive data (1967).

Procedural logic, or *logical structure* of experiment, was a focal point for Merton (1967). The functional analysis of sociology had much to gain from methodological models used by the scientific disciplines such as biology and physics (1967). In the past, sociologists were criticized for not executing operationally sound procedures, systematically gathering the correct types of data, using a common set of concepts, and failing to use the same standards for validity found in the biological sciences (1967).

Merton criticized the three predominant assumptions of functional analysis: functional unity, universal functionalism, and indispensability, as limiting the proper functional analysis of sociological problems (Merton, 1967).

Radcliffe-Brown's definition of function set forth a hypothesis of functional unity in which "a 'function' is the contribution which a partial activity makes to the total activity of which it is a part" (1935, p.397). It occurs when the components of a social system work together harmoniously or with internal consistency, such that persistent conflicts that can be neither resolved nor regulated exist (1935). Merton contended that every social activity or belief is not functional for the whole of society and every person living in it because societies lack the high degree of integration necessary for that to be achieved, and further finds that "complete functional unity" defied fact; within the same society, social activities may be functional for some groups and dysfunctional for others (1967, p. 81). The heuristic value of functional unity is diminished because the assumption detracts from the objective analysis of the consequences of social action on diverse social groups and their individual members (1967). Merton maintained that "the theoretic framework of functional analysis must expressly require that there be

specification of the *units* for which a given social or cultural item is functional. “It must expressly allow for a given item having diverse consequences, functional and dysfunctional, for individuals, for subgroups, and for the more inclusive social structure and culture” (p. 84). In the same way that social structures, or actions, support the maintenance of other parts of the social system, they might also result in negative consequences for them (Ritzer, 2011).

The assumption of universal functionalism maintains that all standardized social and cultural structures have positive functions (Merton, 1967). Again, Merton found this defied what was found in the real world because not all structures or actions had positive function. He disagreed (1967) with Malinowski’s work in anthropology which constructed a functional view of culture that insists every civilization, custom, material object, idea and belief serves to fulfill some satisfactory end (Malinowski & Cairns, 1960). He felt this assumption was best left to be answered by investigation, and that it would have provided better direction for functional analysis research had it posited that cultural “items” contribute to a “net balance of functional consequences” (Merton, p. 1967, p. 86). By concentrating on positive functions, Merton felt the assumption of universal functionalism also detracted from the objective analysis of other types of consequences (1967).

Indispensability also maintains that every standardized aspect of society has positive functions, that each social structure (or cultural item) and each function is also indispensable and functionally necessary for society, and that no other structures and functions meets the needs of society better than those that already exist (Ritzer, 2011).

This assumption is derived from Malinowski's functional view of culture stated earlier, and his assertion that social structure and cultural items are an indispensable part of the working whole of society (Malinowski & Cairns, 1960). Certain functions are assumed to be indispensable if society, groups, or individuals are to persist (1960). According to Merton, certain social structures and cultural items are prerequisite to fulfilling these functions (Merton, 1967). The idea of specialized and irreplaceable structures or items was dismissed by Merton, who believed that while an item may serve multiple functions, those functions can also be fulfilled by multiple items (1967).

Merton defined 11 elements that guide the analysis of functions, or consequences, of a social action. The purpose of this guide was to contribute to the sufficiency and significance of analysis, narrowing scientific implications, and providing knowledge that can potentially have both political and ideological implications (1967). These elements are as follows:

1. The object of analysis represents a social control, such as a role, process, or structure, by which consequences are imputed.
2. There is some motive assumed by the social system (subjective disposition).
3. Objective consequences include both intended and unintended consequences, or functional and dysfunctional effects, that contribute to a net impact of consequences.
4. There is a specific unit, or subgroup, of society for which a social control has consequences.

5. Some biological or social need must exist to meet the functional requirements of a system being observed.
6. Social mechanisms contribute to the attainment of consequences.
7. Some consequences of a social control may be caused by other items (functional alternatives).
8. Functional consequences can be fulfilled by a variety of social processes or social control drivers and their interdependence is relevant; there is structural context.
9. Dysfunction implies stress and strain, and in studying such consequences, an analytical approach that considers structural dynamics and change is employed.
10. Adequate sampling and analytical procedures are necessary for the validation of data.
11. Varying sociological ideologies can impact assumptions and the formulation of the problem. (1967)

Research Related to Unintended Consequences

Studies of unintended consequences of public policies were found to draw upon a wide variety of theoretical and conceptual frameworks. None were found that explicitly employed Merton's guide in the analysis of unintended consequences of a social action. However, studies were found that contained a number of these characteristic elements. Four public policy related studies of the consequences of social action are examined here with respect to the elements of Merton's guide for functional analysis.

The impact of non-police third-party policing by landlords in urban poor areas intended to fight crime (the motive assumed by the social system) was studied by Desmond and Valdez (2013). Police sanctioned landlords (the social control) with nuisance property violations for the behavior of their tenants. Approximately one-third of citations issued (the social mechanism) involved domestic violence, which was abated by landlords by evicting battered women (the dysfunctional effect and the subgroup for which the social control has consequences—unintended consequences in this study). Citations were most likely to be issued in black rather than integrated neighborhoods after controlling for prevalence and rate of domestic violence calls to 911 (alternative cause considered). Housing is the biological and social need that must be met, while third-party policing, poverty, domestic violence, citations, and landlords, represent interdependent variables that result in the unintended consequence. The crime control strategy of policing by landlords was found to have unintended consequences to inner city women. Desmond and Valdez recommended that policy makers consider how their decisions might potentially contribute to social inequality, impact innocent individuals, and violate constitutional and statutory protections (2013).

Collateral consequence and a punitive regime model provided the basis for the theoretical framework when Kupchick and Gifford (2012) studied whether the size of the incarcerated population had an impact on Medicaid enrollment. After 1990, Medicaid enrollment was found to increase as the number of individuals incarcerated increased, suggesting mass incarceration creates a collateral consequence of increasing demands for social services. Again, core elements of Merton's guide for functional analysis of

unintended consequences are present in this study in social controls, motive, unintended consequence, impacted subgroup, biological and social need, social mechanisms, context and dysfunction. Kupchick and Gifford's study not only contributes to the literature on collateral consequences of mass incarceration, but a policymaking orientation that informs the need to consider how marginalized groups may be placed at increased risk (Kupchik & Gifford, 2012).

Unintended consequences of public policies excluding illegal immigrants and irregular and undocumented immigrants from employment and public assistance in the Netherlands was studied by Leerkes, Engbersen, and Leun (2012). Using a marginalization lens, Leerkes et al., assert that decreases in life opportunities increases crime (2012). While they found that a combination of factors (reclassification of immigrant status, cross border crime, and policy and demographic changes) contributed to increases in immigrant crime, 28% resulted from the unintended marginalization effect of the border control policy (2012). This study provides an example of the importance of structural context and the interdependence of items that Merton believed contributed to a consequence (Merton, 1967). New forms of legality, or illegality, were created when policies are intensified (Leerkes et al., 2012). From a constructivist perspective, not only do we stand to gain knowledge from the discourse, the law, and the resulting intended consequences of policy, but from the latent unintended consequences as well (2012).

Chouvy (2013) differentiated consequences into "direct" and "collateral" unintended consequences when reviewing drug crop reduction policy in an effort to better identify what the consequence was attributed to. Both types of consequences contradict

the role of a purposive action. If a consequence was a result of the action, it was classified as direct, while if the consequence was a result of the intended consequence of the action, it was labeled collateral (2012). Unintended consequences of drug control policy continue to occur when inadequate or failed policies and interventions are ignored—largely because they may be alleged, but unmeasured and unproven (2012). Supporting Merton's contention that multiple variations in items and their interdependence play a role in resulting consequences, Chouvy suggests probabilistic causality be used instead of deterministic causality to study consequences because the complexity of the interactive effects and contingent conditions of action are so great that they change outcomes in unforeseen ways (2012). Studies must also take care to not confuse unintended consequences with a failure to achieve the intended consequences (2012).

Labeling Theory, Deviance, and Secondary Deviance

Mead (1934) first planted the seeds for the concept that later became known as labeling theory, or social reaction theory, when he described the development of an individual's self-concept as being influenced by their organization of the attitudes expressed toward him by others from his community or social group regarding his actions. Tannenbaum (1938) built on this by expanding the concept to society's response to juvenile delinquency. He described the transition society makes as a problem grows, initially defining a behavior as a nuisance, evil, or delinquent, and eventually hardening community attitudes as they seek to make the behavior stop. The "evilness" of an act shifts to the evilness of the individual, making all his actions suspect to the community

(1938). Recognizing that he is perceived as different from others in the community, his self-identity changes and he integrates with those who share his activities and condition. Having been defined as bad, society has little belief in his “goodness,” and therefore resigns himself to being bad (1938).

Society has difficulty dealing with people whom it cannot define (Tannenbaum, 1938). Therefore it attempts to identify and define individuals based on their behavior by labeling them. “Unconsciously all agencies combine to maintain this definition even when they apparently and consciously attempt to deny their own implicit judgment” (p. 18). The labeling process, or “the dramatization of evil,” as Tannenbaum (p. 19) called it, separates a child from his peer group and singles him out for special treatment, changing his world dramatically and significantly contributing to the child’s development as a criminal. “The process of making a criminal, therefore, is a process of tagging, defining, identifying, segregating, describing, emphasizing, making conscious and self-conscious; it becomes a way of stimulating, suggesting, emphasizing, and evoking the very traits that are complained of...the person becomes the thing he is described as being.” (p. 19–20).

When labeled individuals are unable to acquire the habits or characteristics that society imposes on its members (socialization, education, employment, self-sufficiency, etc.), other behaviors and attitudes are substituted instead (Tannenbaum, 1938). As a result of this conflict and the child’s isolation they seek companionship and association with groups, or gangs, that fill the void left from the inability to acquire the habits society expects of them—providing a sense of security and form of escape. Their socially

delinquent conduct becomes the foundation for their affinity. This association may be fulfilled not only by a gang, but by a family or a community. Regardless, they all contribute to the development and maintenance of what is perceived as acceptable criminal life (1938). It follows then that in order to break the chain of criminal behavior that is stimulated by the criminal's social world, the "attitudes and ideals, interests and habits" associated with that world must change, providing a different set of values that are internalized by the criminal, and with which society can meet his need for approval (1938, p.21).

In 1951 Lemert first sought to legitimize the concept of deviance in the field of sociology by creating a systematic theory of sociopathic behavior. He defined deviance as behavior which a person does or does not do that gains the attention of the public as deviant (Lemert, 1951). These behaviors are caused by physiological, psychological, cultural and social factors (Lemert, 1967). The violation of social norms is not in itself significant until the behavior is subjectively organized into a societal response which transforms the roles of individuals and results in criteria by which society assigns status (Lemert, 1951, p. 75; Lemert, 1967). How a deviant reacts symbolically to the status assigned to them for their deviant behavior and how this impacts their sociopsychological response determines whether the individual's deviations result from original causes or effective causes (Lemert, 1951; Lemert, 1967). "Self-definitions or self-realizations are likely to be the result of sudden perceptions and they are especially significant when they are followed immediately by overt demonstrations of the new role they symbolize" (Lemert, 1951, p. 74-75).

If the deviant rationalizes their behavior and status as socially acceptable, as may be the case in some cultures, the behavior is a primary deviation that is symptomatic and situational. However, if deviant acts are met with severe social reaction and moral indignation that alters the individual's self-definition of who he is, such that he internalizes his deviant behavior or the role placed upon him as a defensive mechanism, aggressive response, or attempt to adapt to "overt and covert problems" created by the consequence of the societal response to primary deviance, the deviation is considered to be a secondary effect, or secondary deviancy (Lemert, 1951, p. 76; Lemert, 1967, p. 17). Social reaction creates moral problems that result from stigmatization, punishment, segregation, and social control, altering the deviants symbolic and interactional environment such that early or adult socialization is strongly impacted (Lemert, 1967; Lemert, 1972). The process of stigmatization attaches "visible signs of moral inferiority to persons, such as invidious labels, marks, brands, or publicly disseminated information" (Lemert, 1972, p. 65). Secondary deviance is a response then to problems or conditions brought on by the stigmatizing societal reaction to primary deviance. These problems impact the psychological structure and the function of social roles, and is typically prolonged (Liska, 1998). They become central to the existence of those experiencing them, causing the facts of deviance to collocate the secondary deviant's life and identity (Lemert, 1967).

A theoretical distinction between primary and secondary deviance was made by Lemert to bring attention to two different research problems: "(1) how deviant behavior originates [the concern of traditional sociological perspectives of deviance]; (2) how

deviant acts are symbolically attached to persons and the effective consequences of such attachment for subsequent deviation on the part of the person” (Lemert, 1967, p.17). It is the second of these problems that has become the foundation for labeling theory, and the one that has greatest pragmatic significance to sociology (Lemert, 1951; Lemert, 1967, p.18).

Secondary deviance occurs through a process of symbolic interactions: primary deviation occurs, penalties are assigned, more primary deviancy may occur, society reacts by imposing stronger penalties and rejections, further deviation with an increasing sense of injustice, hostility, and resentment toward those imposing sanctions, community stigmatization occurs, deviant conduct escalates in response to stigmatization and penalties, and finally, acceptance and internalization of a deviant social status and self-image (Lemert, 1951). The original causes of primary deviance end up becoming less significant than society’s disapproval in degrading and isolating ways (Lemert, 1967). Essentially, the symbolic interaction processes associated with the stigma of labeling encourage the development of a deviant self-concept and “master status,” which results in further deviance (Becker, 1963; Lemert, 1951).

Becker defined deviant behavior, or deviance, as any behavior for which people are labeled that defies group rules, and the deviant as the one to whom labeling has been applied (Becker, 1963). Labeling theorists believe that deviance is a consequence of how others react to a person’s behavior. Society does not cause the initial deviant behavior, but rather is the judge and gate-keeper regarding what is considered deviant based on created rules that define which infractions constitute deviance. The persons, processes,

and situations involved in this rule-making judgment all contribute to the phenomenon of deviance (1963, p. 4). The deviant behavior may have been committed by a juvenile for a number of reasons: because their values have been influenced by the “wrong crowd,” they have conflicting societal responsibilities, they seek personal gain/gratification, they act on impulse, as an expression of anger, as a response to misinterpretation of messages or peers or other, simple exploration, lack of awareness of the rules, or even accidentally or unintendedly (Gove, 1975, p. 5; Tittle & Paternoster, 2007, p. 453). This labeling is not always applied to everyone that breaks the rules, and therefore some are channeled toward criminal life more than others. In addition, differences in how, what, when, where, and why a label is applied impacts the subsequent actions of everyone—including “audience and actors” alike (Becker, 1963).

Once labeled, deviants share common experiences as a consequence of that label, including those which may lead to subsequent rule-breaking behavior. They are perceived as criminals whom people automatically assume possess other undesirable traits and are likely to commit other crimes (Becker, 1963). The deviant status is one that is so strong that it overrides all other statuses in determining how others will act toward the deviant (1963). This generalization of deviancy produces a self-fulfilling prophecy after being sanctioned from participation in conventional societal groups, making it difficult to conform to other rules (Becker, 1963, p. 34; Braithwaite, 1989). Once ostracized, it is difficult for the deviant to return to a normal status (Gove, 1975).

Informing others of a person’s criminal label is often used as a technique of social control (Bernard, Vold, Snipes, & Gerould, 2010). Because the meaning that individuals

give to themselves is constructed in the process of social interaction with others, the public dissemination of a person's label can be quite threatening, and the power of that threat is increased by the number of persons who know about a deviant's label (2010). Labeling, as a method of social control, makes the deviant worse (Becker, 1963; Braithwaite, 1989; Lemert, 1951, 1972; Tannenbaum, 1938).

Some individuals are able to successfully resist the internalization of a label; many cannot however. "Their attempts to explain are rejected, their protestations are ignored...and they find themselves having to adapt to a social world that assumes they have a psychological problem" (Tittle & Paternoster, 2007, p. 453). Lemert stated,

When others decide that a person is non grata, dangerous, untrustworthy, or morally repugnant, they do something to him, often unpleasant, which is not done to other people. This may take shape in hurtful rejections and humiliations in interpersonal contacts, or it may be formal action to bring him under controls which curtail his freedoms. (1967, p. 44)

If stigmatization is pervasive, eventually an identity crisis occurs; and if others continue to treat the individual as if they are weird, they begin to question their mental stability, eventually behaving in ways that are in keeping with their image as a disturbed person—to which the response of the social audience eagerly provides affirmation (Tittle & Paternoster, 2007).

Erickson posited:

Deviance is considered a vagrant form of human activity which has somehow broken away from the more orderly currents of social life and needs to be

controlled. And since it is generally understood that this sort of aberration would only occur if something were wrong within the organization of society itself, deviant behavior is described almost as if it were leakage from machinery in poor condition; it is an incidental result of disorder and anomie, a symptom of internal breakdown. (1964, p. 9)

He maintained that even the worst of deviants conform most of the time, and when society selects what sociological issue is brought into focus, those few aberrant moments are elevated above all acceptable behavior when sanctions are brought against him in response to them (1964). A consequence of this is that “a moment of deviation may become the measure of a person’s position in society” (1964, p. 11). Each time a norm is used as a basis for judgment, its validity is retained and the authority and boundaries of society are affirmed (1964). However, the inhibition of deviant behavior by institutions may actually prove to perpetuate it (1964). Societal “ceremonies” occur in the form of a court proceeding to moving a person from normal status to a new deviant role. This is represented by a formal process of confrontation, judgment, and placement. Erickson asserted that once this ceremony has taken place, there is no formal ceremony terminating the status which is almost always irreversible. Even if there were such ceremony, nothing occurs to cancel the stigma imposed upon him by the community at large (1964). And so it follows that the community is reluctant to welcome him into the group, and a “self-fulfilling prophesy” is set in motion (1964).

Two major theoretical propositions are commonly defined by labeling theorists. The first relates to societal status and maintains that the probability of being labeled

deviant is influenced by social disadvantages rather than actual rule-breaking, such that those with less power and resources are most likely to be channeled into a deviant role (Becker, 1963; Gove, 1975; Tittle, 1975b). The second proposition relates to secondary deviancy and maintains that deviant labeling creates negative consequences for the person labeled that can lead to secondary deviant criminal behavior (Lemert, 1967; Tittle, 1975b). It is a variation of the later of these two propositions that contributes to the theoretical framework of this study.

Research Related to Labeling Theory, Consequences of Labeling, and Secondary Deviance

Early criticism. In defining the role of sociologists regarding social problems, Lemert (1951) acknowledged that methodological weaknesses exist in studying them, and urged social scientists to engage in inquiry and research to obtain answers as to whether social problems “are unanticipated consequences, secondary stabilizing derivatives, or necessary preconditions of the socio-cultural system in which they develop” (p. 7). Social scientists are in a position to inform policymakers in a democratic society about the consequences of social action and to enlighten them regarding the means of achieving goals (1951).

Labeling theory does not attempt to explain primary deviance by the response that others have to it. Instead, its original proponents simply wanted to enlarge the study of deviant phenomena by expanding the view of deviancy to include the activity of others as it relates to deviance (Becker, 1963). In addition,

The act of labelling, as carried out by moral entrepreneurs, while important, cannot possibly be conceived as the sole explanation of what alleged deviants actually do. It would be foolish to propose that stick-up men stick people up simply because someone has labelled them stick-up men...Nevertheless, one of the most important contributions of this approach has been to focus attention on the way labelling places the actor in circumstances which make it harder for him to continue the normal routines of everyday life and thus provoke him to 'abnormal' actions...The degree to which labeling has such effects is, however, an empirical one, to be settled by research into specific cases rather than by theoretical fiat. (Becker, 1963, p. 179)

Labeling theory's social reaction perspective of deviancy has meet with a number of critics. In defending the perspective, Schur (1975) noted that it redirected attention towards aspects of deviance that were previously neglected. A benefit to this labeling argument was that it spurred researchers to challenge the theory, exploring aspects of deviancy that might never have been studied. Labeling theorists and their adversaries were really addressing different questions--both of which were germane to an understanding of the phenomena of deviance, and both worthy of sociological attention as they addressed different aspects of deviance (1985). Where the social reaction perspective focuses on the process through which individuals are labeled and the consequences of such labeling, its adversaries were oriented in the causation of deviant behavior as typically represented by traditional deviance sociology. Attempts to validate

the social reaction perspective of labeling theory using a causal theory of deviance lens, as many critics did, completely missed the aim of the perspective (1985).

Kitsuse referred to labeling theory as a “new conception” of deviance because the perspective focused on societal reaction and labeling, where the “old conception” was a “norms-based” perspective (Kitsuse, 1975, pp. 276-282). He echoed Schur’s concern about critics, indicating that they were attempting to force societal reaction/labeling theory “into the mold of old conceptions” (p.282). The mold of old conception defined deviance as a “violation of norms”—a definition that Kitsuse found ambiguous (p. 276), whereas labeling theory considered *how* deviants are labeled, and *how* social control is exercised and institutionally legitimized (p. 282).

In 1975 Tittle criticized labeling theory because he maintained that it was difficult to derive specific empirical assertions from it, there was a lack of systematic data to support testing, and vague definitions of the degrees of deviance made it difficult to measure the degrees of labeling (Tittle, 1975b). In addition, Tittle argued that if negatively classified deviants engage in less deviant behavior, then the label did not have a lasting impact. Therefore, he maintained that if labeling cannot be independently determined from its presumed effect, “then the proposition in question is incontrovertible and thereby unscientific” (p. 159). Despite this, Tittle still urged sociologists to conceptualize labeling ideas in a way that allowed it to be tested, admitting that:

Scientific explanation demands continuous specification of vague ideas into more precise postulates, and comparison of theoretically generated prediction with real world outcomes. It is only through a continuing formulation-test-feedback

process that theoretical inadequacies can be identified and corrected. Scientific theories do not emerge full blown. They are built as provocative ideas that are refined and made more precise through the vehicle of empirical testing. In this way, sensitizing concepts become parts of genuine theories that serve the ends of science. (1975b, p. 161)

Modified labeling perspectives. Early critics of labeling theory found ambiguity in the concepts, and criticized it because research studies failed to support it (Hirschi, 1975; Tittle, 1975b). However, much of the early contrary research lacked relevance (Tittle & Paternoster, 2007). Subsequently, the theory has gained clarity because focus has been placed on the social processes that explain why deviant labeling results in secondary deviance. A number of empirically testable propositions resulted from this shift in thinking (Liska & Messner, 1998), including labeling perspectives related to altered self-concept (Matsueda, 1992), developmental and social structural aspects of social exclusion which lead to blocked access to structured opportunities and conventional resources (Link, 1982, 1987; Link et al., 1989; Sampson & Laub, 1995), and reintegrative shaming (Braithwaite, 1989). These perspectives do not assume an individual accepts their label, but rather provides a modified view of labeling that focuses on its consequences and implores researchers to study conditions that potentially mitigate or exacerbate secondary deviance.

Matsueda (1992) argued that delinquent behavior is partly determined by an individual's self-appraisal as influenced by the opinion of others; self-conceptions are formed based on an individual's perceptions of others' attitudes toward them. Data was

collected from 1,725 youth between the ages of 11 and 17 and their parents in personal interviews, including self-reports of delinquent behavior, parental appraisals of their child, and self-reflected appraisals by the youth based on parents, friends and teacher. Appraisals fell into four categories: sociable, likely to succeed, distressed/often upset, and rule violator/gets into trouble. Findings highlight the importance of the conception of self from reflected appraisal as a cause and effect of delinquent behavior (1992). A number of findings were consistent with labeling theory. Prior delinquent behavior was found to have a direct influence on a youth's self-concept regardless of a parent's view of their child. Prior delinquent behavior also had a direct impact on subsequent delinquent behavior even when self-concept and parental appraisal were held constant. Indirectly, parental appraisal of their child as a rule-breaker was also found to influence subsequent delinquency (1992). Matsueda underscored the importance of the role that a youth takes on, as specified by symbolic interactionism that is fundamental to labeling (1992).

Link (1982) suggested the possibility that the effects of labeling may impact individuals in ways that are completely different from the type of behavior connoted by the label given to them. Focusing on the effects of labeling in other areas of a person's life, Link studied individuals with similar psychiatric conditions that had been treated (labeled), and untreated (unlabeled). Analysis found a negative impact of labeling on income and work status, when controlling for psychiatric condition, and sociodemographic variables (1982). Link suggested that discrimination by others and anticipation of rejection contributed to denigrating labeling effects that can impact an

individual's ability to work and earn income (1982). This was later supported by results from a similar study by Link (1987).

The developmental nature of labeling theory was emphasized by Sampson and Laub, who asserted that the impacts of labeling dynamically unfold over time through biological, psychological, and social processes (1997, p. 134). This concept was first set forth by Becker (1963) and later supported by Link (1982) and others (Link et al., 1989). Labeling during critical periods of an individual's life leads to marginalization which reduces structural opportunities essential to a conventional life course and influences identity trajectories over time, thereby increasing the likelihood of subsequent deviance. This is especially true of opportunities shaped by education and employment. Likewise, crime and deviance are reduced when there are stronger social bonds in adulthood. Diminished opportunity over time creates a "cumulative disadvantage" that negatively alters the course of one's life (Sampson & Laub, 1995; 1997, p. 134-135). Sampson and Laub integrated this "dynamic conceptualization of social control over the life course with the one theoretical perspective in criminology that is inherently developmental in nature—labeling theory" (1997, p. 135). This developmental and social structural perspective urges researchers to examine the mediating roles of structured opportunities over a life course in testing labeling theory's secondary deviance proposition (Bernburg & Krohn, 2003).

Reintegrative shaming theory underscored the importance of the circumstances and manner in which labeling is experienced to the prevention of secondary deviancy (Braitwaite, 1989). The impact of labeling is realized in different ways, depending on the

type of crime, the individual labeled, and the conditions in which they live. Variables exist that explain why one individual can resist or ignore institutionalized disapproval of an act, while other others succumb to it; Braitwaite focused on one of these—shaming (1989). Labeling theory was criticized for failing to “distinguish the crime-producing consequences of stigma that is open-ended, outcasting, and person--rather than offense-centered from the crime-producing consequences of shaming that is reintegrative” (1989, p. 4). Labeling theory contends that labeling an offender in stigmatizing ways always makes things worse, while reintegrative shaming recognizes that this is not always the case (1989). Braitwaite recalls a conversation with Glaser in which they discussed the theory as seeking to identify “the person and circumstances in which particular types of labeling and punishment shift the stake of the subjects from conformity to nonconformity with the legal norms, and vice versa” (1989, p. 13). Reintegrative shaming theory postulates that when offenders are integrated into the community and involved in relationships with others, they are less likely to commit crime because they have a sense of personal responsibility for the safety and well-being of those around them. When deviants are shunned by conventional society, they are marginalized, and the likelihood of their meeting societal expectations and becoming law abiding citizens is compromised.

Four deficiencies of labeling theory research that cause methodological problems that limit conclusions that can be made from the research were identified by Bernburg and Krohn: (a) lack of data regarding individuals who have not been labeled, (b) lack of data from longer follow-up periods, (c) failure to investigate intervening processes that may have a mediating effect on the relationship between labeling and subsequent

deviancy, and (d) failure to examine whether conditions of structural location (race, social class) impact the relationship between labeling, structural mediating effects, and subsequent delinquency (2003). While early research related to labeling theory largely failed to address these issues (Paternoster & Iovanni, 1989), and was severely criticized during the earliest years of its development, more recent research has provided empirically testable propositions and attempted to address these issues, providing richer empirical knowledge.

Current research. A number of research studies exist that examine whether criminally related deviant labeling of youth led to secondary deviant criminal behavior (Barrick, 2007; Bernburg & Krohn, 2003; Bernburg et al., 2006; Blomberg, Bales, & Piquero, 2012; Brownfield & Thompson, 2008; Gatti, Tremblay, & Vitaro, 2009; Jackson & Hay, 2013; Jennings, Khey, Mahoney, & Reingle, 2011; Lopes, Krohn, Lizotte, Schmidt, Vasquez, and Bernburg, 2012; McAra & McVie, 2007; Murphy, Brecht, Huang, & Herbeck, 2012; Patrick & Marsh, 2005; Tapia, 2011; Ward, Krohn, & Gibson, 2014; Wilson & Hoge, 2013). The vast majority of these studies provided support for the second theoretical proposition of labeling theory, in that labeling creates negative consequences that lead to secondary deviant criminal behavior.

Meta-analytical studies by Ascani (2012) and Barrick (2007) of the effects of labeling on crime and deviance both yielded results that lend support to the tenets of labeling theory. The most rigorous tests of labeling theory were found to provide the greatest support (2007).

Studies of youth subjected to juvenile justice system interventions as compared to youth given diversionary treatment found significant increases in offending by the former of these groups (McAra & McVie, 2007; Wilson & Hoge, 2013). The greater the intensity of the intervention, the greater the criminogenic effect (Gatti et al., 2009, p. 995). Johnson, Simons, and Conger (2004) urged researchers to explore whether specific legal sanctions are more likely to predict re-offense. Conversely, in a comparison of youth in groups with similar tobacco and alcohol offenses randomly assigned to varying levels of court intervention, Patrick and Marsh (2005) found that all groups had recidivism rates that were not statistically significant, implying that official sanctioning had no effect on this type of offender. Braithwaite (1989), however, asserted that certain types of societal reactions to deviance may place offenders at higher risk for re-offense than others. Paternoster and Iovanni (1989) posited that we should not expect the effects of labeling to be the same across subgroups. In keeping with this, Ward et al. cautioned too that “It is not only possible but, indeed, probable that intervention will have different effects on different types of offenders” (2014, p. 441).

While not specifically a test of labeling theory, a longitudinal study of over 8,000 youth categorized into four risk trajectories for delinquency as determined by protective and vulnerability factors, Murphy et al. (2012) found all groups demonstrated a decrease in delinquency over time. This finding does not support that labeling leads to secondary deviant criminal behavior.

Additional studies examined the non-criminogenic consequences of criminally labeling youth, and found increased high school drop-out rates, unemployment, anti-

social behavior, negative or delinquent self-concept, and welfare status, and reduced post-secondary educational attainment (Bernburg & Krohn, 2003; Brownfield & Thompson, 2008; Hemphill, Toumbourou, Herrenkohl, McMorris, & Catalano, 2006; Hirschfield, 2009; Issmer, Stellmacher, & Gollwitzer, 2013; Jennings et al., 2011; Kirk & Sampson, 2013; Lopes et al., 2012; Sweeten, 2006).

When school attendance and education post-release from incarceration occurred, it was found to have preventive effects on future offending, underscoring the impact of informal social controls on the re-direction of previously criminal paths of youth, and demonstrating that labels are not always as permanent as labeling theory suggested (Blomberg et al., 2012). This appears to support Braithwaite's perspective of labeling in which shaming is followed by the need to help offenders re-integrate into their communities and turn away from crime. While official labeling was found to increase subsequent offending, Jackson and Hay (2013) also found that high family attachment with warm and supportive parents significantly diminished the effect of labeling on subsequent re-offense.

Consequences that result from non-criminal related labeling of youth or adults, such as mental illness, obesity, or learning disabilities have also been studied (Elkington et al., 2013; Kroska & Harkness, 2006, 2008; Kroska, Harkness, Thomas, & Brown, 2014; Mustillo, Budd, & Hendrix, 2013; Mustillo, Hendrix, & Schafer, 2012; Perry, 2011; Shifrer, Callahan, & Muller, 2013; Thoits, 2011). The majority of these studies also support that labeling creates negative consequences.

In studying the effects of serious mental illness (major depression, bipolar disorder, and schizophrenia), Perry (2011) found that labeling individuals with these conditions provoked strong, positive, supportive, reactions from family and friends, while at the same time triggering powerful negative reaction from the general public. Demoralization occurs when patients perceive negative societal conceptions of the label, and when a label is publicly known, they become especially vulnerable to negative social evaluation and rejection (Kroska et al., 2014). In studies by Thoits (2011), the “personal agency” of labeled individuals was highlighted, suggesting that patients labeled with mental illness cope with the threat of stigma from societal reaction in different ways: through self-stigmatization, deflection, avoidance, self-restoration, or by challenging the label (2011). These strategies may apply to a far wider range of labeled individuals (Thoits, 2011) that are forced to cope with what Goffman (1986) refers to as “spoiled identity.”

Adolescents and young adults labeled with mental illness were found to use romantic and sexual relationships to avoid rejection and to distance themselves from “the lower status associated with having a mental illness” (Elkington, et al., 2013, p. 391), resulting in potentially risky coping strategies that create further deviance. Labeling resulted in internalized beliefs of undesirability, and limited choices of partners, causing some to be less assertive and more sexually passive in relationships to avoid rejection (2013). They stayed in relationships with partners they did not particularly like, engaged in unwanted sex in fear of rejection, and in unwanted reproductive behaviors to create stronger bonds with partners to avoid rejection (2013).

Obesity in young adolescent white girls predicted psychological distress at 18 – 21 years of age when parents or friends labeled them as “fat” in early adolescence (Mustillo et al., 2013). This was not found in obese adolescent black girls (2013). Weight-related stigma during *young* adolescence (11 – 14 years of age) proved to have a significant impact (2013). Supportive of the life course perspective of labeling, the influence of labeling changed with age and had implications over life’s course. The greatest proximal psychological distress was experienced in later adolescence, while labeling in early and mid-adolescence had the greatest distal, or long term, psychological effects (2013). These effects were also found to linger significantly beyond the removal of a label (Mustillo et al., 2012). Intrinsic negative effects on self-concept persisted after obese girls achieved normal body mass, and were consistent with girls who did not achieve normal body mass (2012). In formerly obese black girls, self-esteem did rebound after normal body mass was reached. This may be explained by existential, interactional, and cultural barriers that prevent sudden reparation of self-concept when someone attempts to “de-label” or remove themselves from a stigmatized label, even when that label is no longer appropriate (Howard, 2008). Identity change requires a person to let go of a former identity and the residual effects of a past role, necessitating a transition that may require the development of a new identity to replace the old one (2008).

The contextual importance of labeling is highlighted in a study by Hirschfield (2008). In a qualitative study of 20 minority youth, 18 – 20 years of age, that resided in high-poverty urban neighborhoods that had at least one juvenile arrest, findings showed that arrests resulted in minimal stigmatization, impact to self-conception, and social

exclusion (2008). Youth in this population viewed an arrest as a normal part of adolescence in their community (2008). The study suggests that the strength of norms in an individual's social circle and the degree to which an officially sanctioned behavior is defined as deviant in relation to those norms moderates the labeling process (2008), such that negative valuation and social rejection does not occur (2008). Hirschfield found that social perceptions, which are "fluid and contingent," provide the fundamental basis for labeling perspectives (2008). The contextual importance of labeling is supported by Turgeman-Goldschmit (2008), who studied criminally convicted adult computer hackers. In keeping with Becker's assignment of "master status" to deviants, these hackers assigned themselves the label of "computer expert" rather than a deviant label (p. 393). Hackers were found to not be easily stigmatized and successfully avoided the negative effects of labeling and secondary deviance; self-concept did not worsen, and employment did not decrease, but rather increased (2008). Despite the fact that society has labeled hacking as deviant (by enacting laws and restraints against it), because others in society valued this form of deviance sufficiently enough to provide the institutional environment in which hackers gained employment, they were able to successfully operate in normative, non-deviant ways (2008).

Context has significance in mental health labeling as well. Unique cultural meanings may be assigned to mental health conditions that may not be recognized from general mental health labeling, moderating the effects of stigma on mental health patients differently (Kroska & Harkness, 2008).

No research was found that specifically studied labeling theory as it relates to the labeling of juveniles that committed a sexual offense. A handful of studies were found that examined the consequences of being labeled as a sex offender from the perspective of individuals who committed an offense as an adult.

Societal reactions to labeled sex offenders after they were released from prison was studied by Mbuba (2012). This qualitative study of 29 participants gave credence to labeling theory's secondary deviance proposition. Societal reactions to offenders were found to inhibit opportunities for employment and housing. Consistent with findings by Schiavone and Jeglic (2009) and Levenson and Cotter (2005b). Stigmatization and isolation was especially great for those who committed sexual offenses and are required to abide by sexual offender registration laws restricting residency. Financial and emotional well-being was jeopardized, making it difficult to lead a stable life (Mbuba, 2012), creating stress that could trigger re-offense (Levenson & Cotter, 2005b; Mbuba, 2012; Schiavone & Jeglic, 2009). The disdain sex offenders experienced by society and the difficulty of making a life for themselves outside of prison, made reoffending as a means of returning to prison a tempting proposition (Mbuba, 2012). Once labeled, "the person enters into an almost-binding life-long relationship with society, in which society views the person with inexorable suspicion...paradoxically, the rejection encourages them to return to crime as a way to establish meaningful friendships and gain acceptance among peers and also as a method of eking out a living" (2012, pp. 247-248).

Social-psychological consequences of stigmatization of sexual offenders was studied by Mingus and Burchfield (2012) from a modified labeling theory perspective.

Perceptions of 150 formerly incarcerated sex offenders revealed that they perceived that they would be devalued or discriminated against (stigmatized). The effect of this on their reintegration was determined by measuring their use of three coping strategies to deal with stigma—secrecy, withdrawal, and education. Comparing stigma scores with coping scores to determine the impact of stigma on the coping strategy the offender is most apt to use, Mingus and Burchfield found that withdrawal from society and secrecy regarding an offense increased as an offender's perception that they would be devalued and discriminated against increased (2012). In keeping with a modified perspective of labeling theory, findings suggest that individuals indeed adjust their participation in social activities based on the degree to which they anticipate stigmatization in an effort to avoid disclosure of their label. Mingus and Burchfield state:

There can be little doubt that convicted sex offenders are among the most highly stigmatized members of society today. While stigmatization, at some level, has been shown to be beneficial to society as a deterrent to others and as a way to reduce recidivism, it can also produce collateral consequences...when stigma and shame are applied too heavily, offenders may abstain from healthy social activities... self-imposed isolation could tend to exacerbate the very issues that led to the offending behavior in the first place. (2012, p. 107)

In studying the effects of labeling on the reintegration of sex offenders into the community as a function of informal and formal sanctioning, Robbers (2009) surveyed 153 sex offenders who had been released from prison regarding how sex offense convictions generally affected the respondent's life, what

correctional programs they experienced both in and out of prison, how their status as a sex offender affected their lives, what their level of community participation was, and comments and concerns respondents wanted to share (2009). Numerous impacts were identified in Robbers' study.

The public nature of being labeled as a sex offender not only impacted the offender, but was found to impact family and friends as well. Almost half had lost jobs as a result of their sex offender label, and some admitted to lying about their offense to obtain employment (Robbers, 2009). If their status was discovered by co-workers, harassment ensued. Almost all those employed were greatly frustrated at being employed below their skill level, and the majority of respondents felt career advancement had been halted as a result of their label. Similar to findings by Levenson and Cotter (2005a), Robbers found that "isolation, despair, persecution, shame, and embarrassment were common" (2009, p. 17). Twenty-nine percent reported suicidal thoughts and the inability to escape the label (2009). More than half suffered the loss of a relationship, including close family relatives, as a result of their status, and approximately 15% worried about their child's response to their label (2009). One-third were involved in community activities that were largely church-related or ex-offender/support group related (2009). Sixteen percent volunteered in the community (2009). Of those who did not engage in community activities, several mentioned that their loss of voting privileges made them feel disconnected from the community, while others felt they were held in such low esteem that anything they could contribute

to society would not be valued (2009). Robbers found that as offenders tried to stay on the right track, the label placed on them decreased social support and civic identity, and increased psychological stress (Robbers, 2009, p. 24)—factors that contribute to the risk of sexual recidivism, or secondary deviancy (Ackerman & Sacks, 2012; Hanson & Morton-Bourgon, 2005; Levenson & D’Amora, 2007; Levenson, 2007; Ostrowsky & Messner, 2005; Worling & Langstrom, 2006).

Testing the labeling theory perspective that first official offense more strongly predicts subsequent criminal activity, Harris (2013) studied 751 sex offenders who had been referred for civil commitment to obtain treatment because they were serious, persistent sexual offenders. These adult offenders fell into one of three subgroups representing offenders whose initial offense was sexual, violent, or property related. In comparing these groups longitudinally over the criminal career of these offenders to examine the potential impacts of criminal justice intervention, the nature of an initial offense was found to differentiate persistent offenders (2013). Property onset offenders were more likely to engage in substance abuse and antisocial behavior in adolescence, had earlier onset of their initial offense, and a greater number of charges over their career. However, this study did not find that they were predestined to a life of property crime (2013). Offenders with sexual onset demonstrated some evidence of specialization—a finding that Harris forewarns should not be generalized to other sexual offenders due to the narrow and unique population in this study (2013). Findings highlight the significance of understanding the characteristics of an individual’s initial entry into the

criminal justice system--information that supports the continuing effort to better understand sexual re-offending patterns (2013).

Rationale for Choice of Theory

Merton's concept of unintended consequences in functional analysis implores researchers to look beyond whether a social action such as juvenile sexual offender registration achieves its manifest or intended purpose, to objectively observe the latent or unintended functions as well—including those consequences that may be dysfunctional. This concept is founded in the structural-functionalist theoretical perspective commonly used to analyze social phenomenon such as the one studied here. Merton's paradigm of functional analysis provides guidance for the research and analysis of whether a relationship exists between sanctioning juvenile sexual offender registration and possible latent impacts to a registrant's mental health as determined by the severity of depression later in the registrant's adult life. Merton heeds researchers to sufficiently analyze whether potential unintended consequences of purposive social action exist, narrowing scientific implications, such that findings from this study contribute to knowledge that informs political and ideological thinking regarding juvenile sexual offender registration policy.

Given the dearth of research regarding *any* type of consequence of juvenile sexual offender registration (functional or dysfunctional), Merton's concept of manifest and latent function, or unintended consequences, is particularly fitting. The consequences of this public policy must be determined.

Labeling theory is classified as self theory, which emphasizes the study of processes that influence an individual's concept of self and how that contributes to subsequent/secondary acts of deviance (Tittle & Paternoster, 2007). This contrasts with theories of deviance that are classified as control theories, such as the theory of differential social control, developed by Heimer and Matsueda which is concerned with self-image as a means of inhibiting or deterring a person's impulse to commit acts of deviance (2007). Social control theory was not considered for this study because it does not support integration with the concept of unintended consequences in the intuitive manner that labeling theory's secondary deviance concept does. This study does not seek to determine if criminal or simply negative behavior is inhibited (as would be necessary in a test of social control theory), but rather to explore whether non-criminal forms of secondary deviance occur as a result of being labeled a sex offender registrant for a juvenile offense.

Merton's anomie, or strain theory, is also not well suited for this study because it focuses on *why* deviance differs across societal cultures and subgroups within those cultures (Merton, 1936). Further, Merton's anomie concept of deviance does not address the effective consequences of symbolic attachments to persons who have committed a deviant act with respect to subsequent deviancy in the way that labeling theory does (Lemert, 1972). Anomie theory might serve as a basis for future studies, if indeed depression is found to be a potential unintended form of secondary deviant behavior resulting from juvenile sexual offender registration, and if studies outside of this one find it indeed differs across cultures or subgroups.

Unintended Consequence, Labeling Theory, and Secondary Deviance in Relation to This Study

Tittle urged students of labeling theory to: (a) determine how and why labeling occurs, (b) establish the consequences of labeling, and (c) understand the behavior of those directly involved in labeling (1975a, p. 399). Focusing on the second of these directives, this research examines whether labeling an individual as a juvenile sex offender registrant results in potentially latent unintended consequences and secondary deviant mental health conditions in current and former registrants after maturing into adulthood—specifically the presence of depression. Merton’s concept of unintended consequences of purposive social action integrated with Lemert’s labeling theory concept of secondary deviance intuitively provides the analytical framework for this study. However, as in modified labeling theory, this study does not assume that individuals accept their label.

When a juvenile offender is legally sanctioned to abide by state or federal sex offender registration laws (the independent variable), they bear both the legal and common designation of “sex offender” or “sex offender registrant” (the label). Societal definitions that are so strongly negative, as is the case with sex offenders, can significantly alter the subject’s personality creating secondary deviance as they internalize the primary deviant behavior or role placed on them by society, and attempt to cope with problems created as a consequence to society’s reaction (Tweksbury, 2005; Lemert, 1951; Lemert, 1967).

The second proposition of labeling theory provides a test of secondary deviance, maintaining that deviant labeling creates negative consequences for the person labeled that can lead to secondary deviant criminal behavior. Kitsuse suggests that researchers divert their attention from traditional concerns in the sociology of deviance, and investigate “new and different aspects of deviance” (Kitsuse, 1975, p. 275). Sagarin and Kelly caution, however, that the labeling perspective may not be useful to some forms of deviance, and its explanatory and analytic value may differ depending on the manifestation of a phenomenon (Sagarin & Kelly, 1975).

In viewing the labeling of juvenile sex offender registrants as the independent variable and depression as the dependent variable, rather than criminal activity, and by comparing depression scores of current, former, and never-registered individuals to determine if a relationship exists, this study built upon existing labeling theory by suggesting and testing an *alternate non-criminogenic* secondary deviance proposition. In doing so, the critical question to be answered still remains *whether* societal reaction which results in labeling (as demonstrated by a public policy decision) increases or decreases the labeled individual’s deviant behavior (Gove, 1975). If the policy of registering juveniles as a sex offender indeed relates to alternate non-criminogenic forms of secondary deviance, the propositions set forth by modified labeling theory which assert *why* deviance may occur after an individual is labeled stands to be tested.

Supporting Concepts

Introduction

A number of supporting concepts provide insight from which this study of the relationship between juvenile sexual offender registration and depression can be better understood. The emergence and purpose of the juvenile justice system in the United States is provided to give a better understanding of the evolution of juvenile justice policies that led up to the creation and evolution of juvenile sexual offender registration laws, which are also discussed. A review of juvenile sexual offender recidivism research is provided because recidivism has been a key premise upon which juvenile sexual offender registration laws have been created. Juveniles as a subgroup of offenders, trends in offending, policy efficacy, and unintended or collateral consequences of juvenile sexual offender registration are also reviewed. Information regarding adulthood is included because this study focuses on the long-term impacts of registration after juveniles developmentally mature and have increased responsibilities and expectations. Lastly, the characteristics of depression and its consequences are reviewed.

Emergence and Purpose of the U.S. Juvenile Justice System

The Common Law of England provided the basis from which the laws of the United States first differentiated juvenile and adult offenders. Blackstone, in his *Commentaries on the Laws of England*, asserted “to make a complete crime, cognizable by human laws, there must be both a will and an act” (Blackstone, 1770, p. 21). Not only must an act be classified as a crime by society, but an individual’s will to commit that crime--criminal intent, must be clearly evident before an individual can be made liable to

punishment (1770, p. 21). Special consideration for this includes: (a) where there is a “defect of understanding” there’s an absence of discernment and choice, and therefore no act of will, (b) where understanding and will may exist, but were not present when the act was committed because the act occurred by chance or ignorance, and (c) where an individual is compelled to perform the act (1770, p. 21). Blackstone considered the immaturity of children to be a defect of understanding, and that those under the age of discretion needed special consideration in determining culpability.

But by the law, as it now stands...the capacity of doing ill, or contracting guilt, is not so much measured by years and days, as by the strength of the delinquent’s understanding and judgment. For one lad of eleven years old may have as much cunning as another of fourteen; and in these cases our maxim is, that *militia supplet aetatem* [malice supplies the age]. (Blackstone, 1770, p. 23)

In keeping with Blackstone, the concept of *mens rea*, Latin for “guilty mind” (Garner, 2009b, p. 1075), requires that before a child can be held responsible for an act, they must demonstrate criminal intent in their actions and an awareness of the consequences of those actions at the time they were committed. *Mens rea*, in conjunction with the concept of *parens patriae*, Latin for “parent of his or her country” (p. 1221), in which the state acts as the parent in the best interest of a child, provide the foundation for the first U.S. juvenile justice courts established in the early 20th century. While the court’s mission was to meet the individualized needs of the children who came before it in flexible and informal ways, the later concept often resulted in youth being denied the procedural protections afforded to adults in the criminal justice system (del Carmen,

Trulson, 2005). As a result, the concept of *parens patriae* is applied differently today than it was in the early days of juvenile courts.

In 1899 when the first juvenile court was created in Cook County, Illinois, its purpose was to rehabilitate youth for their delinquent acts, rather than to punish. Youth were given individualized care that was flexible and informal. Their understanding of delinquent acts was considered defective due to developmental immaturity. Cases were treated as a civil matter, rather than a criminal one, and dispositions were made “in the best interest” of the child. Over the next 50 years, all 50 U.S. states came to establish juvenile courts. During this era, however, the courts reach to “parent” the child, and in an effort to “cure” the child of the delinquent behavior, resulted in many youth being held in reformatories or state institutions for long periods of time. Issues such as bias during sentencing, and overly harsh sentencing that was incongruent with an offense gave rise to juvenile justice reforms that established court procedures and created protections for juvenile procedural and civil rights. Two U.S. Supreme Court cases were instrumental in precipitating this reform: *Kent v. United States* (1966), and *In re Gault* (1967).

The 1966 decision of the U.S. Supreme Court in *Kent v. United States* addressed the need for procedural safeguards when waiving juvenile offenders to adult court. In expressing concern that the juvenile court may have lost sight of their rehabilitative mission and failed to protect children, the Supreme Court stated:

There is evidence, in fact, that there may be grounds for concern that the child receives the worst of both worlds: that he gets neither the protections accorded to

adults nor the solicitous care and regenerative treatment postulated for children.

(Handler as cited in *Kent v. United States*, 1966)

In 1967, the U.S. Supreme Court's decision *In re Gault* (1967) found that Gault's due process rights had been violated in juvenile court proceedings related to his charge for delinquent acts. He had been committed to state custody until age 21 for making lewd phone calls at age 15. He was denied representation by an attorney, the ability to confront charges, and the opportunity to cross-examine witnesses. In addition, a confession was taken from Gault without the presence of his parents or an attorney, and he was not informed of his rights.

Decisions in *Kent v. United States* (1966) and *In re Gault* (1967) ushered in an era of juvenile justice policy that continued to reflect governmental focus on the court's rehabilitative mission using individualized plans, while also addressing issues with the over institutionalization of youth and the need to provide youth with legal protections. The Juvenile Delinquency Prevention and Control Act of 1968 provided grant money to states for the training of juvenile court personnel, and the Omnibus Crime Control and Safe Streets Act placed juvenile justice on the Department of Justice (DOJ) agenda for the first time. Just a few years later, Congress questioned the effectiveness of these acts, and created the Juvenile Justice and Delinquency Prevention Act (JJDP) of 1974.

Focused on the prevention of juvenile delinquency, the deinstitutionalization of youth, and the separation of youth from the adult criminal justice system, the JJDP has three components which continue to this day, and as last reauthorized in 2002. The act established the Office of Juvenile Justice and Delinquency Prevention (OJJDP) within the

DOJ to coordinate federal juvenile justice efforts to influence and assist state juvenile justice systems; it provided grant money to states to establish and operate juvenile justice systems; and it created core mandates that states are required to comply with to be eligible for grant money. Since 1972 the act has had substantive changes to strengthen the separation of youth from the adult justice system, prevention and treatment efforts, the use of graduated sanctions, the use of risk-need assessments, focus on Disproportionate Minority Contact (DMC), and funding priority to evidence-based programs (Office of Juvenile Justice and Delinquency Prevention, n.d.).

The purpose of the JJDPA of 2002 in conjunction with the Federal Juvenile Delinquency Act of 1974, was to “remove juveniles from the ordinary criminal process in order to avoid the stigma of a prior criminal conviction and to encourage treatment and rehabilitation” *United States v. Brian N.* (1990); *United States v. One Juvenile Male* (1994). “This purpose must be balanced, however, against the need to protect the public from ‘violent and dangerous individuals and providing sanctions for anti-social acts’” (1994). The legislative history of these acts demonstrates Congressional intent that the law ensures state and local courts handle juvenile offenders whenever possible, channeling them away from the federal system and into state and local treatment programs *United States v. Juvenile Male* (1988).

Only a few years after the enactment of the JJDPA, public concern about increasing levels of serious juvenile offending and the perception of juvenile offenders as “superpredators” (del Carmen & Trulson, 2005, p. 9) contributed to a shift in justice policy that sought “law and order” through more harsh and punitive sanctions (Merlo &

Benekos, 2010; Snyder & Sickmund, 2006). In an effort to control crime in the 1980's the juvenile justice system began to take on more characteristics of the adult system. Juvenile transfers to the adult system increased, greater mandatory sentencing was imposed, and repeat and serious offenders were institutionalized more often (Snyder & Sickmund, 2006). State legislatures began to pass more punitive laws in the 1990s that included juvenile offenders, provided public access to juvenile criminal records, and provided greater protection to victims. During this era, adult sexual offender registration laws were also being enacted across the U.S.—many of which encompassed juvenile offenders.

More recently, punitive and “tough on crime” intervention for juveniles has come under fire as needing a more “balanced” approach to accountability, competency, and community protection (Snyder & Sickmund, 2006). A number of models influence the purpose and procedures of juvenile court systems across the United States (2006). The Balanced and Restorative Justice (BARQ) model advocates for public safety, accountability, and restorative justice principles that help offenders live productive and law-abiding lives, and has been explicitly added to juvenile justice laws in more than a dozen states (2006). Other states adhere to the purpose of the Standard Juvenile Court Act as amended in 1959 advocating courts act in the child's welfare and the best interest of the state, and if removed from their parents a child should be provided care as nearly to that which his parents should have provided (2006). Some states adhere to the purpose of the Legislative Guide for Drafting Family and Juvenile Courts Act from the late 1960s, which urged courts to provide for healthy mental and physical development of the

children that come before it, programs of supervision and rehabilitation that remove delinquent children from the consequences of adult criminal behavior, removal of children from homes only when it is necessary for the child's welfare or for the public's safety, and the preservation of constitutional and legal rights (2006). Lastly, a few states demonstrate juvenile justice policies whose purpose emphasizes either accountability and protection, or child welfare. The fundamental ideals of the juvenile justice system still provide the foundation for today's system despite significant policy changes over many years (Merlo & Benekos, 2010; Snyder & Sickmund, 2006).

The jobs of those working in the juvenile justice system--policymakers, judges, prosecutors, probation officers, treatment providers, and law enforcement agents, among others, are not made easy by the conflict between the accountability of morally responsible agents deserving of punishment and the responsibility to protect the welfare and interest of children whose brains are not fully developed that are in need of help and guidance.

There is no well-defined rite of passage from the status of incompetent, supervised child to that of autonomous and morally responsible adult. Instead, there is the ambiguous status of adolescence, which has become indefinitely extended since the mid-20th century, starting earlier, finishing much later. (Smith, 2005, p. 182)

Despite this conflict, 41 states, including the District of Columbia, have statutorily set the upper age of juvenile court jurisdiction for delinquency at age 17; 8 states have set it at age 16; and New York and North Carolina have set it at age 15 (National Center for

Juvenile Justice, 2014a). Only two changes have occurred to these jurisdictional age boundaries in more than 10 years--in 2015 New Hampshire increased the age from 16 to 17, and in 2012 Connecticut increased the age from age 15 to 17 (2014a).

From its peak in 1994 when there were approximately 13,000 judicial waivers to adult criminal courts in the U.S., the count has steadily decreased to 4,000 in 2013 (National Center for Juvenile Justice, 2014b). Over the same period, total juvenile arrests also declined by approximately 25.7% from 2,209,675 to 1,642,600 (Puzzanchera, 2013a; U. S. Department of Justice, 1995) despite an approximate 17.5% increase in the juvenile population in the United States (Puzzanchera, Sladky & Kang, 2014). Declines in juvenile delinquency began years before the most severe juvenile justice sanctions were even implemented (Krisberg, 2005).

Evolution of Juvenile Sexual Offender Registration Laws

In 1947, the state of California passed the first sex offender registration law in the United States, tracking sexual offenders in an attempt to enhance public safety. Forty-three years later in 1990 the state of Washington followed suit, taking their registration law a step further by also notifying the public about sex offenders.

The first U.S. federal sex offender registration law was enacted by congress in 1994 with the passage of the Jacob Wetterling Act as part of the Omnibus Crime Bill of 1994. The purpose of this act was to establish federal guidelines for the tracking of sexually violent offenders, including where they resided after being released from confinement, and to provide a baseline for sex offender registration programs (U. S. Governmental Accountability Office, 2013). The act was created in response to the

abduction of Jacob Wetterling in October of 1989, who, at the age of eleven rode his bicycle along a rural road in Minnesota with his brother and a friend just a short distance from his home. Tragically, Jacob has never been seen again.

The Jacob Wetterling Act, in conjunction with amendments in 1996 by Megan's Law and the Pam Lychner Sexual Offender Tracking and Identification Act, created minimum standards for state sex offender registration programs, and established the National Sex Offender Registry database. States were required to establish registries of offenders convicted of one or more of several sexually related offenses. Offenders subject to registration were required to verify their registration and residential address annually with local law enforcement for 10 years, or quarterly for life, depending on the offense statute of conviction or if the individual had reoffended. The federal law did not require information to be made available to the public, but permitted it to be released, as necessary, for public safety. The act also did not require states to register juvenile offenders adjudicated delinquent for a sexual offense. States that failed to implement registration policies complying with the federal law, or that failed to show "good faith" efforts to comply, were penalized by a 10% reduction in grant money from the federal Edward Byrne Memorial State and Local Law Enforcement Assistance Program. By 1996, all 50 states required sexual offenders to register--26 of which enacted laws in the two years following the passage of the Jacob Wetterling Act (Matson & Lieb, 1996). At that time, thirteen states required registration of juvenile offenders (1996).

Expansion of the Jacob Wetterling Act in 1997 required states to implement greater registration requirements for military offenders, violent offenders, and offenders

working or going to school in another state. With the enactment of the Campus Sex Crime Prevention Act in 2000, sexual offenders attending an educational institution were required to register. State registration laws began to reflect these requirements.

Despite the fact that federal law did not require juvenile offenders to register as sex offenders, by 2014 approximately 41 states included the ability to place some category of juvenile offender adjudicated for a sexual act on their sex offender registry (U.S. Department of Justice, Office of Justice Programs, 2014). Approximately 10 of these states only registered juveniles as sex offenders after judicial review deemed it was necessary (Denniston, 2010). State laws reflected wide variations in how juveniles were treated with respect to registration.

As previously mentioned, some states require a judicial decision and court order before a juvenile offender is required to register; others gave juvenile courts full exclusionary discretion to keep a youthful offender from being classified as a sex offender registrant; some register juvenile offenders based on sexual risk assessments and others register based on the statute violated; some limit the statutes for which juveniles must register, while some require registration of juveniles for the same offense statutes for which an adult offender is required to register; still others require that a juvenile offender exceed a minimum age before registration is required, while others register juvenile offenders of any age; some make registration information public--others do not; some allow juvenile offender registrants the opportunity to petition the court to be relieved of their legal duty to register; some require lifetime registration, and others for a significantly shorter term of years; some use risk assessments to determine how

registrants are categorized, while others strictly categorize based on the sexual offense statute violated (Denniston, 2010).

Despite differences in state juvenile sex offender registration laws, there are several critical elements that are retained in almost all of these laws. Juveniles subject to registration are classified as “sex offenders.” They are assumed to pose a threat to the public. They are required to register routinely with police providing information regarding where they live, work, go to school, move, travel, e-mail addresses used, phone numbers, and vehicles driven. Registration is typically lengthy (10 or more years) and continues beyond juvenile probation into adulthood. Registrants are commonly visited by law enforcement to verify they live at the address they have reported as their residence. Regardless of the state, registration laws are typically complex and difficult for registrants to understand, and failure to comply with the laws results in arrest, with potential adjudication or conviction, fines, incarceration, and updates to their criminal record.

The Adam Walsh Child Protection and Safety Act of 2006 (the “Adam Walsh Act”) was enacted by the U.S. legislature to protect children from sexual exploitation and violent crime, prevent child abuse, child pornography, promote internet safety, and to honor child victims (U. S. Governmental Accountability Office, 2013). Sex offender registration in the U.S. consisted of 50 individual state registries that were believed to lack the uniformity and efficacy necessary to address what was described as “a growing epidemic of sexual violence against children” (2013, p. 1). The federal Sex Offender Registration and Notification Act of 2006 (SORNA), Title 1 of the Adam Walsh Act,

marked the first time that states, U.S. territories, tribal nations, and the District of Columbia were required to register juveniles that commit a sexual offense. With the implementation of SORNA, states were required to register youth which committed aggravated sexual abuse that were 14 years of age or older when the offense was committed, registering them four times a year for life, with the potential to petition for removal after 25 years. The act also created the Office of Sex Offender Management, Apprehending, Registering, and Tracking (the “SMART Office”) to assist states in implementing SORNA.

The Adam Walsh Act is lauded by organizations such as the National Center for Missing and Exploited Children for its effort to tighten and unify sex offender registration systems, fill gaps and close loop holes that existed in prior laws, better track sex offenders to protect children, and strengthen the nationwide network of registration and notification programs (Allen, 2011). However, the implementation of the act has not been without challenges related to retroactivity, funding, statutory labeling, and juvenile registration. The response by states to the juvenile offender registration requirement has been contentious, and is cited as the most common reason states have not implemented the act (Baldwin, 2011; National Consortium for Justice Information, 2009). The Council of State Governments issued a resolution that “strongly opposes SORNA’s application to juvenile sex offenders” (2008). The Council cited that SORNA contradicts the inherent rehabilitative purpose of the juvenile justice system, ignores developmental differences between juveniles and adults that places them at lower risk to reoffend than adult sex offenders, ignores evidence that brain development continues into the twenties

contributing to the malleability of sexual offending behavior and responsiveness to treatment, and lastly, that juvenile sex offenders do not pose the same public safety threat as adult sex offenders (2008; Council of State Governments, 2010).

As of 2015, 17 states, three U.S. territories and 95 Indian tribes have enacted sex offender registration policies that substantially implement SORNA (Office of Sex Offender Monitoring, Apprehending, Registering, and Tracking, 2015). In a survey of registration officials in states, the District of Columbia, and U.S. territories which had not implemented the act, approximately 70% of respondents cited the juvenile registration requirement as a barrier to implementation (U. S. Governmental Accountability Office, 2013). Challenges reconciling conflicts between state laws and SORNA, including existing state juvenile policies, were cited by approximately 90% of respondents (2013). Despite barriers to juvenile registration, seven states that previously did not register juvenile offenders as sex offenders, or that excluded juveniles from registration except when ordered by the court, have changed their registration policy significantly enough to qualify as having substantially implemented the act. Two of these states have implemented juvenile sex offender registration policies that differ significantly from that required by SORNA. Maryland registers juvenile offenders who committed the equivalent of aggravated sexual abuse, but only until the jurisdiction of the court ends at the completion of probation (Maryland Criminal Procedure Code Ann. § 11-704.1, 2011). The state of Tennessee also registers juvenile offenders who committed the equivalent of aggravated sexual abuse for life, but in keeping with the empirical evidence on juvenile sexual recidivism, permits a juvenile offender to be removed at age 25 if they have

committed no subsequent offense for which registration would be required (Tenn. Code Ann. § 40-39-207, 2011).

In addition to an increasing number of laws designating juvenile offenders as sex offenders requiring registration, there has been a proliferation of secondary laws created by state legislatures placing further sanctions on registrants related to where they can live, work, volunteer, receive child custody, or travel. Researchers suggested that increased sanctions on juvenile sex offenders have been driven by several key assumptions: juvenile offenders have high sexual recidivism rates; they are a distinct subgroup of delinquents; juvenile crimes related to sexual offending are on the rise; and the registration of juveniles who commit sexual offenses will substantially reduce future sexually violent crime (Batastini et al., 2011; Caldwell, 2007, 2010; Caldwell & Dickinson, 2009; Letourneau & Miner, 2005; Spice et al., 2013). It is argued, however, that these assumptions are not supported by empirical evidence (Batastini et al., 2011; Caldwell, 2007, 2010; Caldwell & Dickinson, 2009; Letourneau & Miner, 2005; Spice et al., 2013). Much of the existing functional analysis of juvenile sex offender registration has resulted from studies that researchers have conducted to explore these assumptions. A review of the current literature related to these follows.

Juvenile Sexual Offender Recidivism

Concerned about detrimental effects of juvenile registration, researchers have focused considerable attention on sexual recidivism and the identification of factors increasing risk of sexual re-offense (Epperson & Ralston, 2014). At the same time these studies inform which interventions have greater likelihood of efficacy (2014).

The literature related to juvenile sexual offender recidivism was observed to predominantly focus on research expanding knowledge in the following key areas:

- Differentiation of offender characteristics (e.g., analyzing sexual vs. non-sexual offenders, sexual vs. non-sexual recidivism, registered vs. non-registered sexual offenders).
- Risk and protective factors for sexual re-offense.
- Outcomes of placement or treatment.
- Validation of juvenile risk assessment tools such as the Estimate of Risk of Adolescent Sexual Offense Recidivism (ERASOR), the Juvenile Sex Offender Assessment Protocol-II (JSOAP-II), the Juvenile Sexual Offense Recidivism Risk Assessment Tool (JSORRAT-II), and Youth Level of Service/Case Management Inventory (YLS/CMI).

In examining variances in recidivism statistics between studies, methodological considerations related to the definition of re-offense used, length of follow-up, and type of sample used should be examined (McCann & Lussier, 2008). For example, a study might explore the reoffense rates of juvenile sexual and non-sexual offenders, general reoffending verses sexual reoffending, treated participants verses non-treated participants, participants sentenced to secured facilities verses released to the community, or participants assessed at high risk verses all levels of risk, or not assessed at all.

Differentiation of offender characteristics. In a mean five-year follow-up study of recidivism by sexual and non-sexual offenders released from secured custody, Caldwell (2007) found sexual recidivism rates of 6.8% and 5.7%, respectively. Non-

sexual offenders accounted for 85% of all new sexual offenses (2007). The study also examined the relative rates of sexual recidivism over time for the two groups. Findings indicate that when juvenile sex offenders were charged for new sexual offenses, almost all occurred within the first three years after their release from custody, while the rate of sexual recidivism by non-sexual juvenile offenders continued to increase at a constant rate during years three through six of the study (2007).

Caldwell and Dickenson (2009) studied recidivism in 172 youth charged with a sexual offense who had been incarcerated in a secured correctional facility—106 of which were required to register as a sexual offender for a felony offense, and 66 who were not. All had been provided sexual offender treatment. The mean age at release from custody was 17 years, 11 months. Risk scales on the J-SOAP-II and YLS/CMI for registered versus non-registered offenders were compared along with general and sexual recidivism rates for the subgroups after mean follow-up of 49.2 months post-release from custody. Registered sex offenders were followed for a mean of 54.0 month, and non-registered offenders for 39.6 months. At follow-up, felony sexual recidivism was 12.2% for the entire sample, 59.3% for general recidivism, and 36% reoffended with a violent nonsexual offense (2009). Both the registered and non-registered subgroups had similar re-offense rates (2009). Sexual recidivism rates were significantly lower than nonsexual recidivism rates for juveniles who sexually offended, which is well supported in the literature (Aebi, Plattner, Steinhausen, & Bessler, 2011; Burke, 2012; Caldwell, 2010; M. Caldwell & Dickinson, 2009; Carpentier & Proulx, 2011; Chu, Ng, Fong, & Teoh, 2012; Chu & Thomas, 2010; Kemper & Kistner, 2007; McCann & Lussier, 2008; Parks &

Bard, 2006; Rajlic & Gretton, 2010; Vandiver, 2006; Viljoen et al., 2008; Waite et al., 2005; Worling, Litteljohn, & Bookalam, 2010).

In a short-term, one-year study by Burke of all youth adjudicated delinquent in Utah Juvenile Court, 2.1% of sexually delinquent youth had a sexual re-offense. These youth had a *general* recidivism rate of 18.3% which was significantly less than non-sexually delinquent youth who were found to have had a general recidivism rate of 30.6% (Burke, 2012).

A study of youth from Singapore whose sexual offending characteristics were similar to western youth (age at offense, criminal history, etc.), found that 11.5% recidivated sexually over 67.83 month follow-up (Chu & Thomas, 2010). In comparing youth who only had sexual offenses to youth with both sexual and other offenses (generalists), recidivism rates were 14.3% and 9.9%, respectively. However, when generalists reoffended, they had significantly higher rates of violent offenses (18.2%, vs. 1.4%), sexual and/or violent (27.3% vs. 11.3%), and nonviolent offenses (37.7% vs. 16.9%) at almost six-year follow-up (2010). Findings suggest that typological distinctions exist between youth who commit only sexual offenses, and those who commit sexual and other offenses that may contribute to the risk trajectories of these youth (2010).

Examining victim characteristics, Kemper and Kristner (2007) compared the recidivism rates of 296 juveniles who committed a sexual offense that had child, peer, and mixed (child and peer) victims and had been sentenced to a high-security juvenile correctional facility. The total nonsexual recidivism rate was 42.7% while the sexual

recidivism rate was 6.5% over 5.22 years. Sexual recidivism rates were highest for those with child victims, followed by mixed age victims, and peer victims with 8.2%, 4.8%, and 1.3%, respectively. The finding for child victim offenders was consistent with Vandiver (2006), but contrasted earlier findings by Nisbet, Wilson and Smallbone (2004) indicating juvenile sex offenders with adult victims have higher recidivism rates. While Kemper and Kristner's finding for overall sexual recidivism rate was consistent with Parks and Bard's (2006) finding of 6.4%, recidivism of offenders with peer victims was 10%, mixed victims was 6%, and child victims was 4%. Kemper and Kristner also found that child victims tended to be family members (2007).

Vandiver (2006) found sexual recidivism was significantly correlated to victim age, offender age at arrest, and victim sex (2006). This may indicate the offender chooses victims who are most convenient—those who are younger and accessible, which implies treatment models should specifically address this situation.

Meta-analytic studies of juvenile sexual offending commonly examine recidivism rates. While information that is the focus of this type of literature review may be easy to extract, Hanson and Morton-Bourgon (2005) forewarned that the broad overview provided by meta-analytic studies may overlook potentially important differences between studies.

Reitzel and Carbonell (2006) analyzed nine studies examining the efficacy of juvenile sex offender treatment comprised of data from 2,986 adjudicated offenders, including 1,331 providing a control group that was non-treated. Sexually assaultive, sexually non-assaultive, and “hands off” sexual offenses resulting from either arrest or

adjudication were represented in the sample. Studies analyzed had obtained information from youth in detention centers, institutions, the community, and from court record. Sexual recidivism was found to be 12.5% at 59-month follow-up. Non-sexually violent, non-violent, and unspecified non-sexual recidivism was 24.7%, 28.5%, and 20.4%, respectively, over the same period. A statistically significant difference was found in the sexual recidivism rate of treated and untreated youth, at 7.4% and 18.9%, respectively (2006). This suggests that treatment may have a positive impact on the sexual recidivism of youth who sexually offend (2006).

Meta-analysis of sexual recidivism data for juvenile sex offenders from 63 data sets found weighted mean recidivism rates for sexual and general offending of 7.1% and 43.4% respectively over mean follow-up of 59.4 months Caldwell (2010). Of significance in this study is that monthly sexual recidivism rates during adolescence were four times higher than was found for adult offenders, over similarly short time frames (2010). This finding, and the fact that juveniles who sexually offend generally have lower rates of sexual recidivism than adult offenders (Letourneau & Miner, 2005) lends support to the importance of developmental issues in adolescent sexual misconduct that changes as youth transition to a new developmental stage in young adulthood (Caldwell, 2007, 2010).

Risk and protective factors for sexual reoffense. A variety of factors are believed to be associated with juvenile sexual offending and have increasingly become the subject of research in recent years. The goal of these studies is often to inform the development of risk assessment, and/or treatment. In achieving this, the analysis of

recidivism is commonly used to determine the significance of these factors as they relate to subsequent offending.

The prevalence and impact of general dynamic factors (e.g., school behavior, use of free time, relationship to adults and peers, family income, supervision, family member imprisonment, drug and alcohol abuse, attitude, impulsiveness, aggression, thinking and problem-solving skills, and self-control) and specific sexual offending risk factors (history of physical and sexual abuse, mental health problems, placement, and social isolation) on general recidivism by juvenile sexual and non-sexual offenders was studied by van der Put, van Vugt, Stams, Dekovic and van der Laan (2013). At 18-month follow-up, juvenile non-sexual offenders aged 12 to 18 pre-screened as medium to high risk for recidivism, were found to recidivate, generally, at a rate of 50%, while misdemeanor sex offenders, felony sex offenders, and child sex offenders recidivated generally at a rate of 43%, 24%, and 21%, respectively (2013). Analysis found that dynamic risk factors were far more prevalent in non-sexual offenders and misdemeanor sex offenders than in juveniles who committed a felony sexual offense.

In a similar study, Spice, et al., (2013) examined risk and protective factors as they related to sexual and nonsexual recidivism among juveniles who sexually offended who were discharged from a residential treatment facility. Follow-up over 7.24 years found 8.3% of the youth reoffended sexually. Spice et al. (2013) found commonly perceived risk factors of sexual abuse were not significantly related to sexual recidivism. This finding is supported by van der Put et al. (2013) who found while history of being sexually abused was more common in youth who committed serious sexual offenses, this

risk factor did not significantly relate to general recidivism (which included sexual offenses). Spice et al. (2013) found *opportunities to reoffend* was the only risk factor associated with sexual recidivism. History of prior criminal offending and peer delinquency was associated only with nonsexual recidivism (2013). It is difficult to accurately predict risk factors that have a significant relationship to sexual recidivism by juvenile offenders because recidivism rates for sexual offenses are low (Caldwell, 2010; Spice et al., 2013). No protective factors were related to sexual recidivism, and only strong attachments and bonds were related (negatively) to nonsexual recidivism (Spice et al, 2013). Findings indicate risk factors related to nonsexual recidivism are consistent across both the general and juvenile sexual offender population (2013).

Carpentier and Proulx (2011) studied the recidivism rates of 351 male adolescent sex offenders assessed at a Canadian outpatient psychiatric clinic. Eight-year follow-up found general and sexual recidivism rates of 45% and 10%, respectively (2011). Results confirmed Caldwell's (2007) findings that few adolescents who sexually offended persist in sexual offending beyond adolescence (Carpentier & Proulx, 2011), even when they continue to commit general crimes in adulthood. Higher risk of sexual recidivism was associated with abandonment by a father, sexual victimization of a child, contact with younger children, and victimization of a stranger. Higher risk of overall recidivism was found to increase with prior delinquency, attention deficit disorder, child sexual victimization, school delays and contact with delinquent peers.

Data from the clinical files of 111 adolescents sexual offenders who had victimized a child less than 12 years of age and at least three years younger who were

involved in a treatment program in Quebec, Canada was analyzed by Dennison and Leclerc (2011) to determine the relevancy of developmental factors to repeat sexual offending. Twenty-seven of the participants were found to have sexually reoffended. Findings support that repeat offenders were more likely to have been sexually abused, and to have engaged in inappropriate sexual behaviors compared to those who did not reoffend. Inappropriate sexual behaviors were, however, more common in repeat offenders that had not been sexually abused. Inadequate parenting was more commonly found in non-repeat sexually abused offenders. In the absences of inappropriate sexual behaviors and inadequate parenting, victims of child sexual abuse were most likely to be repeat offenders. However, almost half of repeat offenders did not have a history of sexual abuse.

Hanson and Morton-Bourgon (2005) conducted meta-analysis of 82 adult and adolescent recidivism studies with an average 76-month follow-up in seeking to determine whether predictors of sexual recidivism are substantially different from those of nonsexual recidivism. Sexual deviance and antisocial behavior was found to predict sexual recidivism by adolescent sex offenders (2005). General recidivism was also predicted by antisocial behavior (2005). Factors that may be related to the initiation of sexual offending were not always associated with persistence (2005, p. 1158).

McCann and Lessier (2008) conducted meta-analysis of recidivism rates in 18 studies from throughout the U.S., Canada, New Zealand/England, and Europe to study the impact of anti-social behavior and sexual deviancy on sexual reoffending in 3,189 juvenile sex offenders. None of the studies related to treatment. Institutional samples

from participants in correctional or psychiatric facilities accounted for 53% of the studies, while offenders under community services accounted for 23.5% and court records for the remaining 23.5% (2008). Studies include juveniles who had been either charged or adjudicated of a sexual offense, or referred for sexual conduct issues. Victim age was diverse. Average follow-up fell between 5 and 9 years essentially covering the period of adolescence. The longest follow-up study was 19 years and the shortest 3 years. The average proportion of general recidivism was found to be 53%, and 12.2% for sexual recidivism. In studies reporting sexual and nonsexual recidivism dichotomously, the average proportion of nonsexual recidivism was 41.7%. Risk factors related to criminal history, characteristics of offense, victim, psychology and behavior, and antisociality and sexual deviancy were analyzed. Based on their findings, McCann and Lessier (2008) suggest:

- A juvenile's age at intake predicted sexual recidivism.
- Causing physical injury to a victim was not predictive of sexual re-offense.
- The number of victims was not related to sexual re-offense.
- Offenders with male victims were more likely to reoffend.
- The larger the age discrepancy between offender and victim, the more likely a juvenile will reoffend.
- If a victim was a stranger, the more likely a juvenile will reoffend.
- Offending against a relative or acquaintance was not predictive of re-offense.
- Neither psychopathy or aggressive behavior was related to sexual recidivism.

- Both sexual deviancy and antisociality were significantly related to sexual recidivism.

While a substantial number of juveniles reoffended during the follow-up period, very few of these were for sexual offenses. Sexual offending risk factors for juvenile sex offenders appear to be consistent with that of non-sexual juvenile offenders and adults sex offenders (2008). Studies used in McCann and Lessier's research had limitations that could not be resolved by meta-analytical review. The authors note low rates of sexual recidivism made it difficult to detect statistically significant predictors of sexual abuse—a challenge also voiced by Parks and Bard (2006), Caldwell (2010), and Spice et al. (2013).

Outcomes of placement and treatment. In a 20-year follow-up study, base rates for sexual, nonsexual violent, nonviolent, and general offending recidivism (9%, 22%, 28%, and 38%, respectively) were significantly lower for juveniles who participated in specialized treatment through the Sexual Abuse: Family Education and Treatment (SAFE-T) Program in Toronto, Canada, relative to a comparison group (21%, 39%, 52% and 57% base rates, respectively) that either did not receive treatment, did not complete treatment, or were treated elsewhere (Worling et al., 2010). Informed by an earlier 10-year follow-up study by Worling and Curwen (2000) with the same participants as the 20-year study, both the treated and comparison groups were found to have very small increases in recidivism during the latter 10-year interval, with the greatest increase in the 2000 to 2010 study realized for nonsexual offenses (7%). Findings by Worling et al. (2010) support an earlier meta-analytic study by Reitzel (2005) which yielded a statistically significant difference in sexual recidivism rates of treated and untreated

youth (8.6% from 29 studies of 3,730 treated youth and 19.4% from 8 studies of 1,605 untreated youth).

Waite, et al. (2005) studied the recidivism rates of 256 male juvenile sex offenders receiving sexual offender treatment in two different Virginia programs; one an intensive program in a “self-contained” unit separate from the general incarcerated juvenile population, and the other a less intense program in a “prescriptive” unit where sex offenders were housed with the general population of juvenile offenders. Ten-year follow-up using adult criminal records found that both groups sexually reoffended at less than 4.9% and 4.5%, respectively (2005). Recidivism for nonsexual person offenses was 31% and 47%, respectively (2005). Impulsive/antisocial behavior scores on the JSOAP-II assessment were found to predict recidivism in both groups (2005).

In Caldwell’s meta-analysis study discussed earlier, rates of sexual recidivism by juvenile sex offenders were also found to be uninfluenced by post-adjudication placement in the community, a residential facility, or a secured facility, or whether a juvenile is charged versus convicted (Caldwell, 2010).

The only known study of the impact of sexual offender registration itself (as a form of treatment applied to an offender) on recidivism was conducted by Letourneau et al. (2010). In evaluating the impact of South Carolina’s sex offender registration policy on sexual recidivism by male juvenile sex offender registrants adjudicated for a felony offense between 1990 and 2004, over a mean follow-up of 9 years, using registry, juvenile justice, and criminal court data, 2.5% of registrants were found to be adjudicated for a new sexual offense (2010).

Validation of sexual risk assessment tools. Recidivism is often used as a measure of validation for tools that assess juveniles with sexual behavior problems, and their risk to reoffend. These include the Juvenile Sexual Offense Recidivism Risk Assessment Tool JSORRAT-II, Juvenile Sex Offender Assessment Protocol-II (JSOAP-II), Estimate of Risk of Adolescent Sexual Offense Recidivism (ERASOR), and Youth Level of Service/Case Management Inventory (YLS/CMI). Accurate juvenile risk assessments support more efficient and strategic allocation of resources, and improved programming and placement, which yield better outcomes for youth, especially given their age, malleability, and future maturational development (Epperson & Ralston, 2014).

In a developmental study for the JSORRAT-II tool, data was obtained from the Utah Division of Juvenile Justice Services for 636 youth who sexually offended prior to age 18 between 1990 and 1992. A full spectrum of sexual offenses is represented by the data. Eight-four youth, or 13.2%, were charged with a subsequent sexual offense before age 18 (Epperson & Ralston, 2014). In cross-validating the JSORRAT-II, data was obtained from the Utah Division of Juvenile Justice Services for 566 youth who sexually offended prior to age 18 between 1996 and 1997 (2014). In July, 2006, when all participants would have already reached age 18, 12.7% had been charged with a new sexual offense before age 18 (2014). Juveniles under 16 years of age at index offense had a 16.7% recidivism rate (2014). The study did not indicate what type of placement or treatment, if any, these youth received. These findings contrast with those found by Viljoen et al. (2008) who studied the use of the JSORRAT-II tool with adolescents

admitted to a residential sex offender treatment program, and will be discussed subsequently.

The predictive validity of the ERASOR, J-SOAP-II, and the YLS/CMI risk assessment measures were evaluated by Chu et al. (2012) by examining sexual and non-sexual recidivism of youth who sexually offended in non-Western cultures. Eight of the 104 youth reoffended sexually over approximately 4.5 year follow-up, while 27 reoffended non-sexually, yielding rates of 7.7% and 26%, respectively (2012). Offense statutes were similar to those in the U.S., including molestation, rape, non-consensual falatio, indecent exposure, and peeping (2012).

A retrospective study of the predictive power of the J-SOAP-II and the Sexual Offense Severity (SOS) Scale using data from 223 children and adolescents (10 – 18 years of age) convicted of a sexual offense in Zurich, Switzerland was conducted by Aebi et al. (2011). Offenses included sexual assault of a child (at least 3 years younger), sexually coercive behavior, rape, exhibitionism and sexual harassment. Data was obtained from forensic, police and court judicial files. The mean age of participants was 15.7 years. Mean follow-up of 4.3 years found sexual recidivism of 3.1%, nonsexual violent recidivism of 16.6% and general recidivism of 44.8% (2011). Multivariate analysis found that the predictive power of the J-SOAP-II for sexual recidivism achieved significance only when combined with the SOS (2011). Alone, only the J-SOAP-II antisocial and adjustment scales moderately predicted sexual recidivism, while the sexual drive scale did not (2011). The J-SOAP-II scale for impulsive/antisocial behavior moderately predicts nonsexual violent and general recidivism (2011).

Rajlic and Gretton (2010) explored the predictive validity of the J-SOAP-II and the ERASOR for sexual and nonsexual recidivism risk while testing the moderating effect of adolescent sex offenders who only committed sexual offenses and those who also committed other nonsexual delinquent acts with an antisocial orientation. Data was obtained regarding 286 male adolescent offenders in British Columbia, Canada who had confessed, been charged, or adjudicated of one or more sexual offenses and were referred for outpatient sexual offender treatment. Sexual offenses varied from sexual assault to noncontact sexual offenses with varied victim ages and gender. Using criminal records, over 6.6 year follow-up, general recidivism was 43.3% and sexual recidivism was 9.4% (2010). Only 7.4% of the sex offense-only adolescent sex offender group were charged with a new sexual offense, while 12.9% of the adolescent sex offender group who also committed other delinquent acts were charged with a subsequent sexual offense (2010). The group with adolescents committing only sexual offenses was found to reoffend with general offenses at a significantly lower rate (26.6%) than the group having other delinquent offenses (64.3%; 2010). Total scores on both the J-SOAP-II and ERASOR predicted sexual, nonsexual, and general recidivism (2010). Nonsexual recidivism was found to be predicted more accurately by the J-SOAP-II (2010).

A prospective validity study of the ERASOR adolescent sexual offense risk assessment tool was conducted by Worling, Bookalam, and Litteljohn (2012) using data from 191 male adolescent sexual offenders. Data was obtained from five agencies in Ontario, Canada. Almost all participants were evaluated in a community based agency; the remainder were assessed while in custody. Almost three-quarters had child victims.

Youth and adult criminal charging data were used to determine sexual recidivism of 9.4% over an average 3.66 year follow-up (2012). This was consistent with sexual recidivism of 8.6% over a 2.5 year follow-up interval using data from 70 of the participants (2012). Using ERASOR total scores to determine low, moderate, and high risk groups, the shorter-term follow-up data found sexual recidivism of 0%, 20%, and 50%, respectively, while longer-term follow-up yielded rates of 5.9%, 12.1% and 26.7%, respectively (2012). Using sum of risk factors to determine risk groups, shorter-term data found sexual recidivism rates of 0%, 8.3%, and 44.4 %, respectively, and 4.1%, 9.8%, and 25%, respectively, using longer follow-up data (2012). Both the ERASOR total score and sum of risk factors score were found to be predictive of sexual recidivism over both intervals (2012). Clinical judgment of risk ratings from the ERASOR was found to only predict sexual recidivism over the longer interval (2012). Sexual recidivism over the shorter interval was also correlated to scores specifically for dynamic and static risk factors. Worling et al. found that the aggregate score of dynamic risk factors was significantly predictive of sexual reoffending, while the aggregate score of static risk factors was not (2012). In addition to sexual recidivism, the ERASOR total score significantly predicted nonsexual violent recidivism (13.6%) over the longer interval, while nonviolent recidivism was 18.3% (2012).

The J-SORRAT-II, Structured Assessment of Violence Risk in Youth (SAVRY), and J-SOAP-II were each found to predict violent behavior in a study by Viljoen et al. (2008) of 169 male youth who were admitted to a residential adolescent sex offender program. At approximately 6.5 year follow-up, recidivism rates for sexual offenses were

8.3%; 12.7% for nonsexual violent offenses; 10.1% for *serious* nonsexual violent offenses; and 42.8% for any offense (2008). Youth who reoffended did so within an average of 100.9 months (2008). Findings indicate that both the JSOAP-II and the SAVRY yielded false positive results for re-offense by adolescent offenders, including for sexual, nonsexual violent, and serious nonsexual violent offending (2008). More significantly, false positive results were greatest for younger adolescents (12 – 15 years of age), indicating that they were more likely to be inaccurately judged to be a high risk for both sexual and nonsexual re-offense (2008).

A study of recidivism was used by Schmidt, Campbell, and Houlding (2011) to examine the predictive and incremental validity of the YLS/CMI, SAVRY, and Psychopathy Checklist: Youth Version (PCL:YV). At mean 10-year follow-up of high-risk youth, results indicated 64.7% of the youth recidivated, and did so at the mean age of 16.8 years (2011). Of those who reoffended, 51.1% committed a nonviolent offense, 47.4% committed a violent offense, and 3.8% committed a sexual offense (2011). Over half of the youth offended with a technical violation of probation (2011). All three tools were found to predict recidivism (general, violent, nonviolent, sexual, and technical) long-term from adolescence into adulthood, particularly in males (2011). The authors caution that these tools are best used to guide intervention in a preventive manner for those who are at the highest risk to reoffend, rather than using these tools to predict whether an individual will reoffend, without greater verification (2011).

Juvenile Sex Offenders as a Unique Subgroup of Delinquent Offenders

The classification and singling out of youth who have committed a sexual offense as distinctly different from other delinquents for the purpose of legal sanctions on “sex offenders” was questioned long ago by Caldwell (2002), Chaffin, Letourneau, and Silovsky (2002), Seagrave and Grisso (2002), and Zimring (2004).

Sexual recidivism rates for sexual and non-sexual juvenile offenders mentioned earlier from Caldwell’s five-year follow-up study of individuals released from secured custody (6.8% and 5.7%, respectively) do not identify a unique subgroup of delinquents (2007). Further, sexual offenders were significantly less likely to be charged with a general offense, violent offense, or a felony (2007)--a finding also supported by (Burke, 2012; Chu & Thomas, 2010; Rajlic & Gretton, 2010). General, violent, and felony recidivism rates for juvenile sexual offenders was 73.9%, 41.8%, and 49.4%, respectively, while the rates for non-sexual offenders was 80.4%, 45.7%, and 61.6%, respectively (2007). As a group, juvenile sexual offenders were unlikely to persist in sexual offending or pose greater risk of re-offense than non-sexual juvenile delinquents (2007).

Adolescent specialization in sexual offending is uncommon (Seto & Lalumiere, 2010). In fact, adolescents were significantly more likely to commit non-sexual offenses if they reoffended (Aebi et al., 2011; Burke, 2012; Caldwell, 2007, 2010; Caldwell & Dickinson, 2009; Carpentier & Proulx, 2011; Chu et al., 2012; Chu & Thomas, 2010; Hanson & Morton-Bourgon, 2005; Kemper & Kistner, 2007; McCann & Lussier, 2008; Parks & Bard, 2006; Rajlic & Gretton, 2010; Seto & Lalumiere, 2010; Vandiver, 2006;

Viljoen et al., 2008; Waite et al., 2005; Worling et al., 2010). This pattern of behavior by juveniles who have sexually offended makes them similar to other delinquents, in general, and provides the most important evidence that supports assertions by Letourneau and Miner (2005) that these youth do not represent a distinct subgroup of juvenile offenders.

Trends in Juvenile Sexual Offending Arrests

Researchers suggest that the increasing sanctions on juveniles who committed a sexual offense has been driven, in part, by the assumption that juvenile crimes related to sexual offending are on the rise (Caldwell, 2007; 2010; Letourneau & Miner, 2005; Spice et al., 2013). This assumption is incongruent with juvenile arrest statistics from the U.S. Department of Justice as shown in Table 1. Reductions of 42.4% in juvenile arrests for forcible rape and 12.6% in juvenile arrests for other sexual offenses have occurred over the 17-year period from 1994 to 2011 (the most current year for which juvenile arrest statistics are available).

Table 1

Juvenile Arrests for Sexual Offenses (1994 and most recent 5-year data available)

	1994	2007	2008	2009	2010	2011
Number of juveniles in the U.S.	263,125,867 ^b	301,231,207 ^b	304,093,966 ^b	306,771,529 ^b	309,326,295 ^b	311,587,816 ^b
Arrests	2,209,675 ^c	2,180,500 ^d	2,111,200 ^e	1,906,600 ^f	1,642,600 ^g	1,470,000 ^h
Forcible rape	4,859 ^c	3,580 ^d	3,340 ^e	3,100 ^f	2,900 ^g	2,800 ^h
All other sexual offenses ^a	14,418 ^c	15,500 ^d	14,500 ^e	13,400 ^f	13,000 ^g	12,600 ^h

Note. ^aExcludes prostitution. ^bAdapted from Puzzanchera, Sladky, & Kang, 2014. ^cAdapted from U. S. Department of Justice, 1995, p. 227. ^dAdapted from Puzzanchera, 2009a. ^eAdapted from Puzzanchera, 2009b. ^fAdapted from Puzzanchera, 2011. ^gAdapted from Puzzanchera, 2013a. ^hAdapted from Puzzanchera, 2013b.

Efficacy of Juvenile Sexual Offender Registration

The purpose of the Sex Offender Registration and Notification Act of 2006 (SORNA), Title I, of the federal Adam Walsh Act is to “protect the public from sex offenders and offenders against children.” State registration policies declare similar purposes. For example, Michigan’s Sex Offender Registration Act, Act 295 of 1994, states its intent is to prevent and protect “against the commission of future criminal sexual acts by convicted sex offenders.” The definition of “convicted” used in the act also includes juvenile offenders adjudicated in juvenile court.

In attempting to answer the question of whether juvenile sex offender registration has protected the public from sex offenders and from the commission of future criminal

sexual acts, one method of evaluating the efficacy of such policies has been to compare the recidivism rates of registered juvenile sex offenders vs. non-registered juvenile sex offenders (Caldwell & Dickinson, 2009; Letourneau & Armstrong, 2008). Registration policies assume juvenile registrants have distinctly higher risk of committing future sexual violence. Conducting between-group analysis of static risk relative to recidivism for 106 registered juvenile sex offenders and 66 unregistered juvenile sex offenders incarcerated in a secured correctional facility, Caldwell and Dickinson found that both subgroups had similar recidivism rates (2009). Mean follow-up was 49.2 months (54.0 months for registered sex offenders and 39.6 months for non-registered offender; 2009). J-SOAP-II risk scores obtained prior to treatment for scales that most predict sexual recidivism were found to be lower for youth who had to register, than for those who did not—even despite the fact that all participants who were required to register were adjudicated of felony sexual offenses. Further analysis determined sex offender registration did not moderate the accuracy of the risk score at predicting sexual recidivism. Findings failed to support the assumption that registration provides an effective means of lowering re-offense (2009).

Caldwell and Dickenson's finding supported those of Letourneau and Armstrong (2008). The later of whom evaluated the effectiveness of South Carolina's sexual offender registration policy at reducing recidivism by juveniles who sexually offend. Registered and nonregistered youth were matched on year of offense, age at offense, race, prior person offense, and type of sexual offense. At 4.3 year follow-up sexual recidivism rates were found to be less than 2%—values that were so low that between-group

analysis could not be performed (Letourneau & Armstrong, 2008). Differences in between-group recidivism of nonsexual person offenses were not found to be statistically significant (2008). Letourneau et al. (2009b), studied whether South Carolina's sex offender registration policy influenced the risk of sexual re-offense by juvenile offender registrants after conducting survival and competing risk analysis. No statistically supported evidence of a deterrent effect on sexual recidivism was found (2009b). Findings did support that registration can increase the risk/hazard of general re-offense (2009b).

Reductions in new adjudications provide another way to evaluate the effectiveness of juvenile sex offender registration policies at deterring new offenses. Letourneau et al. (2010) compared the average monthly rate of juvenile sex crime charges before and after the implementation of South Carolina's state sex offender registration policy for juvenile sex offenders. Statistical analysis resulted in findings that the policy did not have a general deterrent effect on the number of first-time juvenile sex crimes as determined by charges (2010). In a similar study by Letourneau et al. (2010) studying the potential deterrent effect on adult sex crimes before and after the implementation of South Carolina's state sex offender registration policy, statistical analysis supported a significant general deterrent effect. Arrests for first-time adult sex crimes were found to decrease by approximately 11% reduction in the 11 year period following implementation of the policy as compared to the five-year period preceding the 1995 implementation of the policy (2010).

Adults who were unaware of juvenile sexual offender registration policies were asked to examine retrospectively whether they had engaged in sexual behavior before 18 years of age. Stevenson, Najdowski, and Wiley (2013) found that these individuals were more likely to have engaged in underage sex. In other words, youth at highest risk for registration were least aware of the law, demonstrating a non-deterrent effect (2013).

A third method of evaluating the efficacy of juvenile sex offender registration policies was used by Caldwell et al. (2008). In evaluating the effectiveness of the Adam Walsh Child Protection and Safety Act SORNA provision and similar state legislation, the reoffending characteristics of juvenile offenders with felony sexual offenses was compared with juvenile offenders who had no sexual offense. The predictive ability of several commonly used risk assessment measures for sexual recidivism, including SORNA tier designation, were examined. Using sex offender participant records, juvenile offenders were coded for each of the risk measures. Risk designations were found to be inconsistent across tools. After 71.6 month follow-up the SORNA criteria for Tier III designation requiring juvenile registration did not predict new general or sexual recidivism (2008). The criteria for registration did predict violent nonsexual recidivism. However, juveniles meeting the criteria for registration were significantly *less likely* to commit a violent offense than those who did not meet the criteria for registration (46.9% vs. 70.4%). SORNA criteria for registration was found to over-label participants of lower risk for violent reoffense as lifetime registrants. Caldwell et al. (2008) found that SORNA fails to accurately identify high-risk juvenile sex offenders; therefore, this policy will not achieve reductions in offending that were/are intended by the registration of

individuals (2008). Further, when over 95% of all sexual offense arrests are committed by first-time sex offenders (Sandler et al., 2008), the efficacy of sex offender registration policies as a means of prevention is questionable.

Like Caldwell et al. (2008), Batistini (2011) found that SORNA's tier inclusion system had no significant relationship to the J-SOAP-II sexual risk assessment measure. In addition, Batistini found it also had no significant relationship to juvenile risk assessment measures used in Texas and Wisconsin. It *was* significantly related to New Jersey's risk assessment tool for juvenile sexual offenders. SORNA registration criteria did not, however, significantly predict general or sexual reoffending among the study's 265 juvenile male participants (2011). This is supported by adult studies that found registration tier levels do not correlate to reoffending (Sandler et al., 2008; Sperber et al., 2010). Violent non-sexual re-offense was predicted by the tier system, but was significantly lower in juveniles who were actually labeled as tier III designated registrants than those who were not (Batistini, 2011). None of the assessment measures significantly predicted general or sexual reoffending in adolescent sex offenders (2011).

Existing research found that sex offender registration policies do not deter future sex crimes by registrants (Caldwell & Dickinson, 2009; Letourneau & Armstrong, 2008; Letourneau et al., 2009b; Letourneau et al., 2010) nor did they find registration had a general deterrent effect on future new first-time sex crimes by juveniles (Letourneau et al., 2010). Lastly, specific registry tier/risk levels did not predict sexual recidivism by juvenile offender registrants (Batistini et al., 2011; Caldwell et al., 2008).

The Bureau of Justice Statistics (Snyder, 2000,) reports that 93% of all child sexual abuse cases are committed by family members or acquaintances. This raises further questions regarding the efficacy of sexual offender registration, in general (Levenson & D'Amora, 2007).

No studies were found that evaluated the effects of juvenile sexual offender registration policy on public safety--a deficiency supported by the 2013 study by the U.S. Governmental Accountability Office (GAO) on the challenges jurisdictions face in implementing the Sex Offender Registration and Notification Act (SORNA; 2013). In 2013, the National Institute of Justice (NIJ), the organization charged with studying SORNA's effectiveness at increasing public safety issued a challenge seeking creative and innovative strategies to measure SORNA's public safety benefits, for which a cash award was offered (National Institute of Justice, 2014). In 2014 the institute ruled that none of the suggestions submitted met the challenge, and therefore a prize was not awarded (2014).

Unintended Consequences of Juvenile Sex Offender Registration

In recent years, increasingly harsh and adult-like sanctions have been applied to juvenile sexual offenders. For those who are labeled and required to register as a sex offender, several negative collateral and unintended consequences have been identified (Comartin et al., 2010; Cook, 2010; Harris et al., 2010; Jeglic et al., 2012; Levenson et al., 2007; Levenson & Hern, 2007; Levenson & Tewksbury, 2009; Mercado et al., 2008; Prescott, 2010;). The failure of policy makers to consider the developmental needs of juvenile offenders is believed to be contributing to restrictive and ineffective juvenile

justice policies (Letourneau & Miner, 2005)--policies that have long been questioned as having potentially iatrogenic effects to juvenile offenders (Caldwell, 2002; Chaffin & Bonner, 1998; Chaffin et al., 2002; Letourneau & Miner, 2005; Trivits & Reppucci, 2002; Zimring, 2004).

The large majority of the existing literature related to unintended consequences of sexual offender registration pertains to adult offenders. While many of the findings from these studies are likely applicable to juvenile offenders, the body of knowledge specifically related to the unintended consequences of juvenile sexual offender registration is sparse. In the few studies conducted to date, scholarly researchers have approached the problem from three perspectives: the impacts of registration on public safety, the families of registrants, and indirectly on registrants.

Research exploring consequences that impact public safety have focused on juvenile justice decision making. These studies were strengthened by the use of juvenile justice data, which allowed for rigorous quantitative statistical analysis. Generalizability was limited, however, because data was obtained from only one state. Conversely, the study of impacts to families and registrants conducted by Comartin et al. (2010) obtained data from interviews with parents of adolescent offenders who were required to register as sex offenders. This provided for qualitative analysis that allowed Comartin et al. (2010) to identify impacts of registration that had not previously been explored for this population. Some impacts obtained directly from family members, and indirectly regarding registrants from this study appear to be unique to this population. While the small number of participants in qualitative studies does not support generalizability,

participation is intentionally selective to provide for the extraction of information focused on the phenomenon. Comartin et al.'s (2010) findings provided significant insight for future studies.

In addition to scholarly research identifying consequences to judicial decision making and impacts to registrants and family members, governmental survey research has also identified consequences that impact the administration of registration requirements.

Juvenile justice decisions. In studying the effects of juvenile sexual offender registration on judicial decision making, Letourneau et al. (2009a) found that as state and federal juvenile registration policies increased sanctions on juveniles who committed a sexual offense in South Carolina, prosecutors were significantly less likely to prosecute juveniles for a sexual offense. When juveniles were prosecuted, the number of plea bargains to lower severity offenses or non-sexual offenses increased significantly (Letourneau et al., 2013; Letourneau et al., 2010). Similar changes in judicial decision making regarding adult sex crimes have also been found (Letourneau et al., 2010). These findings support an earlier study by Calley (2008). After having analyzed initial charges, dispositional charges, and treatment resulting from dispositional decisions for juvenile prosecutions in Michigan, Calley found that the majority of juveniles charged with the most serious of sexual offenses pled charges down to a lesser, non-registerable offense, even without consideration of risk scores on scales that most accurately predict juvenile sexual offender recidivism. This resulted in ineligibility for county-funded sexual offender treatment (2008). Controversies surrounding the registration of juvenile

offenders created the impetus for dispositional decisions that avoided sexual offender registration (Calley, 2008; Letourneau, et al., 2013) and the collateral and unintended consequence of preventing juveniles with sexual behavior issues from obtaining treatment (Calley, 2008).

Administration of registration. In the study conducted by the Governmental Accountability Office in creating their 2013 report on the challenges that jurisdictions face in implementing SORNA, improved monitoring of registered sex offenders and enhanced information sharing between jurisdictions was reported (U. S. Governmental Accountability Office, 2013). State officials and law enforcement agents both identified, however, that their workload had increased because of registration requirements, in part due to the increased frequency at which SORNA requires registrants to update registration information (2013).

Registrants. Researchers, clinical practitioners, and legal scholars are concerned about the potential iatrogenic effects of harsh legal sanctions on juveniles that commit sexual offenses, especially when the efficacy of substantively improving community safety is questionable (Caldwell, 2002; Chaffin & Bonner, 1998; Chaffin et al., 2002; Letourneau & Miner, 2005; Trivits & Reppucci, 2002; Zimring, 2004).

Overlabeling. As states adopt the requirements of the SORNA in the Adam Walsh Act, Harris et al. (2010) note that an increasing number of juvenile dispositions for a sexual offense that resulted in juveniles being placed in the highest risk SORN tier.

Social, Emotional, and Psychological Impacts. In a study of adult sex offenders, social, emotional, and psychological consequences of registration were similar to that of

juvenile offenders as expressed by parents in Comartin et al. (2010). Registrants experienced increased stress, shame, stigma, isolation, embarrassment, loss of friendships, and hopelessness (Mercado et al., 2008). Shame, stigmatization, and ostracism are associated with increased risk for recidivism (Ackerman & Sacks, 2012; Hanson & Morton-Bourgon, 2005; Levenson, 2007; Levenson & D'Amora, 2007; Ostrowsky & Messner, 2005; Worling & Langstrom, 2006). Parents were not the only persons to perceive that the mental health of juvenile sex offenders was negatively impacted. Harris, Walfield, Shields, and Letourneau (2015) found that treatment providers overwhelmingly perceived that juvenile sex offenders experienced negative consequences to their mental health when they were required to register as a sex offender. In addition, treatment providers perceived negative consequences related to harassment and unfair treatment, school problems, living instability, and risk of reoffending (2015).

When stigma cannot be controlled or concealed, Schmitt, Branscomb, Postmes, and Garcia (2014) found that self-esteem and psychological distress is significantly impacted. These findings came from studies of discrimination which have applicability to individuals labeled as sex offenders. The greatest harm to psychological well-being, including the negative impacts of depression, occurred when individuals perceived discrimination to be personal, rather than aimed at a group (2014). Depression, anxiety, and psychological distress were found to be greater for those experiencing discrimination because of their sexual orientation or mental illness, than for those experiencing racism and sexism (2014). Supporting the assertion by Schmitt et al. (2014) that psychological distress increases when stigma cannot be concealed, Jeglic, Mercado, and Levenson

(2012) found in a study of adult sex offenders who were subject to public notification on the internet exhibited higher levels of depressive symptoms than individuals in the general population. Notifying the community of an offender's registration status may potentially exacerbate risk factors for recidivism related to social stability and positive support (Levenson & Hern, 2007).

Labeling sexually reactive youth as sex offenders in the same category as adult offenders does more harm than good (Cook, 2010). These youth are banished in the same way that adults are, and if these youth were sexually abused, the label perpetuates an identity with their aggressor (2010). In youth subjected to public notification of their sex offender registration information, moral development may be stunted, causing greater likelihood of identifying with those who may have offended them, posing greater hindrance to treatment (2010).

Tewksbury and Zgoba (2010) found that in analyzing the stress of sexual offender registrants in general, and also their internet usage, that registrants reported moderately high levels of stress and have restricted means to cope with it. In addition, while the registrants studied were prohibited from using the internet, they continued to do so because it supported contact with family and friends, provided news, and aided their ability to seek employment (2010). Unintended consequences may result in reductions in prosocial activities that support reintegration, thereby weakening protective factors that prevent reoffense (2010).

Life Needs. As young adults, sex offenders were found to have significantly more difficulty than older offenders when securing housing (Levenson & Hern, 2007).

They were also more likely to be unable to live with supportive family if they are subject to residency restrictions due to their sex offender registration status (2007). As young people strive to earn an education or secure employment, registration requirements create obstacles in achieving these goals (Comartin et al., 2010; Prescott, 2010). Adult studies have found that lifestyle instability is associated with increased risk for recidivism (Levenson & Hern, 2007).

The GAO report documenting the challenges jurisdictions face in implementing SORNA identified that since the act's implementation, jurisdictions have reported that registered sex offenders have even greater difficulty in obtaining housing and employment, and that this potentially has an adverse effect on the offender's ability to reintegrate into their communities (U. S. Governmental Accountability Office, 2013).

Family members. Juvenile sexual offender registration has collateral consequences to family members of registrants (Comartin et al., 2010; Levenson & Tewksbury, 2009). Like registrants, family members, including parents, siblings, children, grandparents, and other relatives face stressful psychological and social consequences (Comartin et al., 2010; Levenson & Tewksbury, 2009). Parents of juvenile and young adult sex offender registrants experience fear and paranoia over concerns for their child's public safety, their vulnerability to future false allegations because of their status, unintended mistakes that could have legal consequences to their child as they attempt to abide by complex registration requirements, information about their child being publicly disseminated, and about how engrained the label might become in their child (Comartin et al., 2010). A sense of powerlessness and hopelessness accompanied

parents because of their inability to protect their children from these negative consequences (2010). Some parents expressed an overriding feeling that no matter how many good things their child did, they were not allowed to be proud of them because their offense overrode everything (2010).

Threats and harassment of family members was not uncommon (Comartin et al., 2010; Levenson & Tewksbury, 2009). Family members suffered from stigmatization, shame, low self-esteem, and isolation as well, when a child or sibling was labeled a sex offender (Comartin et al., 2010; Levenson & Tewksbury, 2009). Family members often suffered the loss of friendships, and even family relationships, when others were embarrassed to associate with them, ostracized them, or if conflicts from misunderstandings about the label or the offender occurred (Comartin et al., 2010).

When registrants could not find employment, the financial hardship that was created was felt by the whole family as they tried to support the registrant's needs in their adult life (Comartin et al., 2010; Levenson & Tewksbury, 2009). Financial hardships and residency restrictions also contributed to instability in housing for the entire family (Levenson & Tewksbury, 2009). Siblings, grandparents, and extended family demonstrated resentment toward the registrant child because their issues consumed so much of the families time, energy, and money (Comartin et al., 2010).

Numerous unintended consequences place strain on the family of sex offender registrants, compromising the family's ability to positively support the offender, and potentially facilitating criminal recidivism (Levenson & Tewksbury, 2009).

In reviewing the literature regarding the unintended consequences of sex offender registration, no studies were found that specifically explored the impacts of registration on individuals registering solely for a juvenile offense. Much of what has been learned about unintended consequences of this policy has been acquired from the study of adult sex offenders. This disparity in the existing literature provides the rationale for this study's exploration into the relationship between juvenile sex offender registration and depression after registrants, or former registrants, have matured into adulthood.

Studies by Comartin et al. (2010), Schmitt, Branscomb, Postmes, and Garcia (2014), and Cook (2010), supported by studies of adult offender registrants by Jeglic, Mercado, and Levenson (2012), Mercado et al. (2008), Tewksbury and Zgoba (2010), identify that labeling adolescents as a sex offender registrant, stigmatizing individuals with a label, and labeling adults as sex offender registrants results in psychological distress. These studies reinforce the research questions posited in this study which explore the relationship between juvenile sex offender registration and depression in current and former registrants in adulthood. None of these studies, however, specifically studied the dependent variable, depression, in individuals who had committed a juvenile sexual offense and were subject to registration. The qualitative study by Comartin et al. gathered data related to the psychological and social impacts of registration for families and indirectly from registrants. It did not specifically explore whether depression existed; nor did the researcher interview actual registrants. Pittman's qualitative survey-type study is the only work known to have collected data from actual juvenile offender registrants (Pittman, 2013). The study provided a glimpse into the impacts of juvenile

offender registration on mental health, and provides a catalyst for future scholarly studies. Due to the lack of scholarly research related to the key variables of this study, this study will be especially instrumental in helping to scientifically, and statistically define what is known about depression amongst individuals who currently are, or formerly were, required to register as a sex offender for a juvenile offense after they've transitioned into adulthood.

Adulthood: What Makes a Person an Adult?

Some consider adulthood to begin at age 18, when individuals are legally considered an "adult." However, the transition from adolescence to adulthood requires the development of skills to maintain independence, self-sufficiency, and the management and maintenance of intimate relationships (Mahmoud, Staten, Hall, & Lennie, 2012). Arnett (2004) spent 10 years questioning "emerging adults" throughout the United States from diverse ethnic and social backgrounds to determine what makes a person an adult. Besides the age-related definition of adult (18 years of age or older), in years past, attaining adulthood was associated with marrying and having a family (2004). But today it is associated with self-sufficiency and independence (2004).

Arnett (2001, 2004) found that emerging adults identified several necessary criterion to be considered fully adult, including: taking responsibilities for one's own actions (93%); making decisions independently of parents or the influence of others (81%); financial independence from parents, including the ability to earn money and pay bills (74%); and no longer living with a parent (55%). Adulthood is not attained because of a single event, but rather, as the result of a gradual process of achieving these criterion

(Arnett, 2004). These criterion were consistently cited as most significant to achieving adulthood amongst teens and young-to-midlife adults as well (Arnett, 2001).

In American society adulthood is considered an achievement and a source of pride. It represents the ability to maintain employment, pay bills, and run one's own household and life—essentially fulfilling the responsibilities needed to demonstrate that the criterion for adulthood are met and independence is achieved (Arnett, 2004). In reality, even when the attainment of this criterion is questionable or simply not met, adulthood represents the time of life when society *expects* an individual to achieve these things.

Depression

Depression is a medical condition that causes persistent feelings of sadness and loss of interest that can lead to emotional and physical problems (Mayo Clinic Staff, 2015; Paolucci & Paolucci, 2007). It can be triggered by a life stress or loss, or when all seems well (Paolucci & Paolucci, 2007).

It is estimated that 9.1% of adults in the United States currently have depression, while 11.1% of 18 – 24 year olds are estimate to have it (Center for Disease Control, 2011); 4.1% of the population are estimated to meet the criteria for major depression (Center for Disease Control and Prevention, 2010). Over one's lifetime, 16.2% of adults are affected by major depression (Kessler et al., 2003). More than half of these are estimated to be undiagnosed and untreated (Hasin, Goodwin, Stinson, & Grant, 2005; Paolucci & Paolucci, 2007).

Three predominant types of depression classifications exist: major depressive disorder (MDD), minor depressive disorder (Persistent), and Bi-Polar disorder (Paolucci & Paolucci, 2007). Major depressive disorder (MDD) is marked by sadness and at least five or more symptoms that persist for a minimum of two weeks. The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, (DSM-V; American Psychiatric Association, 2013) defines these as:

1. Depressed mood most of the day, nearly every day.
2. Markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day.
3. Significant weight loss when not dieting or weight gain (e.g., a change of more than 5% of body weight in a month), or decrease or increase in appetite nearly every day.
4. Insomnia or hypersomnia nearly every day.
5. Psychomotor agitation or retardation nearly every day (observable by others).
6. Fatigue or loss of energy nearly every day.
7. Feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick).
8. Diminished ability to think or concentrate, or indecisiveness, nearly every day (either by subjective account or as observed by others).

9. Recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide.

In addition these symptoms must be found to cause “clinically significant distress or impairment in social, occupational, or other important areas of functioning,” and cannot be “attributable to the physiological effects of a substance or to another medical condition” (2013). It is possible for these symptoms to continually exist for two years or more (2013). Amongst psychiatric disorders, major depression is one of the most common and severe (Kessler et al., 2003).

Symptoms are similar in cases of persistent depression, except that they are not disabling, (Paolucci & Paolucci, 2007) and they last at least two year. Bi-Polar disorder is characterized by changes in mood that cycle back and forth. Individuals with this condition possess the same symptoms as depression, and several others unique to bi-polar disorder.

Depression can be caused by stress or a chemical imbalance in the brain that may occur after exposure to one or more risk factors. Regardless of the initial cause, depression ultimately occurs because of a chemical imbalance in the brain. A number of factors exist that protect or predispose individuals from/to depression, including: (a) genetic history, (b) childhood experiences, (c) environmental and social factors, (d) personality make-up, and (e) physical conditions (Paolucci & Paolucci, 2007).

Studies have shown that involvement with the juvenile justice system is a correlate of depression (Rosenberg et al., 2014). A number of other factors have

correlated as well, including: (a)sexual abuse (Klein et al., 2013; Lee, Lyvers, & Edwards, 2008; Thomas, DiLillo, Walsh, & Polusny, 2011); child abuse (Herrenkohl, Hong, Klika, Herrenkohl, & Russo, 2013); black, Hispanic, non-Hispanic persons of other races, or multiple race-ethnicity (Center for Disease Control and Prevention, 2010; Gayman, Lloyd, & Ueno, 2011; Wu, Noh, Kaspar, & Schimmele, 2003); female gender (Brown et al., 2013; Center for Disease Control and Prevention, 2010; Klein et al., 2013; Mahmoud et al., 2012), having family history of mood disorders (Klein et al., 2013); socioeconomic factors including unemployment and less than 12 years of education (Center for Disease Control and Prevention, 2010; Post et al., 2013; Swanholm, Vosvick, & Chng, 2009); low income (Hasin, et al., 2005; Post et al., 2013); substance abuse (Lee et al., 2008); divorced or not in a relationship, or poor relationship quality (Center for Disease Control and Prevention, 2010; Leach, Butterworth, Olesen, & Mackinnon, 2013; Swanholm et al., 2009); detention/incarceration (Ariga et al., 2010; Falk, Thompson, & Sanford, 2014; Schnittker, Massoglia, & Uggen, 2012); parental incarceration (Turney, Wildeman, & Schnittker, 2012); lack of health insurance (Center for Disease Control and Prevention, 2010); shame and guilt (Orth, Berking, & Burkhardt, 2006); and perceived stigma (Talley & Bettencourt, 2011).

Consequences of Depression

One of the most common consequences of depression is role impairment (Asarnow et al., 2005; Murray & Lopez, 1996). It refers to the inability to work or carry out other usual activities (Merikangas et al., 2007). In studying the societal cost of illness, depression has emerged as the single most burdensome chronic condition in the

world in middle-aged persons with respect to disability-adjusted life years, largely due to role impairment (Murray & Lopez, 1996). It is the second leading cause of absenteeism in the work place, even exceeding arthritis, cancer, and heart disease (Merikangas et al., 2007). In 2006 lost workplace productivity in the U.S. was estimated at \$36 billion annually because of depression (Kessler et al., 2006).

Depression can be costly and debilitating to those who suffer from it (Center for Disease Control and Prevention, 2010). Untreated depression is associated with increased use of medical services for physical complaints. When treatment is not stable, it is associated with higher comorbidity rates, more frequent urgent care visits, and greater total direct costs of depression and nondepression-related care (Birnbaum et al., 2009). Epidemiologically, depression is associated with poor physical health, decline in physical ability, high rates of cardiac problems (Barefoot & Schroll, 1996; Birnbaum et al., 2009; Paolucci & Paolucci, 2007; Penninx, Giralnik, Ferrucci, Simonsick, Deeg, & Wallace, 1998; Wulsin & Singal, 2003), stroke (Paolucci & Paolucci, 2007; Salaycik et al., 2007), cancer (Paolucci & Paolucci, 2007), higher rates of smoking (Goodman & Capitman, 2000; Hughes, 1999), and premature death (Kuchibhatla, Fillenbaum, Hybels, & Blazer, 2012; Penninx et al., 1999). In addition, there are health impacts to family members who care for individuals with depression (Paolucci & Paolucci, 2007). From a societal perspective, depression is thought to be the most costly psychiatric disorder.

Children of parents with depression have elevated risk of depression (Hammen, 2010). When onset of depression occurs in childhood, adolescence and early adulthood, life course trajectories may be impacted (Kessler & Wang, 2010, p. 13). Early onset

predicted high school dropout, college dropout, poor marital quality and divorce (Kessler, Foster, Saunders, & Stang, 1995).

Palmer and Binks (2008) assessed the depression level of young adult offenders incarcerated in the United Kingdom and found approximately 57% had mild to severe depression symptoms. Depression scores were similar to those found in North American studies of adolescent psychiatric patients (2008) and significantly higher than mean scores of depression for U.S. male college students (2008). Depression is also associated with delinquent behavior--an association that is found to have an impact on suicidal behavior (Bauer, Chesin, & Jeglic, 2014).

The incidence of depression in adult sex offender registrants subject to community notification and residency restrictions was found to significantly exceed that of U.S. male college students (Jeglic, Mercado, & Levenson, 2012). Thirty-five percent of participants had moderate or severe depression, and 43% had some degree of suicidal ideation (2012).

Of all persons experiencing depression, approximately 30,000 commit suicide each year (Paolucci & Paolucci, 2007).

Summary and Conclusion

Merton urges social scientists to examine not only the intended consequences of purposive social action, but the unintended consequence as well when conducting functional analysis of public policy. This concept, in conjunction with a variation to Lemert's secondary deviance proposition of labeling theory is tested by this study, and

asserts that deviant labeling creates negative consequences for the person labeled that can lead to alternate forms of secondary deviant behavior that are non-criminogenic.

Researchers suggest that increasing sanctions on juveniles that commit sexual offenses have been driven by a number of assumptions: juvenile offenders have high rates of recidivism; they are a distinct subgroup of delinquents; sexual offending crimes by juveniles are on the rise; and that registration of juveniles that commit sexual offenses will substantially reduce future sexually violent crimes. The review of the literature for this study does not support these assumptions.

Sexual recidivism rates for juvenile sexual offenders are significantly lower than general recidivism rates for juvenile non-sexual offenders. Sexual reoffending has been found to be similar for both sexual and non-sexual juvenile offenders. In addition, juvenile sexual offenders are more likely to commit non-sexual offenses if they reoffend. Given these findings, juvenile offenders do not represent a distinct subgroup of juvenile offenders.

A 42.4% reduction in arrests for forcible rape and 12.6% reduction in other sexual offenses by juvenile offenders has occurred over that past 17-years for which the most current data is available. These values were declining before more intense juvenile sexual offender sanctions related to registration were implemented, while at the same time the U.S. juvenile population was increasing.

Existing research indicates sexual offender registration has not moderated sexual recidivism rates of registered and non-registered juveniles that committed a sexual offense. These values remained low for both populations. Registration has not

demonstrated a deterrent effect on the number of first-time juvenile sex crimes. Further, risk assessment scores of registered youth were found to be lower than non-registered youth, calling into question the predictive ability of juvenile sexual offender registration policies to identify those most likely to reoffend.

Assumptions influencing the need for juvenile sex offender registration, and the efficacy of such policies, do not appear to be supported by research. Further, little research exists regarding the unintended consequences of registration policies as they specifically relate to juvenile offenders. There were no studies found that analyzed data collected directly from this population after they have matured into adulthood. Given the questionable efficacy of this public policy, it becomes that much more important to extend the knowledge regarding the “net effect” of this social action.

This exploratory study extends the existing knowledge regarding the latent consequences of juvenile sexual offender registration by determining whether a relationship exists between registration and depression in current and former registrants in adulthood when registration was solely because of a juvenile offense. Chapter 3 describes the research methods used to answer research questions and test hypotheses.

Chapter 3: Research Method

Introduction

The purpose of this exploratory study was to gain a more comprehensive understanding of the effects of sex offender registration policy by determining whether a relationship exists between juvenile sex offender registration and latent depression in current and former registrants after the developmental transition from adolescence to adulthood has occurred, and whether there is a persistent effect to this relationship.

After stating the research questions and hypotheses this chapter describes the research design, including study variables, the design's relationship to the questions being answered, time and resource constraints of the design, and an explanation of the rationale for its use. The sampling methodology, including population, sampling procedures, participant recruitment, instrumentation used to operationalize constructs, reliability and validity of instrumentation from prior research, and data collection techniques are described. Lastly, threats to validity and ethical considerations are addressed.

Research Questions and Hypotheses

Three research questions and their associated hypotheses shaped and focused the purpose of this study by informing research design, and defining what data collection must specifically attempt to answer. Changes in the independent variable, juvenile sex offender registration status (current, former, and never-registered), provided the basis for the comparative analysis of the relationship to depression in adulthood that is embodied

in these research questions and hypotheses. A persistent depressive effect after the sex offender registrant label for a juvenile offense was removed is explored by RQ3.

RQ1: Do adults who are currently required to register as a sex offender for a juvenile offense have higher severity of depression scores than adults in the general population who have never been required to register as a sex offender?

H_01 : Current sex offender registration for a juvenile offense does not significantly predict higher severity of depression scores in adulthood, than in adults in the general population who have never registered, after controlling for depression-related covariates.

H_11 : Current sex offender registration for a juvenile offense significantly predicts higher severity of depression scores in adulthood, than in adults in the general population who have never registered, after controlling for depression-related covariates.

RQ2: Do adults who were formerly required to register as a sex offender for a juvenile offense have higher severity of depression scores than adults in the general population who have never been required to register as a sex offender?

H_02 : Former sex offender registration for a juvenile offense does not significantly predict higher severity of depression scores in adulthood, than in adults in the general population who have never registered, after controlling for depression-related covariates.

H_12 : Former sex offender registration for a juvenile offense significantly predicts higher severity of depression scores in adulthood, than in adults in the general population who have never registered, after controlling for depression-related covariates.

RQ3: Do adults who are currently required to register as a sex offender for a juvenile offense have higher severity of depression scores than adults who formerly were required to register as a sex offender for a juvenile offense?

H_03 : Current sex offender registration for a juvenile offense does not significantly predict higher severity of depression scores in adulthood, than in adults who formerly registered as a sex offender for a juvenile offense, after controlling for depression-related covariates.

H_13 : Current sex offender registration for a juvenile offense significantly predicts higher severity of depression scores in adulthood, than in adults who formerly registered as a sex offender for a juvenile offense, after controlling for depression-related covariates.

These hypotheses were independently tested by comparing mean depression scores of three sets of two criterion groups. Criterion groups were based on the independent variable (registration status):

1. Currently-Registered vs. Never-Registered ($H1$ comparison to control group)
2. Formerly-Registered vs. Never-Registered ($H2$ comparison to control group)
3. Currently-Registered vs. Formerly-Registered ($H3$ analyzed persistent effect)

Research Design and Rationale

Juvenile sex offender registration provided the independent variable in this study. Depression in adulthood provided the dependent variable that was studied. A number of variables that could also predict depression were controlled in the analysis. These included: (a) gender, (b) race/ethnicity, (c) relationship status, (d) years of education, (e)

income, (f) history of family psychiatric problems, (g) history of substance abuse, (h) history of child abuse or neglect (as a victim), (i) history of sexual abuse (as a victim), (j) learning or physical disability, (k) taking medication for mental or emotional health, (l) having experienced confinement for more than 30 days, (m) criminal history (determined from number of offenses adjudicated and/or convicted), and (n) parent incarceration while participant was a child. Registration-related data was collected from current and former registrants. This included: (a) age when first registered, (b) length of time registered to date, (c) court of first offense requiring registration (juvenile or adult), (d) whether registration is available to the public; (e) whether any offenses requiring registration were a felony, (f) whether sexually related offenses were part of one or multiple cases brought before the court, (g) designated registration risk level, (h) length of registration requirement, (i) length of time since a former registrant last had to register, and (j) dependency on someone for housing. These variables were explored for their relationship to depression (the dependent variable), and served to authenticate the participant response. State where first adjudicated or convicted of the offense requiring registration, first state in which registration was required, and state of last registration also supported the authenticity of data provided by participants and generalizability of results.

A non-experimental, exploratory, quantitative ex post facto design was used to answer the research questions. The discipline of study and the specific issue being addressed provided the rational justification for the research design and method of study (Rudestam & Newton, 2007). Studies that examine the impact of policy, criminal

behavior, and psychological effects commonly use a non-experimental ex post fact design approach (Bernburg & Krohn, 2003; Bernburg et al., 2006; Chioqueta & Stiles, 2006; Horon et al., 2013; Jeglic et al., 2012; Palmer & Binks, 2008).

To review the purpose of this study and research questions, sexual offender registration for a juvenile offense was the treatment that was studied. It was studied after the treatment had occurred; thus necessitating the need for the non-experimental ex post facto design (Tuckman & Harper, 2012). The relationship of this treatment to an outcome—depression in current and former juvenile sex offender registrants was explored. Statistical analysis of quantitative data is especially useful in analyzing relationships (Rudestam & Newton, 2007). This study was not conducive to an experimental design because researchers cannot control to whom the treatment of sexual offender registration is applied. Sex offender registrant status is applied by the judicial system and therefore random assignment of participants to groups is not possible.

Non-experimental ex post facto studies cannot assume causal relationships exist (Tuckman & Harper, 2012). By using a causal-comparative ex post facto design, however, criterion groups representing differential treatment (the independent variable), can be used to compare and contrast characteristics or differential effects (the dependent variable, or outcome), to analyze and correlate relationships (2012). Creswell (2009) notes the use of variables in research questions typically falls into one of several methodological approaches to analysis. One of these is a comparison of groups based on the independent variable and their impact on the dependent variable (2009). In this study, comparison of outcomes for severity of depression (the dependent variable) for criterion

groups was based on changes in registration status for a juvenile offense (the independent variable). In determining if a relationship exists, analysis of these changes provided for the comparison of currently-registered and formerly-registered participants versus those who have never-registered.

Between-group analysis characteristic of quantitative ex post facto causal-comparative design is well suited to this study because the hypotheses focus on the comparison of the severity of depression between current juvenile sex offender registrants, former juvenile sex offender registrants, and those who have never been a sex offender registrant. Non-experimental, exploratory, ex post facto studies of between-group comparisons have been used in numerous studies related to juvenile criminal offending, recidivism, mental health, and disabilities (Bernburg et al., 2006; Bhati & Piquero, 2007; Blomberg et al., 2012; Brownfield & Thompson, 2008; Caldwell, 2007; Caldwell & Dickinson, 2009; Chu & Thomas, 2010; Davies & Tanner, 2003; Gatti et al., 2009; Harris, 2013; Hay, Stults, & Restivo, 2012; Jennings et al., 2011; Kemper & Kistner, 2007; Letourneau & Armstrong, 2008; Lopes et al., 2012; McAra & McVie, 2007; Murphy et al., 2012; Shifrer, 2013; Tapia, 2011; Ward et al., 2014; Wilson & Hoge, 2013).

The retrospective view provided by ex post facto research allows for the examination of the impact of the independent variable on a subsequent outcome naturally over time without the constraint of waiting a number of years before data could be collected. Resource and time constraints of a retrospective approach are largely limited

to data collection and the time it takes to obtain sufficient sample sizes, rather than randomization, manipulation, and control of the independent variable.

As mentioned previously, because treatment has not been controlled by the researcher in causal-comparative designs, the ability to identify causation is limited (Tuckman & Harper, 2012). Despite the ambiguity of causality, a causal-comparative design advances knowledge in the discipline because it can identify whether current or former juvenile sex offender registration potentially relates to depression, providing insight to future studies that might further explore causation (2012). Most significant, however, is that this design approach is useful in the exploration of the behavioral implications of classifying individuals into different criterion groups (2012). This is exactly the kind of knowledge that is lacking in the literature and that this study seeks to advance by exploring latent mental health implications of officially labeling juveniles who sexually offend as sex offender registrants.

Methodology

Research questions inform the most appropriate methodology used to study a problem (Rudestam & Newton, 2007). This study utilized a quantitative methodology with a self-report survey design. The use of a survey questionnaire lends itself to the collection of numeric data necessary to answer the question of whether there is increased severity of depression in current and former juvenile sexual offender registrants as compared to those who have never registered.

Population

The treatment (juvenile sex offender registration), cannot be manipulated in this study, and therefore must be included by selection. This dictates two of the target populations: individuals living in the United States that are currently required to register as a sex offender solely for a juvenile offense and individuals formerly required to register as a sex offender solely for a juvenile offense. A third population serves as the control group for this study, and includes individuals who have never had to register as a sex offender. These populations provide the three criterion groups studied.

Because this study seeks to examine latent impacts of juvenile sex offender registration after the individual has matured into adulthood, the population is narrowed to individuals who are currently adults between the ages of 21 and 39. The age of 21 was selected as the lower age limit for this study to better assure individuals have attained an age where they are expected to function as an adult. The age of 39 was selected as the upper age limit for participants because it was approximately 21 years ago, in 1994, that U.S. states largely began to implement juvenile sex offender registration policies. If an individual committed an offense as a juvenile for which sex offender registration was required 20 years ago when they were just under 18 years of age, during the course of this study the individual was approximately 39 years of age. This allowed this study to focus on the impact of sex offender registration on depression in the formative years of adult life when independence is typically established requiring new responsibilities in adult life related to careers, housing, self-sufficiency, and potentially growing family relationships (i.e., a spouse and children).

More specifically, the three populations sampled in this study are: (a) all individuals between the ages of 21 and 39 that are currently required to register as a sex offender solely for a juvenile offense, (b) all individuals between the ages of 21 and 39 that were formerly required to register as a sex offender solely for a juvenile offense, and (c) all individuals between the ages of 21 and 39 that have never had to register as a sex offender for an adult or juvenile offense.

It has been conservatively estimated that 3% of all sex offender registrants in the United States are juvenile offender registrants (Letourneau et al., 2009a). Given that there are approximately 774,600 registered sex offenders in the United States (Special Analysis Unit, 2014), this means there are an estimated minimum 23,238 juvenile sex offender registrants. This number is expected to be considerably higher because the percentage did not include individuals whose offense occurred as a juvenile but were charged as an adult (e.g., individuals who were 17 when they offended), and it does not include juvenile offenders who formerly registered.

Sampling and Sampling Procedures

Nonprobability convenience sampling was used to obtain data. This method is commonly used by social scientist when an exact list of sampling units in a population is unable to be identified (Frankfort-Nachmias & Nachmias, 2008). It is impossible to identify all current and former juvenile sex offender registrants because a complete list of these individuals and their current whereabouts is not available to the public (if it even exists, especially for former registrants) largely due to protections afforded juvenile offenders by state juvenile justice systems. The sample did not fully represent the

sampling population, and is therefore nonprobabilistic. Because the population of interest in this study is small relative to the U.S. population in general, convenience sampling was used to maximize the number of sampling units in the sampling frame.

The sampling frame included individuals between the ages of 21 and 39. It excluded individuals who have at any time been required to register as a sex offender for an offense that occurred as an adult. It was largely drawn from a population that was available through a number of advocacy and support groups, resource networks, mental health agencies and treatment providers, attorneys, and research participation programs.

Due to the nature of the treatment examined--juvenile sex offender registration, confidentiality of information is especially of concern amongst this population and adds to the complexity of obtaining sampling units. However, in working with these organizations to solicit participation from their members or clients, this issue is expected to be alleviated by the existing trust relationship of this researcher with leaders of these groups, established during many years of work as a juvenile advocate.

In calculating a priori sample size, statistical power, alpha level, and effect size are required for studies using multiple regression for analysis of variance with the independent variable while controlling for known predictors. Statistical power is the probability that a test will detect an effect when one exists (Field, 2013), while alpha level is the probability of detecting an effect when one does not actually exist (2013). Effect size represents the influence or degree of change caused by the independent variable, or treatment, on the dependent, or outcome variable (Rice, 2009). In this study effect size represents the amount of change in the severity of depression score that is

caused by sex offender registration for a juvenile offense; it is associated with the influence of a treatment to change a condition (2009); the larger the effect size, the greater the power or influence of the treatment.

Existing social science research informs that for medium effect size a value of .15 should be used in determining sample size for multiple regression studies (Faul, Erdfelder, Buchner, and Lang, 2009; Rice, 2009). Conventional criterion of .05 for alpha level and statistical power of .80 are recommended by Fields (2013) to achieve an 80% chance of detecting an effect that actually exists.

Using the G*Power analysis tool the sample size required for analysis using hierarchical multiple linear regression with 16 predictors when testing for 1 predictor was calculated. Where power = .80, alpha level = .05, or 5%, and medium effect size = .15, the tool recommends a minimum total sample size of 56 (Faul, et al., 2009). Therefore, the goal of this study was to achieve a minimum total sample size of 56 for statistical analysis. To obtain a sample mean that is as close as possible to the true mean of the entire population studied, the largest sample size possible obtained from the convenience sample was utilized. In addition, the larger the sample, the greater separate effects are minimized that result from uncontrolled variables interacting unpredictably (Isaac & Michael, 1995).

Participant Recruitment and Data

Participants were recruited from a number of sources, largely via the internet. Sources included sex offender registrant advocacy and support groups, resource networks, mental health organizations and treatment providers, attorneys, and “word of

mouth.” Advocacy, support groups, and resource networks for sex offenders were particularly important in reaching registrants. The population studied was difficult to reach, and their identity may be protected by law. Regardless of whether registration information is made available to the public or not, my experience working with this population has found that these individuals tend to be especially protective of their identity out of fear for their safety, potential harassment, and disruption to their life. Therefore, it was critical that these individuals self-select themselves for participation in the research survey. Even when such individuals anonymously identify themselves, they are often guarded about participating in research studies due to skepticism of the researcher’s objectivity regarding sex offender registration policies that they are now, or were, subject to.

A number of benefits are achieved by reaching out to this population through advocacy and support groups, resource networks, mental health organizations and treatment providers, and attorneys to disseminate information about this study to potential participants that should increase the likelihood of participation. The population studied was specifically targeted. Trust regarding the objectivity of the study is more likely to be earned from participants when the study is communicated by an organization or person they trust, and a layer of anonymity is provided.

Instrumentation and Operationalization of Constructs

Depression was measured using the Public Health Questionnaire-9 (PHQ-9) instrument developed by Robert L. Spitzer, Kurt Kroenke, and Janet B. W. Williams, and colleagues in 1999 as a brief, self-report, diagnostic screening instrument for depression

in primary care settings (1999). The PHQ-9 has increasingly been used in research as well (Kroenke, Spitzer, Williams, & Lowe, 2010). Participant's rate depressive symptoms for nine-items that are scored to provide a measure of severity of depression (see Appendix A).

Permission from the developer to use and score the PHQ-9 instrument was granted (see Appendix B).

The PHQ-9 instrument was selected because it is brief, easy to administer, considers the duration of depressive symptoms over the prior two weeks rather than one, and can be scored by researchers without special training (Kroenke et al., 2001). In addition, at its face, subjective evaluation of the PHQ-9 instrument finds a measure whose items reasonably capture the variable of depression accurately because they were informed by the empirical knowledge of the American Psychiatric Association's membership regarding depression, making it especially appropriate for this study. The instrument's content is congruent with the testing purpose of this study—a necessary requirement if the interpretation of results is to be valid (Sireci, 2007).

Content validity is the degree to which elements of a measure are relevant and represent the construct to be measured (Frankfort-Nachmias & Nachmias, 2008).

Content validity of the PHQ-9 measure of severity of depression is strengthened because the questions are based directly on the criteria used in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), Fourth Edition, for the diagnosis of depression (Kroenke et al., 2001). These criteria remained unchanged in the Fifth Edition (DSM-V)

after a decade of criterion revisions to the diagnosis and classification of mental disorders by the American Psychiatric Association (2013).

While the PHQ-9 questionnaire was initially developed for use in primary care settings to screen for depression, the instrument has also been used with the general population (Choi, Schalet, Cook, & Cella, 2014; Kocalevent, Hinz, & Brähler, 2013; Maideen, Sidik, Rampal, & Mukhtar, 2014; Merz, Malcarne, Roesch, Riley, & Sadler, 2011; Patten & Schopflocher, 2009; Pilkonis et al., 2013; Pyne et al., 2009). Reliability, as determined by analysis of internal consistency as measured by Cronbach's α , was found to be 0.82 or greater for this population (Choi et al., 2014; Kocalevent et al., 2013; Martin, Rief, Klaiberg, & Braehler, 2006; Merz et al., 2011; Patten & Schopflocher, 2009; Wang et al., 2014). No studies were found that used the PHQ-9 instrument to screen for depression in the sex offender or delinquent population.

PHQ-9 has been criterion validated as a measure of depression in numerous studies of the general population that used diagnoses obtained from clinical interviews such as the Structured Clinical Interview for DSM-IV (SCID) that are based on the DSM-IV criteria for major depressive disorder (MDD; Arroll et al., 2010; Maideen et al., 2014). In addition, the instrument has been criterion validated across multiple cultures (Allgaier, Pietsch, Frühe, Sigl-Glöckner, & Schulte-Körne, 2012; Arroll et al., 2010; Khamseh et al., 2011; Kroenke et al., 2001; Merz et al., 2011; Milette, Hudson, Baron, & Thombs, 2010).

Construct validity using convergent, intercorrelational, factor analysis, and structural methods of validation have also been used to validate the PHQ-9 instrument

(Allgaier et al., 2012; Crane et al., 2010; Kocalevent et al., 2013; Kroenke et al., 2001; Merz et al., 2011).

PHQ-9 performance has been found to be similar across varied forms of administration, including patient self-report on paper, using touch-screen computer, by phone, or in-person interview (Fann et al., 2009). Good criterion validity was found in tests of adult populations for major depression that also demonstrated strong construct validity with comparable sensitivity and specificity (Kroenke et al., 2001). In a large study of primary care patients and obstetrics/gynecology patients criterion validity was assessed using mental health professional interviews. Receiver operating characteristic (ROC) analysis showed that area under the curve (AUC) for PHQ-9 in diagnosing major depression was .095 suggesting that persons with and without depression are discriminated well by the instrument (2001). Internal consistency was reported using Cronbach's $\alpha = 0.89$ and 0.86 for the two populations, respectively (2001). Kroenke, Spitzer, Williams, and Lowe (2001) reaffirmed reliability and validity in a large study of primary care and obstetrical/gynecological patients, correlating it well to the psychiatric interview ($r = 0.83$). Zuithoff et al. (2010) also found the PHQ-9 to have high internal consistency = $.88$ and test-retest reliability with correlation = 0.94 in a large study of primary practice patients. Discriminative ability was demonstrated using ROC analysis which found $AUC = 0.87$ (2010).

Veterans have been administered the PHQ-9 using telephony interactive voice response (IVR) technology and paper with internal consistency of 0.76 and 0.82 respectively, with structural and content validity established using factor analysis

(Turvey, Sheeran, Dindo, Wakefield, & Klein, 2012). Khamseh et al. (2011) studied diabetics, establishing validity using criterion correlation to interviews and the Center for Epidemiological Studies Depression Scale (CES-D) instrument, resulting in a PHQ-9 AUC value of .829, sensitivity = 73.8%, and specificity = 77.1%. Millette et al. and the Canadian Scleroderm Research Group (2010) studied individuals with Systemic Sclerosis, finding internal consistency of the PHQ-9 to be .87 and established validity using criterion from medical histories and interviews, and construct convergent correlations with the CES-D, which found both instruments to be similar. Crane et al. (2010) established the PHQ-9 as an appropriate instrument for individuals with HIV in a study using a web-based survey evaluating item-level bias with covariates. Hepner, Hunter, Edelen, Zhou, and Watkins (2009) used the PHQ-9 to study depression in substance abusers, finding internal consistency of .87 and high correlation ($r = .76$) with the Beck Depression Inventory (BDI-II). Studying depression in persons with multiple sclerosis, Amtmann et al. (2014) used one-factor, confirmatory factor analytic models to determine adequate fit of the PHQ-9, CES-D, and Patient Reported Outcomes Measurement Information System (PROMIS) Depression Short Form instruments. Essential unidimensionality, acceptable interitem reliability and convergent/discriminant validity were all found (2014).

All groups in this study (currently-registered, formerly-registered, and never-registered) responded to the same self-report survey that includes the PHQ-9 instrument as a measure of severity of depression. This instrument accommodated statistical analysis for estimates of reliability based on internal consistency. While the split-half

method of assessing reliability correlates scores for each half of the instrument's questions and allows for the determination of the correlation coefficient as an estimate of reliability, it does not consider the numerous ways in which data can be randomly split. Instead, Cronbach's alpha coefficient of reliability was evaluated as a measure of internal consistency because it represents the average of the correlation coefficient for *every* possible split-half that can be correlated. This measure is the most common measure of scale reliability in research studies (Field, 2013).

The alignment of items in the PHQ-9 instrument with the DSM-IV and DSM-V criterion for depression clearly indicates that this empirical measure covers the domain of content. Greater content validity was achieved in this study by assuring survey questions adequately identify the sample population represented by the study—juvenile sex offender registrants. A multi-disciplinary team of experts who have worked in disciplines related to juvenile sex offender registration individually reviewed the survey questionnaire to reasonably ensure: technical accuracy of questions; that questions indeed capture the correct sample subjects; items are understandable; and language is not offensive to any particular group. In addition, several individuals who qualified as participants reviewed the survey to validate content. Information obtained from these reviews was used to make improvements to the survey. Despite efforts to achieve validity of content, content validity is insufficient by itself to assess the validity of social science measures as it does not determine to what extent an empirical measure should be considered content valid (Carmines & Zeller, 1979).

Criterion validity is concerned with the relationship between individuals' performance on two measures of the same construct (Mislevy & Rupp, 2010). The results of one test instrument for depression are compared with another established instrument that is considered to provide the criterion standard for the domain of content. Structured clinical interviews using the DSM-IV criterion for MDD are commonly used as the "gold standard" for establishing criterion validity (Allgaier et al., 2012; Appel et al., 2011; Arroll et al., 2010; Boyle et al., 2011; Khamseh et al., 2011; Kroenke et al., 2001, 2010; Lowe et al., 2004; Maideen et al., 2014). Because this method requires participants to disclose information that identifies them for subsequent contact and assessment using the criterion standard instrument, and because anonymity is a concern to this population, this method of validation was not used.

In a weaker test of criterion-related validity, a test of depression classification was conducted by examining whether previous diagnosis of depression by a health professional predicts PHQ-9 scores indicating depression. There are a number of considerations that limit the usefulness of this test; for example, subsequent treatment intervention may have alleviated depression severity. In a study by Patten and Schopflocher (2009) the incidence of depression was twice as high in survey respondents that had a history of depression as diagnosed by a health professional compared to those who had not.

Construct validity requires that the relationship postulated between the independent variable, juvenile sex offender registration, and the dependent variable, depression, is recognized and measured by the instrument (Frankfort-Nachmias &

Nachmias, 2008). This can be assessed by relating the behavior, depression, to a test of juvenile sex offender registration as a construct that attempts to explain it (2008).

The survey for this study included questions from the Center for Epidemiological Studies Depression Scale Revised (CESD-R) to enable the correlation of results from the PHQ-9 and CESD-R scales in a test of construct validity. The CES-D instrument was revised in 2004 to more reliably indicate general dysphoria and align items to the DSM-IV symptoms for MDD (Van Dam & Earleywine, 2011). The CESD-R instrument includes 20 questions and can be self-administered (see Appendix C). It is intended for use by the general population for the purpose of identifying persons at high risk for depression.

Permission from the developer to use and score the CESD-R instrument has been granted and can be found in Appendix D.

The CESD-R has been found to have internal consistency, Cronbach's $\alpha = .92$ in a large general public population sample and $.93$ in a student sample (Van Dam & Earleywine, 2011). Using convergent and divergent construct validation the CESD-R was found to have large positive correlation to an instrument measuring anxiety ($r = 0.653, p < 0.01$) and medium correlation with an instrument measuring Schizotypal Personality Disorder ($r=0.426, p < 0.01$) suggesting strong psychometric properties that make it a useful atheoretical tool for assessing depression in the general population (2011).

Correlational analysis of data from the PHQ-9 and CESD-R instruments supports convergent construct validity, indicating that the PHQ-9 measures what it is intended to

measure. A study using general population samples found correlation values of .88 for the PHQ-9 and CES-D instruments (the prior generation of the CESD-R; Pilkonis et al., 2013) and no significant differences were found in these instruments in a study of systemic sclerosis patients (Milette et al., 2010). No studies were found that explored the correlation of the PHQ-9 and CESD-R instruments.

In addition to questions from the two assessment instruments, the survey included questions to obtain demographic, historical, general, and registration-related data necessary for covariates that were controlled, potentially new predictor variables that relate to depression that were tested, and the authentication of participants.

Data Collection

Adult participants who are current and former sex offender registrants for a juvenile offense were predominately recruited through advocacy and support groups, resource networks, and mental health and legal organizations. Participants who have never had to register were recruited through the same avenues, but predominantly through “word of mouth” and snowball sampling. A digital or paper informational flyer with informed consent information regarding the study was provided to cooperative entities to disseminate via e-mail, internet websites, mail, or word of mouth (see Appendix E).

An online survey questionnaire (see Appendix F) made available through a survey service such as Survey Monkey was used to facilitate automated digital data collection from all three study populations (current and former juvenile sex offender registrant, and

never-registered individuals). Information about how to access the survey was provided in the informational informed consent flier.

The survey began with introductory information regarding informed consent, participant responsibilities, and a resource for mental health support should participants feel they need it. A definition of what constitutes a sexually related offense is provided. This was followed by questions related to informed consent, qualification of participants, demographic, historical, general, and registration-related data necessary for known covariates that were controlled, potentially new predictor variables relating to depression that were tested, the authentication of participants, and items necessary to measure severity of depression using the PHQ-9 instrument and the CESD-R instrument to validate its use.

Qualifying data was collected related to registration status (current, former, or never a registrant) and whether registration for an adult offense was ever required. This was used to qualify participation in the study and to determine which group each participant's data was categorized into.

Demographic, historical, and general data that was collected included: (a) age, (b) gender, (c) race/ethnicity, (d) relationship status, (e) years of education, (f) income, (g) history of family psychiatric problems, (h) history of substance abuse, (i) history of child abuse or neglect (as a victim), (j) history of sexual abuse (as a victim), (k) learning or physical disability, (l) taking medication for mental or emotional health, (m) having experienced confinement for more than 30 days, (n) criminal history (determined from number of offenses adjudicated and/or convicted), and (o) parent incarceration while

participant was a child. The number of offenses not only served to indicate whether the participant had a criminal history, but it provided a form of authentication for the participant's responses. All of these data items, except age, provided control variables used in analysis. In addition, a question regarding any prior medical diagnosis of depression was included to support validity determination for the PHQ-9 instrument.

Additional registration-related data was collected from current and former registrants only, and served as potentially new predictor variables to be tested. These questions also supported authentication of participant responses. Data collected for this purpose included the age at which the participant first registered, years registered to date, years since last registered, years required to register, court of first offense requiring registration (juvenile or adult), whether registration is provided to the public, whether any offenses requiring registration were a felony, whether sexually related offenses were part of one or multiple cases brought before the court, designated registration risk level, and dependency on someone for housing. Three additional data elements were also used to authenticate data from current or former registrants: the state in which they were adjudicated or convicted of the offense that required registration, the state in which they were first required to register, and the state in which they last registered in.

After demographic, historical, general, and registration-related questions, the survey contains nine questions from the PHQ-9 instrument, and 20 questions from the CESD-R instrument. The survey concludes with a final question reconfirming informed consent and the use of the data provided by the participant in this study. This provides one last opportunity for participants to exit the survey without retaining the data they

have entered for use in the study. Once the survey has been completed, contact information for a resource that could provide mental health support was provided again should the participant need it, along with information on how to obtain the results of the study.

No follow-up procedures are required for the participant, as all data is collected at the time the survey is completed. Data collected from completed surveys was digitally transferred into the research database providing the data source for analysis after data collection ended.

Data Analysis

Data collected from the survey was imported into the SPSS Statistical software tool so that multiple regression analysis that controlled for potential confounding effects could be performed. This method of statistical analysis was selected over ANCOVA analysis of covariance because it provided the ability to better interpret interacting effects. If the effect of a covariate overlaps with the effect of juvenile sex offender registration (the treatment/independent variable), it reduces the effect of the treatment on depression (the dependent variable) because the covariate explains some of the variance (Field, 2013). Statistical analysis using ANCOVA inaccurately attributes this variance to the treatment, and therefore requires independence of each predictor and treatment effect (2013).

Hierarchical multiple regression was used for data analysis because it can determine whether a predictive relationship exists by comparing criterion groups based on changes in the independent variable after controlling for all other known predictor

variables of depression. Three independent tests of two criterion groups each were analyzed: currently-registered and never-registered, formerly-registered and never-registered, and currently-registered and formerly-registered. To facilitate this analysis, categorical covariates, or concomitant variables, such as race/ethnicity were dummy coded. Dichotomous concomitant variables such as gender, relationship status, history of family psychiatric problems, substance abuse, child abuse/neglect, sexual abuse, learning/physical disability, incarceration as a juvenile, criminal history, incarcerated parent, and taking medication for mental or emotional health did not require dummy coding; nor were the continuous concomitant variables for years of education and income.

Threats to Validity

The inability to do random sampling to assign the treatment of sex offender registration and the need for self-selection of participants who need anonymity poses a number of threats to validity.

When an effect, such as depression, can be attributed to a treatment, such as juvenile sexual offender registration, rather than other unmeasured or uncontrolled differences between registered and unregistered persons, internal validity is achieved (Tuckman & Harper, 2012). Although this study was conducted at a single point in time, participant history of events experienced and personal characteristics could have influenced or confounded the outcome, depression. As mentioned previously, the literature identified a number of confounding factors that can impact depression. By assessing depression severity in registered and formerly registered juvenile sex offenders,

and a control group of individuals who have never registered, and systematically exploring and controlling for potential confounding factors using multiple regression for statistical analysis, internal validity was strengthened. In addition, by limiting participants to those in early adulthood (age 21 to 39), threats to validity related to differences in maturation and age-based developmental norms and expectations for this population are reduced. Because data collection did not target individuals with higher or lower depression levels, or result in compensation/incentives to the participant, and is an ex post facto study at a single point in time, internal validity was not threatened by selection, mortality, and inequities in compensation.

Self-reported data can pose a threat to internal validity if responses to depression are minimized or exaggerated. To reduce the impact of this threat, an explanation of a participant's role and the need for accuracy and honesty was provided in the survey's introduction. Consensual validation of the agreement to fulfill this role was obtained at the start and the end of the survey.

Threats to external validity can arise from participant selection, uniqueness of study setting, and timing (Creswell, 2009). The nature of the subject of this study contributed to the complexity of these issues: the juvenile sex offender registrant population was difficult to reach, self-selection was required, and a limited number of settings/avenues were available from which participants could be recruited. Random selection was not possible. Generalizability of findings may not occur when the sample is not representative of the larger juvenile sex offender registrant population. To minimize threats to external validity the broadest and largest possible sampling frame was used to

provide for meaningful statistical analysis. By soliciting participants for this study and making the survey available throughout the United States through advocacy and support groups for sexual offender registrants, resource networks, mental health agencies and treatment providers, and attorneys, this threat can be reduced. Even still, findings need to qualify the reach from which study participants were obtained.

Having worked with members of the population of juvenile offenders who committed a sexual offense I am aware of their guarded nature regarding their registration status. As mentioned previously, this plays a significant role in the methodology and instrumentation used in this study. By using convenience self-selection sampling and anonymity, a trade-off exists. Greater participation was anticipated, thereby improving external consistency while also strengthening internal consistency by reducing the effect of uncontrolled variables. This was done, however, at the expense of criterion validity of the PHQ-9 instrument for this population because the “gold standard” criterion for depression required participant follow up with a clinical interview. This would have necessitated participants to relinquish their identity in some form. Doing so would have likely caused a significant reduction in the number of samples collected, potentially jeopardizing the ability to do any meaningful research on this population. This study instead relied on face, content, and construct validation methods.

Construct validity is threatened if the measures used do not adequately identify depression. The use of existing survey instruments with established validity and reliability allows meaningful and useful inferences to be made from scores obtained from these instruments (Creswell, 2009). By utilizing instruments such as the PHQ-9 and

CESD-R to measure the dependent variable, which have been verified for content, criterion, and construct validity in prior studies, as well as consistency across constructs and stability over time, threats to construct validity were reduced or prevented.

Statistical conclusion validity is threatened when there is inadequate statistical power or statistical assumptions are violated causing inaccurate inferences from data (Creswell, 2009). It is anticipated that multicollinearity of some confounding variables will exist. In conducting statistical analysis using multiple regression, these threats were addressed.

Ethical Procedures

This study was conducted using protocols required by the Walden University Institutional Review Board (IRB). The approval number for this study is 05-15-15-0299148. Ethical procedures used were in keeping with recommendations for ethical research set forth by the American Psychological Association (Smith, 2003). In addition, I have earned a certificate of completion from the National Institute of Health's training on "Protecting Human Research Participants."

Intellectual property was respected by obtaining authorization to use, reproduce, and score both the PHQ-9 and CESD-R instruments from their respective authors (See Appendix B and D).

Access to participants was obtained through a number of avenues, including advocacy and support groups, resource networks, mental health agencies and providers, attorneys, and by "word of mouth." The role of these entities was solely to recruit potential participants by informing them of this study. They were not required to provide

identifying information about potential participants or to collect survey data from participants. If an organization had an IRB, Independent Ethics Committee (IEC), Ethical Review Board, or any other board or committee that functions to protect the rights and welfare of human subjects from physical or psychological harm as participants of a research study, agreement was obtained from the board or committee regarding the organization's recruitment role. The primary ethical concern of recruitment was that no entity recruiting participants force or coerce anyone into participating in this study. Participation was strictly voluntary. This was conveyed in e-mail correspondences with organizations accompanying the informational flyer used for recruiting purposes.

Information regarding informed consent was provided at the start of the survey and was included in the study's purpose, approximate time to complete the survey, participant rights, participant's role, potential risks and prospective benefits of the survey research, the limits of confidentiality, contact information where inquires could be made, and lastly, questions that affirm a participant's informed and willing consent to participate. In the unlikely event that this survey caused emotional distress to a participant, perhaps as they reflected upon their past and answered questions related to depression, contact information for a resource hot-line providing mental health support was included in the survey.

The decision to make participation anonymous in this study was given careful consideration. Ultimately it came down to two concerns--the need for a sufficient sample size, and the risk of duplicate participation. Given the population studied, the likelihood of obtaining significantly fewer participants if the study were not anonymous was

believed to be greater than the likelihood of an individual taking the time to participate in the study more than once. To reduce the chance of the later occurring, participants were provided information regarding how valuable their participation was and their role in assuring the integrity of data by providing accurate and honest responses to questions, and participating only once. Participants were asked to confirm their agreement to abide by these requirements before they could proceed with the remainder of the survey. They were asked to reaffirm this agreement at the end of the survey when they confirmed their completion of the questions. Participants could opt-out of the study by exiting the survey at any time before confirming completion of the questions.

Vulnerability of participants to breaches in data disclosure was virtually eliminated because data collected did not contain identifying information. Reports of findings from this study will also not contain identify information. Even still, data was collected from a secured website, downloaded via a secured transmission, stored on a computer that is password protected and secured by software such as Norton 360 or McAfee, residing behind a protected firewall. Data will be stored for at least five years to provide accessibility for review or reproducibility. This anonymous data may potentially be shared with the Association for the Treatment of Sexual Abuser for future research.

Several potential ethical issues for research studies, in general, do not pose issue for this study. This study is not being conducted in my work environment; there are no conflicts of interest, including related to participant mental health treatment, or instrumentation used; and anonymous data collection and precluding compensation,

prevents the potential for the use of coercive power and inappropriate or inequitable incentives for participants.

Summary

Due to the nature of the independent variable, juvenile sexual offender registration, a non-experimental, exploratory, quantitative ex post facto design was used to answer the research questions. Convenience sampling was largely conducted with the aid of advocacy, mental health, and legal organizations, treatment providers, and resource networks, to recruit as many participants as possible from this narrow and hard to reach population. To minimize threats to internal and external validity the broadest and largest possible sampling frame was used to provide for meaningful statistical analysis. This sampling method allowed for anonymity of participants, and was expected to provide enough participants to permit between group comparisons that explore the relationship between juvenile sexual offender registration and depression.

The PHQ-9 instrument was used to measure depression in an on-line self-report survey that was available on the internet. Face and content validity of the instrument was enhanced by review of the survey questions by experts related to juvenile sexual offending and registration and by several individuals who qualified as participants. Construct validity was evaluated through convergent methods correlating the PHQ-9 to the CESD-R instrument for depression. In a weaker test of criterion-related validity, a test of depression classification was conducted by examining whether previous diagnosis of depression by a health professional predicts PHQ-9 scores indicating depression.

Where external validity is supported by larger sample sizes, internal validity is strengthened by systematically exploring and controlling for concomitant variables that may confound the treatment's contribution to depression. For this reason, multiple regression was conducted using SPSS statistical software to provide for the statistical analysis of confounding variables.

Lastly, participants were recruited and treated respectfully. They were provided information about the study, including their rights, roles, responsibilities, and benefits. Informed consent was obtained from each participant. In the unlikely event that the survey caused emotional distress to a participant, a resource hot-line providing mental health support was provided. Data was collected anonymously, and transferred and stored on secured systems. Summary results of the study will be made available to participants on an Internet website.

Chapter 4 provides greater detail regarding data collection. Most importantly, the results of statistical analysis of data obtained during collection is presented.

Chapter 4: Results

Introduction

This study explores whether a relationship exists between juvenile sex offender registration and depression in current and former registrants after they've developmentally matured into adulthood, whether there is a persistent effect to this relationship, and whether specific characteristics associated with registration have a relationship to depression.

Hypotheses tested, data collection characteristics, and statistical results including analysis of covariates, reliability, validity, and assumptions are presented in this chapter.

Each of the following hypotheses was tested while controlling for seven depression-related covariates: (a) family history of psychological issues, (b) history of substance abuse, (c) history of sexual abuse, (d) history of confinement, (d) history of taking psychiatric medication, (f) history of parental incarceration while a child, and (g) criminal history.

RQ1: Do adults who are currently required to register as a sex offender for a juvenile offense have higher severity of depression scores than adults in the general population who have never been required to register as a sex offender?

H_01 : Current sex offender registration for a juvenile offense does not significantly predict higher severity of depression scores in adulthood, than in adults in the general population who have never registered, after controlling for depression-related covariates.

H_11 : Current sex offender registration for a juvenile offense significantly predicts higher severity of depression scores in adulthood, than in adults in the general population who have never registered, after controlling for depression-related covariates.

RQ2: Do adults who were formerly required to register as a sex offender for a juvenile offense have higher severity of depression scores than adults in the general population who have never been required to register as a sex offender?

H_02 : Former sex offender registration for a juvenile offense does not significantly predict higher severity of depression scores in adulthood, than in adults in the general population who have never registered, after controlling for depression-related covariates.

H_12 : Former sex offender registration for a juvenile offense significantly predicts higher severity of depression scores in adulthood, than in adults in the general population who have never registered, after controlling for depression-related covariates.

RQ3: Do adults who are currently required to register as a sex offender for a juvenile offense have higher severity of depression scores than adults who formerly were required to register as a sex offender for a juvenile offense?

H_03 : Current sex offender registration for a juvenile offense does not significantly predict higher severity of depression scores in adulthood, than in adults who formerly registered as a sex offender for a juvenile offense, after controlling for depression-related covariates.

H_13 : Current sex offender registration for a juvenile offense significantly predicts higher severity of depression scores in adulthood, than in adults who formerly registered

as a sex offender for a juvenile offense, after controlling for depression-related covariates.

Data Collection

Current and former registrants were recruited largely through advocacy, legal, and mental health organizations throughout the United States by e-mail and word-of-mouth for a period of 15 weeks from May 16, 2015 to August 28, 2015. While it was anticipated that this population would be challenging to reach and establish trust, it proved to be more difficult than anticipated. It is virtually impossible to estimate the response rate, and it is assumed to be extremely low compared to the number of actual qualified current and former registrant participants who were made aware of the study. The control group of never registered participants was also recruited through the same organizations as current and former registrants, but this seemed to yield few responses. However, recruitment by word of mouth through persons not affiliated with advocacy, legal, or mental health organizations resulted in snowball sampling that led to participants being recruited through social media such as Facebook.

A total of 274 (N) survey responses were received; of these, 26 were incomplete, and 83 were disqualified because the participant either did not consent to participate, did not agree to be honest, were not between 21 and 39 years of age, did not live in the U.S., or were currently registering or formerly registered as a sex offender for an offense committed at 18 years of age or older. There were 165 responses from qualified participants. Fifty-nine of these were from registrants; 36 of which were from current registrants, and 23 of which were from former registrants. Based on a medium effect size

of .15, alpha of .05, and power of .80, G*Power analysis recommended a minimum sample size of 56 when testing for 1 predictor after controlling for 15 (including dummy variables for race) when doing hierarchical regression. After preliminary analysis using Pearson's and point-biserial correlation, only seven predictors achieved correlational significance, $p < .05$. Bootstrapping confirmed the significance of each of these. Only the covariates of (a) family psychiatric history, (b) substance abuse, (c) sexual abuse, (d) confinement, (d) psychiatric medication, (e) parent jailed, and (f) criminal history were used as controls and included in the analytical model used to test the hypotheses (see Table 2). Race, gender, education, income, committed relationship, child abuse, and learning disabilities were not found to be significantly correlated, and were therefore excluded from the regression model.

Data results are provided to three decimal places whenever available in SPSS.

Table 2

Bi-Variate Correlational Analysis of Covariates and PHQ-9 Score

Depression-related covariates	<i>r</i>	<i>r_{pb}</i>	<i>p</i> (2-tailed)	<i>N</i>
Education years	-.136		.080	165
Income	-.139		.076	165
Gender		-.101	.195	165
Race - Black		-.022	.777	165
Race - other		.019	.812	165
Committed relationship		.033	.674	165
Family psych history		.335	.000	165
Substance abuse history		.254	.001	165
Child abuse ^a		.138	.076	165
Sexual abuse ^a		.243	.002	165
Learning disability		.150	.055	165
Confined over 30 days		.282	.000	165
Psychiatric meds		.381	.000	165
Parent jailed		.290	.000	165
Criminal history ^b		.331	.000	165

Note. ^aVictim of abuse. ^bHistory of criminal offense of any kind.

Data was collected via an anonymous, online survey instrument from individuals between 21 and 39 years of age, living in the United States, who are currently, or were formerly, required to register as a sex offender for a juvenile offense, or who have never been required to register as a sex offender. Baseline demographic information for frequency of participants by registration status category (representing each criterion

group) and their mean age is found in Table 3. Demographic information related to race, gender, and state of initial registration, are reported in Tables 4, 5, and 6, respectively.

Table 3

*Frequency of Registration Status with Mean Age
(N=165)*

Registration status	<i>n</i>	<i>M age</i>
Never-registered	106	29.78
Formerly-registered	23	29.52
Currently-registered	36	30.64
Total	165	29.93

Table 4

Registration Status by Race for Study Population (N=165)

Race	Never-registered		Formerly-registered		Currently-registered	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
White	71	66.98	22	95.65	26	72.22
Black	18	6.98	1	4.35	7	19.44
Hispanic/Asian/Other	17	16.04	0	0.00	3	8.33
Total	106	100.00	23	100.00	36	100.00

Table 5

Registration Status by Gender for Study Population (N=165)

Race	Never-registered		Formerly-registered		Currently-registered	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Female	7	6.60	1	4.35	1	2.78
Male	99	93.40	22	95.65	35	97.22
Total	106	100.00	23	100.00	36	100.00

Table 6

Registration Status by State of First Registration for Study Population (N=165)

State first registered	Formerly-registered		Currently-registered	
	<i>f</i>	%	<i>f</i>	%
California			2	5.56
Florida	1	4.35	2	5.56
Illinois			2	5.56
Massachusetts			1	2.78
Michigan	16	69.56	17	47.22
New Jersey			1	2.78
New York			1	2.78
Ohio	2	8.70	1	2.78
Oregon			1	2.78
Pennsylvania			2	5.56
Tennessee	1	4.35		
Texas	1	4.35	2	5.56
Washington	1	4.35	4	11.11
Wisconsin	1	4.35		
Total	23	100.00	36	100.00

From Table 6, approximately two-third of former registrant participants were first required to register in Michigan, and approximately one-half of currently-registered participants were from Michigan. Three factors likely contributed to this finding. I live in Michigan and know many treatment providers, lawyers, and advocacy support leaders in the state and these persons may have been more likely to disseminate my research flyer. In addition, I believe potential participants from Michigan were more likely to have recognized my name, and to have trusted me enough to participate in this study. Lastly, Michigan's Sex Offender Registration Act changed on July 1, 2011. For approximately 15 years prior, Michigan required the registration of juveniles, of any age,

who were adjudicated for one of many offenses on a comprehensive list of offense statutes. Prior to the law change, it was estimated that approximately 3,717 juvenile offenders were required to register in Michigan (K. Johnson, personal communication, December 22, 2011; December 23, 2011). After the law changed, approximately 2,400 were estimated to have been removed from the registry (December 22, 2011; December 23, 2011). As a result, Michigan's juvenile sex offender registrant population is estimated to have been one of the largest of any state. Likewise, the law change produced the largest population of former juvenile offender registrants of any state.

It is virtually impossible to determine how representative the non-probability sample used in this study represents the population of interest. The number of juvenile offender registrants is estimated to be a minimum of 23,238 based on estimates that juvenile offenders account for approximately 3% of all sex offender registrants in the United States (Letourneau et al., 2009a). This does not include juveniles registering who were charged as an adult, or those who have been removed from the registry. The units of analysis for the study are unknown, and therefore non-probability convenience sampling was used. The majority of participants who are current or former juvenile sex offender registrants in this study sample were accessed directly or indirectly through advocacy, legal, and other organizations. Because these participants were accessed through these means, the sample likely includes a greater number of juvenile offender registrants who have access to support resources than those found in the general registrant or juvenile offender registrant population at-large.

Results

Statistical analysis was conducted using hierarchical multiple linear regression. Descriptive statistics, reliability, validity, and assumptions analysis were each conducted as a precursor to the statistical analysis conducted to answer hypothesis, H1 through H3. Data is reported to three decimal places when provide by SPSS.

Descriptive Statistics

Descriptive statistics characterizing the total sample ($N = 165$) by registration status/criterion group are reported in Table 7. Of special note is that the mean PHQ-9 score for depression currently-registered participants ($M = 11.500$) is greater than both formerly-registered participants ($M = 7.348$) and never-registered participants ($M = 4.528$). Overlapping 95% confidence intervals across registration status categories are also noted.

Table 7

Descriptive Statistics by Criterion Group and PHQ-9 Total Score

Criterion group	<i>n</i>	<i>M</i>	<i>SD</i>	<i>SEM</i>	95% CI for <i>M</i>		Min.	Max.
					<i>LL</i>	<i>UL</i>		
Never-registered	106	4.528	6.011	.576	3.405	5.646	0	27
Formerly-registered	23	7.348	6.379	1.220	5.177	10.139	0	24
Currently-registered	36	11.500	8.157	1.260	9.468	14.262	0	27
Total	165	6.442	7.134	.583	5.319	7.556	0	27

Assumptions

Six assumptions must be evaluated when doing multiple regression analysis: (a) independence of residuals, or auto correlation, should exist, (b) no significant outliers

should exist in the data, (c) linearity should exist between predictor variables and the dependent variable, (d) normality of residuals exists, (e) homoscedasticity of residuals exists, and (f) multicollinearity of predictor variables should not be significant.

Independence of residuals. In testing the assumption of independence of residuals, or error, the regression model is evaluated to determine if adjacent residuals are uncorrelated (Field, 2013). The Durbin-Watson statistic for each of the test models is reported in Table 8, and provides evidence that this assumption is met. In most test models the adjacent residuals are slightly positively correlated. Durban-Watson values can vary between 0 and 4, with values at 2 indicating residuals are uncorrelated. Durban-Watson analysis tests a null hypothesis stating that zero autocorrelation of residuals exists. If the statistic exceeds the upper bound (d_U) from the Durbin-Watson matrix (Slavin & White, 1977) the null-hypotheses is not rejected. This means that residuals are not positively autocorrelated at the 1% level of significance, and the assumption of independence of errors is met. There is independence of residuals in each test case.

Table 8

Durbin-Watson Statistic by Test Model^a

Test	Criterion groups/ Test model	<i>n</i>	<i>k</i>	Durbin-Watson Critical values		Durbin-Watson	Assumption
				dL	dU		
H_01^b	Current/Never	142	8	1.378	1.717	1.879	Met (DW > 1.717)
H_02^c	Former/Never	129	8	1.378	1.717	2.085	Met (DW < 2.283)
$H_03^{d,e}$	Current/Former	59	7	1.134	1.685	1.892	Met (DW > 1.685)

Note. ^aDependent Variable: PHQ9 Score. ^bPredictors: (Constant), Criminal History, Psychiatric Meds, Sexual Abuse, Family Psych History, Parent Jailed, Substance Abuse History, Confined Over 30 Days, Current Registrant. ^cPredictors: (Constant), Criminal History, Psychiatric Meds, Sexual Abuse, Family Psych History, Parent Jailed, Substance Abuse History, Confined Over 30 Days, Former Registrant. ^dPredictors: (Constant), Psychiatric Meds, Sexual Abuse, Family Psych History, Parent Jailed, Substance Abuse History, Confined Over 30 Days. ^ePredictor: Age registration started.

Outliers. Only one of the three models used to test each of the hypotheses yielded cases that have a standard residual that exceed outlier limits of +/- 3 standard deviations when doing Casewise Diagnostics. Table 9, represents two cases that are outliers in the test of H_02 of former registrants and those never registered. Given $N=129$ for the model, two outliers do not exceed 5% of the subgroup. Therefore, these cases were considered insignificant, and the assumption for outliers is met. Evaluation using the outlier labeling rule also found that none of the cases were qualified as outliers.

Table 9

Casewise Diagnostics^a

Case number	Std. residual	PHQ-9 Score	Predicted value	Residual
60	3.890	27	6.99	20.009
126	3.077	24	8.17	15.828

Note. ^aDependent Variable: PHQ9 Score

Linearity. Visual examination of residual plots of ZRESID (y -axis) and ZPRED (x -axis) for the variables collectively, for tests of hypotheses H_{01} , H_{02} , and H_{03} , approximate linearity. Examination of the Normal Q-Q Plots also supported linearity, as did the partial plots of each variable. No systematic curvature or major outliers were found. Evaluation of statistical tests for skewness and kurtosis are discussed with the evaluation of the assumption of normality.

Normality. Analysis of normality using the Kolmogorov-Smirnov statistic for the total sample, $p < .001$, indicates that the distribution is significantly different than a normal distribution, and therefore the assumption of normality has not been met (see Table 10). Because the independent predictor variable, registrations status, is categorical, the Kolmogorov-Smirnov statistic was determined for each of the three criterion groups—currently-registered, formerly-registered, and never-registered. This analysis is a test of a null hypothesis that the data is not normal. Both the formerly and currently-registered groups were not significantly different from a normal distribution, and therefore approximate normality, with $p = .200$, while the never-registered group was significantly different with $p < .001$, indicating a non-normal distribution. The overall sample was strongly influenced by the non-normality of the never-registered criterion

group. The distribution of data for the never-registered group is positively skewed, with z-score of skewness = 6.27. It exceeds 1.96 at $p < .05$, and therefore the null hypotheses that there is no skewness is rejected. The statistic indicates that more participants had lower severity of depression scores—a naturally occurring distribution that is expected when analyzing the general population. The sample is not kurtotic, with z-score of kurtosis statistic = 1.75, which, at $p < .05$ supports the null hypotheses that there is no kurtosis. Normal Q-Q Plots support these findings. In examining the histograms for standardized residuals of each test of H_{01} , H_{02} , and H_{03} , respectively, it was observed that they approximate normal distribution. While multiple regression analysis is robust to issues of normality (Fields, 2013), bootstrapping was utilized to make the predictive capacity even stronger.

Table 10

Statistical Test of Normality for PHQ-9 Score

Criterion Group	Kolmogorov-Smirnov ^a		
	Statistic	df	P
All	.193	142	.000
Never	.226	106	.000
Former	.135	23	.200*
Current	.101	36	.200*

Note. ^a Lilliefors Significance Correction. *. This is a lower bound of the true significance.

Homoscedasticity. The scatterplot for the test of H_{01} and H_{02} representing the current/never-registered criterion groups and the former/never-registered criterion-groups, respectively, appeared to be heteroscedastic. Breusch-Pagan and Koenker tests confirmed this. The scatterplot for the test of H_{03} , did not appear heteroscedastic, but

computational analysis using the Breusch-Paga and Koenker test did indicate the presence of heteroscedasticity. As recommended by Fields (2013), robust bootstrapping methods were used to generate confidence intervals and significance tests of the model parameters.

Multicollinearity. Examination of correlations and coefficient data from regression analysis of the relationship of registration status to severity of depression in the currently-registered and never-registered criterion groups, and the formerly-registered and never-registered criterion groups, indicates the assumption of multicollinearity is met. None of the predictor variables had substantial correlations in which Pearson's r was greater than .9 (Field, 2013). Collinearity tolerance values were all greater than .2, and no variance inflation factors (VIF) were greater than 10 (2013). Multiple regression analysis using currently-registered and formerly-registered criterion groups did find collinearity existed between registration and criminal history. Criminal history was dropped from the model testing H_03 . This relationship was expected, as all persons required to register as a sex offender have a criminal history that caused the treatment of registration to be applied. Coefficient tables with collinearity statistics are provided when the findings of statistical analysis are reported.

Validity

A number of statistical analyses were conducted to support the validity of the PHQ-9 instrument as a measure of severity of depression.

Construct convergent validity. A test of construct validity using convergent methods was conducted to assess whether the PHQ-9 instrument accurately measures the

construct of interest—severity of depression. Twenty questions from the CESD-R instrument were included in this survey to support the analysis of construct convergent validity. Bi-variate analysis using Spearman’s rho correlation, r_s , was conducted using the PHQ-9 and CESD-R depression categories as determined from depression scores from each of the instruments. From Table 11 we see that PHQ-9 Depression Severity Category was significantly related to CESD-R Symptom Category, $r_s = .828$, 95% Percentile CI [.773, .872], $p < .001$, supporting construct convergent validity.

Table 11

Spearman’s rho Correlation of Depression Category for Construct Convergent Validity

		PHQ-9 Depression Severity Category	CESD-R Symptom Category
PHQ-9 Depression Severity Category	r_s	1.000	.828 ^{ab}
	p (2-tailed)	.	.000
	N	165	165
CESD-R Symptom Category	r_s	.828 ^{ab}	1.000
	p (2-tailed)	.000	.
	N	165	165

Notes. ^aCorrelation is significant at the 0.01 level (2-tailed). ^bBased on 1000 bootstrap samples.

Criterion validity. Data was collected regarding whether a participant had previously been diagnosed with depression. This dichotomous variable was tested using point-biserial correlation for its relationship to the continuous dependent variable of PHQ-9 score. From Table 12 we see that PHQ-9 score was significantly related to prior diagnosis of depression, $r_{pb} = .520$, 95% Percentile CI [.386, .637], $p < .001$, supporting criterion validity.

Table 12

Point-biserial Correlation of Depression Category for Criterion Validity

		PHQ-9 Score	Depression diagnosis
PHQ-9 Score	r_{pb}	1	.520 ^{ab}
	p (2-tailed)		.000
	N	165	165
Depression diagnosis	r_{pb}	.520 ^{ab}	1
	p (2-tailed)	.000	
	N	165	165

Notes. ^aCorrelation is significant at the 0.01 level (2-tailed). ^bBased on 1000 bootstrap samples.

Internal validity. Internal validity assesses the extent to which the findings of a study are attributable to the treatment—juvenile sex offender registration. While this is not an experimental study, and is not intended to prove causality, analysis of the hypotheses controlled for seven covariates using hierarchical multiple linear regression. Covariates controlled were (a) family history of psychological issues, (b) history of substance abuse, (c) history of sexual abuse (as a victim), (d) confinement for more than 30 days, psychiatric medication, (e) parental incarceration, and (f) criminal history.

Reliability

In evaluating internal reliability, Cronbach's Alpha was used to determine the consistency of items in the PHQ-9 and CESD-R instruments. Cronbach's $\alpha = .938$ for the PHQ-9 instrument and .971 for the CESD-R instrument, indicate a high degree of inter-correlation of items in each instrument, and that the items measure the same construct (see Table 13).

Table 13

Reliability Statistics

Instrument	Cronbach's α	Cronbach's α	
		Based on standardized items	<i>N</i>
PHQ-9	.938	.938	9
CESD-R	.971	.971	20

Findings from Analysis of Hypothesis 1

Results were generated from regression analysis, controlling for dichotomous depression-related covariate data from the two criterion groups of adults currently required to register as a sex offender for a juvenile offense and adults who have never been required to register as a sex offender.

H_01 : Current sex offender registration for a juvenile offense does not significantly predict higher severity of depression scores in adulthood, than in adults in the general population who have never registered, after controlling for depression-related covariates.

H_11 : Current sex offender registration for a juvenile offense significantly predicts higher severity of depression scores in adulthood, than in adults in the general population who have never registered, after controlling for depression-related covariates.

Hierarchical multiple regression analysis was conducted to determine if the addition of current juvenile sex offender registration by a person who is now an adult improved the prediction of severity of depression score over and above seven depression-related covariate predictors alone using data from the two criterion groups of currently-registered and never-registered participants only. See Table 14 for the model summary, Table 15 for the ANOVA statistics, and Table 16 for full details of the regression model.

The ability of the overall model, including depression-related covariates (Model Step 1) and current juvenile sex offender registration (Model Step 2), to predict severity of depression was statistically significant, $R^2 = .336$, $F(8, 133) = 8.408$, 95% Percentile CI [.967, 1.661], $p < .01$; adjusted $R^2 = .296$. The addition of current juvenile sex offender registration to the model (Model Step 2) significantly predicted severity of depression scores, positively, $\beta = .404$, $t(133) = 3.122$, $p < .01$. Current juvenile sex offender registration explained a significant proportion of variance in depression scores, $R^2 = .336$, $F(1, 133) = 9.745$, $p < .01$; $\Delta R^2 = 0.049$ after controlling for covariates of depression. The null hypothesis, H_0 , is rejected. Given $B = 6.724$, current registration predicts a positive increase of 6.724 points in severity of depression score.

The magnitude of the effect size, R^2 , is large (greater than .14). Model Step 1 represents a good model that predicts depression. The fact that Model Step 2 achieves significance with $\Delta R^2 = 0.049$ is especially meaningful, and even more so because only one additional variable accounts for this strong change.

Bootstrap results for the model summary yields 95% Percentile CI [.967, 1.661]. With the lower and upper limit both being positive, there is 95% confidence that the true value of R is not zero; therefore the model is valid. The Percentile Confidence Interval method was used over the Bias Corrected and Accelerated method when bootstrapping, solely because SPSS produced inconsistent results when using the later method.

Table 14

Model Summary^a for Hypothesis 1 Test – Currently-Registered and Never-Registered Criterion Groups

Models step	R	R ²	Adjusted R ²	SE of the estimate	Change statistics				Sig. F change	Durbin-Watson
					ΔR ²	F change	df1	df2		
1	.536 ^b	.287	.250	6.287	.287	7.713	7	134	.000***	
2	.580 ^c	.336	.296	6.091	.049	9.745	1	133	.002**	1.879

Notes. Significance at $p < .05$. ^aDependent Variable: PHQ9 Score. ^bPredictors: (Constant), Criminal History, Psychiatric Meds, Sexual Abuse, Family Psych History, Parent Jailed, Substance Abuse History, Confined Over 30 Days. ^cPredictors: (Constant), Criminal History, Psychiatric Meds, Sexual Abuse, Family Psych History, Parent Jailed, Substance Abuse History, Confined Over 30 Days, Current Registration. * $p < .05$, ** $p < .01$, *** $p < .001$

Table 15

ANOVA^a for Hypothesis 1 Test – Currently-Registered and Never-Registered Criterion Groups

Model step	df	SS	MS	F	p
Regression	7	2133.852	304.836	7.713	.000 ^{b***}
1 Residual	134	5295.726	39.520		
Total	141	7429.577			
Regression	8	2495.386	311.923	8.408	.000 ^{c***}
2 Residual	133	4934.192	37.099		
Total	141	7429.577			

Notes. Significant at $p < .05$. ^aDependent Variable: PHQ9 Score. ^bPredictors: (Constant), Criminal History, Psychiatric Meds, Sexual Abuse, Family Psych History, Parent Jailed, Substance Abuse History, Confined Over 30 Days. ^cPredictors: (Constant), Criminal History, Psychiatric Meds, Sexual Abuse, Family Psych History, Parent Jailed, Substance Abuse History, Confined Over 30 Days, Current Registration. * $p < .05$, ** $p < .01$, *** $p < .001$

Table 16

Coefficients and Collinearity Statistics for Hypothesis 1 Test – Currently-Registered and Never-Registered Criterion Groups

Model step	Independent variable	Coefficients				Collinearity		
		<i>B</i>	<i>SEB</i>	β	<i>p</i>	<i>t</i>	Tolerance	VIF
1	(Constant)	3.196	.694		.000***	4.606		
	Family psych history	1.424	1.570	.078	.366	.907	.713	1.402
	Substance abuse history	-.037	1.672	-.002	.982	-.022	.686	1.458
	Sexual abuse ^a	.467	1.802	.021	.796	.259	.814	1.229
	Confined	.198	1.737	.011	.910	.114	.599	1.670
	Psychiatric meds	6.466	1.610	.317	.000***	4.017	.852	1.173
	Parent jailed	3.306	1.662	.165	.049	1.989	.770	1.299
	Criminal history ^b	3.739	1.423	.245	.010	2.627	.614	1.629
2	(Constant)	3.136	.672		.000***	4.664		
	Family psych history	2.763	1.580	.152	.083	1.748	.661	1.513
	Substance abuse history	.049	1.621	.003	.976	.030	.686	1.458
	Sexual abuse ^a	-.664	1.783	-.030	.701	-.373	.780	1.282
	Confined	.183	1.683	.010	.914	.108	.599	1.670
	Psychiatric meds	5.904	1.570	.290	.000***	3.761	.841	1.189
	Parent jailed	3.406	1.610	.170	.036	2.116	.770	1.299
	Criminal history	-1.344	2.134	-.088	.530	-.630	.256	3.900
Current registration ^b	6.724	2.154	.404	.002**	3.122	.298	3.360	

Notes. Hierarchical Regression. $R^2 = .29$ for Model Step 1; $\Delta R^2 = .05$ for Model Step 2 ($p_s = < .05$). * $p < .05$, ** $p < .01$, *** $p < .001$. ^aVictim of abuse. ^bHistory of criminal offense of any kind.

Findings from Analysis of Hypothesis 2

Using hierarchical regression analysis, controlling for dichotomous depression-related covariate data from the two criterion groups of adults formerly required to register

as a sex offender for a juvenile offense and adults who have never been required to register as a sex offender.

H₀₂: Former sex offender registration for a juvenile offense does not significantly predict higher severity of depression scores in adulthood, than in adults in the general population who have never registered, after controlling for depression-related covariates.

H₁₂: Former sex offender registration for a juvenile offense significantly predicts higher severity of depression scores in adulthood, than in adults in the general population who have never registered, after controlling for depression-related covariates.

Hierarchical multiple regression analysis was conducted to determine if the addition of former juvenile sex offender registration by a person who is now an adult improved the prediction of severity of depression score over and above seven depression-related covariate predictors alone using data from the two criterion groups of formerly-registered and never-registered participants only. See Table 17 for the model summary, Table 18 for the ANOVA statistics, and Table 19 for full details of the regression model. The ability of the overall model, including depression-related covariates (Model Step 1) and former juvenile sex offender registration (Model Step 2), to predict severity of depression was statistically significant, $R^2 = .335$, $F(8, 120) = 7.871$, Percentile CI [1.041, 1.775], $p < .01$; adjusted $R^2 = .300$. The addition of former juvenile sex offender registration to the model (Model Step 2) did not significantly predict severity of severity of depression scores, $\beta = .158$, $t(120) = 1.260$, $p > .05$. Former juvenile sex offender registration (Model Step 2) failed to demonstrate a significant variance in depression

scores, $R^2 = .344$, $F(1, 120) = 1.588$, $p > .05$, $\Delta R^2 = 0.009$. The null hypothesis, H_0 , failed to be rejected.

Bootstrap results for the model summary yields 95% Percentile CI [1.041, 1.775].

With the lower and upper limit both positive, there is 95% confidence that the true value of R is not zero; therefore the model is valid.

Table 17

Model Summary^c for Hypothesis 2 Test – Formerly-Registered and Never-Registered Criterion Groups

Model step	R	R ²	Adjusted R ²	SE of the estimate	Change statistics				Sig. F change	Durbin-Watson
					ΔR^2	F change	df1	df2		
1	.579 ^a	.335	.297	5.156	.335	8.726	7	121	.000***	
2	.587 ^b	.344	.300	5.143	.009	1.588	1	120	.201	2.085

Notes. Significance at $p < .05$. ^aPredictors: (Constant), Criminal History, Psychiatric Meds, Sexual Abuse, Family Psych History, Parent Jailed, Substance Abuse History, Confined Over 30 Days. ^bPredictors: (Constant), Criminal History, Psychiatric Meds, Sexual Abuse, Family Psych History, Parent Jailed, Substance Abuse History, Confined Over 30 Days, Former Registration. ^cDependent Variable: PHQ9 Score. * $p < .05$, ** $p < .01$, *** $p < .001$

Table 18

ANOVA^a for Hypothesis 2 Test – Formerly-Registered and Never-Registered Criterion Groups

	Model step	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
	Regression	7	1623.579	231.940	8.726	.000 ^{b***}
1	Residual	121	3216.297	26.581		
	Total	128	4839.876			
	Regression	8	1665.586	208.198	7.871	.000 ^{c***}
2	Residual	120	3174.209	26.452		
	Total	128	4839.876			

Notes. Significant at $p < .05$. ^aDependent Variable: PHQ9 Score. ^bPredictors: (Constant), Criminal History, Psychiatric Meds, Sexual Abuse, Family Psych History, Parent Jailed, Substance Abuse History, Confined Over 30 Days. ^cPredictors: (Constant), Criminal History, Psychiatric Meds, Sexual Abuse, Family Psych History, Parent Jailed, Substance Abuse History, Confined Over 30 Days, Former Registration. * $p < .05$, ** $p < .01$, *** $p < .001$

Table 19

Coefficients and Collinearity Statistics for Hypothesis 2 Test – Formerly-Registered and Never-Registered Criterion Groups

Model step	Independent variable	Coefficients				Collinearity		
		<i>B</i>	<i>SEB</i>	β	<i>p</i>	<i>t</i>	Tolerance	VIF
1	(Constant)	2.986	.569		.000***	5.249		
	Family psych history	1.432	1.480	.095	.335	.9768	.569	1.759
	Substance abuse history	3.827	1.568	.221	.016	2.440	.667	1.499
	Sexual abuse ^a	-	1.720	-.005	.956	-.056	.767	1.304
	Confined	0.096	1.722	-.038	.692	-.397	.608	1.643
	Psychiatric meds	7.086	1.348	.427	.000***	5.258	.832	1.202
	Parent jailed	1.932	1.826	.095	.292	1.058	.682	1.467
	Criminal history ^b	-.247	1.214	-.018	.839	-.203	.707	1.414
2	(Constant)	2.971	.568		.000***	5.233		
	Family psych history	1.661	1.487	.110	.266	1.116	.560	1.785
	Substance abuse history	4.136	1.584	.239	.010	2.612	.651	1.536
	Sexual abuse ^a	-.668	1.777	-.033	.708	-.376	.717	1.395
	Confined	-.370	1.734	-.020	.831	-.213	.596	1.678
	Psychiatric meds	6.744	1.372	.406	.000***	4.916	.799	1.251
	Parent jailed	2.36	1.85	.116	.21	1.27	.66	1.52
	Criminal history ^b	-2.094	1.902	-.152	.273	-1.101	.287	3.487
Former registration	2.536	2.013	.158	.210	1.260	.346	2.894	

Notes. Hierarchical Regression. $R^2 = .34$ for Model Step 1; $\Delta R^2 = .01$ for Model Step 2 ($ps = 0.21$). * $p < .05$, ** $p < .01$, *** $p < .001$. ^aVictim of abuse. ^bHistory of criminal offense of any kind.

Findings from Analysis of Hypothesis 3

Results were determined from regression analysis, controlling for dichotomous depression-related covariate data from the two criterion groups of adults currently

required to register as a sex offender for a juvenile offense and adults who were formerly required to register as a sex offender for a juvenile offense.

H₀₃: Current sex offender registration for a juvenile offense does not significantly predict higher severity of depression scores in adulthood, than in adults who formerly registered as a sex offender for a juvenile offense, after controlling for depression-related covariates.

H₁₃: Current sex offender registration for a juvenile offense significantly predicts higher severity of depression scores in adulthood, than in adults who formerly registered as a sex offender for a juvenile offense, after controlling for depression-related covariates.

Hierarchical multiple regression analysis was conducted to determine if the addition of current juvenile sex offender registration by a person who is now an adult improved the prediction of severity of depression score over and above seven depression-related covariate predictors alone using data from the two criterion groups of currently-registered and formerly-registered participants only. See Table 20 for the model summary, Table 21 for the ANOVA statistics, and Table 22 for full details of the regression model. The ability of the overall model, including depression-related covariates (Model Step 1) and current juvenile sex offender registration (Model Step 2), to predict severity of depression was statistically significant, $R^2 = .323$, $F(7, 51) = 3.470$, 95% Percentile CI [.882, 1.949], $p < .01$; adjusted $R^2 = .230$. The addition of current juvenile sex offender registration to the model (Model Step 2) significantly predicted severity of depression scores, positively, $\beta = .248$, $t(51) = 2.039$, $p < .05$. Current

juvenile sex offender registration explained a significant proportion of variance in depression scores, $R^2 = .323$, $F(1, 51) = 4.157$, $p < .05$, $\Delta R^2 = 0.055$. The null hypothesis, H_03 , is rejected. Given $B = 3.892$, current registration predicts a positive increase of 3.892 points in severity of depression score.

The magnitude of the effect size, R^2 , is large (greater than .14). Model Step 1 represents a good model that predicts depression. The fact that Model Step 2 achieves significance with $\Delta R^2 = 0.055$ is especially meaningful, and even more so because only one additional variable accounts for this strong change.

Bootstrap results for the model summary yields 95% Percentile CI [.882, 1.949]. With the lower and upper limit both positive, there is 95% confidence that the true value of R is not zero; therefore the model is valid.

Table 20

Model Summary^a for Hypothesis 3 – Currently-Registered and Formerly-Registered Criterion Groups

Model step	R	R ²	Adjusted R ²	SE of the estimate	Change statistics				Sig. F change	Durbin-Watson
					ΔR^2	F change	df1	df2		
1	.517 ^b	.267	.183	6.988	.267	3.164	6	52	.010*	
2	.568 ^c	.323	.230	6.785	.055	4.157	1	51	.047 ^{d*}	1.874

Notes. Significance at $p < .05$. ^aDependent Variable: PHQ9 Score. ^bPredictors: (Constant), Criminal History, Psychiatric Meds, Sexual Abuse, Family Psych History, Parent Jailed, Substance Abuse History, Confined Over 30 Days. ^cPredictors: (Constant), Criminal History, Psychiatric Meds, Sexual Abuse, Family Psych History, Parent Jailed, Substance Abuse History, Confined Over 30 Days, Current Registration. ^dThree decimal places are noted so rounding does cause the statistic to be inappropriately evaluated for non-significance. * $p < .05$, ** $p < .01$, *** $p < .001$

Table 21

ANOVA^a for Hypothesis 3 Test – Currently-Registered and Formerly-Registered Criterion Groups

	Model step	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
	Regression	6	926.949	154.492	3.164	.010 ^{b*}
1	Residual	52	2539.220	48.831		
	Total	58	3466.169			
	Regression	7	1118.337	159.762	3.470	.004 ^{c***}
2	Residual	51	2347.832	46.036		
	Total	58	3466.169			

Notes. Significant at $p < .05$. ^aDependent Variable: PHQ9 Score. ^bPredictors: (Constant), Criminal History, Psychiatric Meds, Sexual Abuse, Family Psych History, Parent Jailed, Substance Abuse History, Confined Over 30 Days. ^cPredictors: (Constant), Criminal History, Psychiatric Meds, Sexual Abuse, Family Psych History, Parent Jailed, Substance Abuse History, Confined Over 30 Days, Current Registration. * $p < .05$, ** $p < .01$, *** $p < .001$

Table 22

Coefficients and Collinearity Statistics for Hypothesis 3 Test – Currently-Registered and Formerly-Registered Criterion Groups

Model step	Independent Variable	Coefficients				Collinearity		
		<i>B</i>	<i>SEB</i>	β	<i>p</i>	<i>t</i>	Tolerance	VIF
1	(Constant)	6.054	1.446		.000***	4.186		
	Family psych history	6.590	2.535	.374	.012	2.600	.680	1.472
	Substance abuse history	1.194	2.097	.072	.571	.570	.888	1.126
	Sexual abuse ^a	2.690	2.184	.156	.223	1.232	.878	1.139
	Confined	1.487	2.121	.096	.486	.701	.747	1.339
	Psychiatric meds	-1.491	2.440	-.086	.544	-.611	.703	1.422
	Parent jailed	3.175	2.247	.180	.164	1.413	.865	1.156
2	(Constant)	3.982	1.733		.026	2.298		
	Family psych history	7.020	2.470	.399	.006	2.842	.675	1.482
	Substance abuse history	.675	2.052	.041	.743	.329	.874	1.144
	Sexual abuse ^a	2.675	2.120	.155	.213	1.262	.878	1.139
	Confined	1.089	2.068	.071	.601	.526	.740	1.351
	Psychiatric meds	-.920	2.386	-.053	.701	-.386	.694	1.442
	Parent jailed	2.273	2.226	.129	.312	1.021	.831	1.204
Current registrant	3.892	1.909	.248	.047*	2.039	.900	1.111	

Notes. $R^2 = .27$ for Model Step 1; $\Delta R^2 = .06$ for Model Step 2 ($ps = 0.047$). * $p < .05$, ** $p < .01$, *** $p < .001$. ^aVictim of abuse.

Additional Findings

Eight *potential* predictors of severity of depression specifically related to characteristics of sex offender registration were also explored using data from the currently-registered and formerly-registered criterion groups after controlling for six depression-related covariate predictors. Covariate predictors were the same as those

controlled while analyzing data testing H_03 . Hierarchical multiple regression analysis was conducted to determine if the addition of each of the potential registration-related predictors individually improved the prediction of severity of depression score in Model Step 2 over and above the covariate predictors controlled in Model Step 1. Findings from analysis of the eight potential predictors are summarized in Table 23.

Table 23

*Summary of Model Step 2 Findings Using New Potential Predictors –
Currently-Registered and Formerly-Registered Criterion Groups (N=59)*

Potential predictor	R^2	ΔR^2	p F change	P Model ANOVA	B	β	p	Predicts severity of depression
Age at initial registration	.535	.019	.247	.012*	.274	.147	$p > .05$	No
Years registered	.520	.003	.671	.019*	-.092	-.055	$p > .05$	No
Convicted in adult court	.554	.040	.092	.006**	-3.401	-.220	$p > .05$	No
Public registration	.585	.074	.020*	.002**	-4.696	-.286	$p < .05^*$	Yes, Negatively
Felony offense	.533	.017	.283	.013*	2.241	.138	$p > .05$	No
Subsequent offense	.533	.017	.274	.013*	-3.979	-.145	$p > .05$	No
Tier 3 risk	.528	.011	.381	.015*	-6.325	-.107	$p > .05$	No
Housing dependency	.570	.057	.043*	.004**	3.767	.245	$p < .05^*$	Yes, Positively

Notes. * $p < .05$, ** $p < .01$, *** $p < .001$

Of particular interest from Table 23 is that only public registration and housing dependency significantly predicted severity of depression scores; public registration, negatively, and housing dependency, positively. This means that participants whose

registration information was not available to the public had significantly higher severity of depression scores. Mean PHQ-9 scores for those who currently or formerly registered with information made public was 8.68 ($n = 40$) while those whose information was nonpublic was 12.42 ($n = 19$). Eighty-four percent of nonpublic registrants were adjudicated in juvenile court, while only 16% were convicted in adult court for an offense that occurred when the participant was less than 18 years of age. Of only currently-registered participants, mean PHQ-9 scores were also higher for those whose information was nonpublic (16.82, $n=11$) compared to those whose information was public (9.16, $n = 25$). While, this study found that nonpublic registration significantly predicted higher severity of depression than in public registrants, the mean depression score for the latter group is still increased, and is consistent with findings by Jeglic, Mercado, and Levenson (2012) in which public notification of adult sex offenders resulted in increased depressive symptoms over that of the general population.

Those who were dependent on someone for housing had significantly higher severity of depression scores. This supports findings from research regarding juveniles and (Comartin et al., 2010) and adult sex offenders (Levenson, 2008; Tewksbury & Lees, 2006), in which housing related issues contributed to heightened emotional distress.

Frequency analysis of question nine of the PHQ-9 instrument regarding suicidal ideation and whether participants had thoughts of death or hurting themselves, found that 53% of those currently registering as a sex offender for a juvenile offense, 26% of those who formerly registered for a juvenile offense, and 16% of those who never registered had these thoughts on one or more days in the past two weeks. Approximately 11% of

current registrants had these thoughts nearly every day, while 0% of former registrants and 4% of never-registered persons did. Spearman's rho correlation, r_s , for this PHQ-9 question and question 14 of the CESD-R instrument regarding suicidal ideation and a participant's wish to die was .827. Heightened levels of suicidal ideation are consistent with studies of adult sex offender registrants (Jeglic et al., 2012; Jeglic, Spada, Mercado, 2013; Levenson, 2008).

Examining mean depression scores of never-registered participants who had a criminal history, and those who did not, found mean depression scores of 5.38 ($n = 12$), and 4.39 ($n = 94$), respectively. ANOVA between-group analyses did not find this difference to be significant. Those who formerly registered had mean scores of 7.35 ($n = 23$). ANOVA between-group analyses of never-registered participants with a criminal history, and those who formerly registered (of which all had a criminal history for a sexual offense) found the difference in mean severity of depression scores was not statistically significant. Findings are not consistent with Rosenberg et al., (2014), in that involvement in the justice system did not, on its own, correlate to severity of depression. Mean depression scores by criminal history and registration status are found in Table 24.

Table 24

Mean PHQ-9 Score by Criminal History and Registration Status

	<i>N</i>	<i>M</i>	<i>SD</i>	<i>SE</i>	95% <i>CI</i> of <i>M</i>		Min.	Max.
					<i>LL</i>	<i>UL</i>		
No criminal history	94	4.39	5.723	.590	3.22	5.57	0	27
Criminal history								
Never-registered	12	5.58	8.163	2.356	.40	10.77	0	26
Formerly-registered	23	7.35	6.379	1.330	4.59	10.11	0	24
Currently-registered	36	11.50	8.157	1.360	8.74	14.26	0	27
Total	165	6.44	7.134	.555	5.35	7.54	0	27

Summary

After dividing data into three sets of two criterion groups based on juvenile sex offender registration status, hierarchical multiple regression analysis was conducted. This method permitted known covariates associated with severity of depression to be controlled. By studying this non-experimental data to determine the statistical association between juvenile sex offender registration status (the independent variable) and severity of depression (the dependent variable), the predictive nature of the variable was determined for specific registration status groups. This method of analysis answered the research questions regarding whether persons with specific registration status have higher severity of depression than others. Three sets of two criterion groups were studied to support analysis of the research questions:

1. Data from adults currently registering for a juvenile offense, and from adults in the general population who have never had to register.

2. Data from adults who formerly registered for a juvenile offense, and from adults in the general population who have never had to register.
3. Data from adults currently registering for a juvenile offense, and from adults who formerly registered for a juvenile offense.

Analysis using the first set of criterion groups found that *current* sex offender registration for a juvenile offense significantly predicted higher severity of depression scores compared to adults who have *never* had to register. Answering the first research question, this post-hoc analysis found that adults who currently register for a juvenile offense had higher severity of depression scores than adults who had never registered.

Analysis using the second set of criterion groups did not find that *former* sex offender registration significantly predicted higher severity of depression scores compared to adults who have *never* had to register. Answering the second research question, this post-hoc analysis failed to prove that adults who formerly registered for a juvenile offense had significantly higher severity of depression scores than adults who had never registered.

Analysis using the third set of criterion groups found that *current* sex offender registration for a juvenile offense significantly predicted higher severity of depression scores compared to adults who *formerly* registered for a juvenile offense. Answering the third research question, this post-hoc analysis found that adults who currently register for a juvenile offense had higher severity of depression scores than adults who formerly registered for a juvenile offense.

Table 25 summarizes the findings from this study.

Table 25

Summary of Findings

Hypothesis tested	Criterion groups	<i>n</i>	Findings	Result
<i>H</i> ₀ 1: Current sex offender registration for a juvenile offense does not predict higher severity of depression scores	Currently-registered Never-registered	142	$p < .01$; $B = 6.724$ <i>H</i> ₀ 1 Rejected	Current registration predicted higher severity of depression, positively
<i>H</i> ₀ 2: Former sex offender registration for a juvenile offense does not predict higher severity of depression scores	Formerly-registered Never-registered	129	$p > .05$ <i>H</i> ₀ 2 Failed to be Rejected	Former registration did not predict higher severity of depression, positively
<i>H</i> ₀ 3: Current sex offender registration for a juvenile offense does not predict higher severity of depression scores	Currently-registered Formerly-registered	59	$p < .01$; $B = 3.829$ <i>H</i> ₀ 3 Rejected	Current registration predicted higher severity of depression, positively

Exploration of eight potentially new predictors of depression related to sex offender registration found public registration significantly predicted lower severity of depression scores. This means that when registration information was not available to the public, higher severity of depression scores were predicted. This finding is discussed in Chapter 5. If a person was dependent on someone for housing, this also significantly predicted higher severity of depression scores.

Suicidal ideation was more than three times higher in current registrants than those who never registered, and approximately twice as high as those who formerly registered. Mean depression score for the never-registered participant group with criminal history was lower than that of both former and currently-registered participants. However, scores for participants with criminal history for a sexual offense who formerly

registered were not statistically different from that of never-registered participants with criminal history.

In Chapter 5, findings from this study are interpreted and then discussed in the context of the existing research. Limitations of this study, recommendations for further research, implications findings have for social change, and conclusions are also discussed.

Chapter 5: Discussion, Recommendations, and Conclusion

Introduction

The purpose of this study was to gain a more comprehensive understanding of the effects of sex offender registration policy by exploring whether a relationship exists between juvenile sex offender registration and latent depression in current and former registrants after they've developmentally matured into adulthood, and whether there is a persistent effect to this relationship. Existing research does not support the efficacy of such policy (Batastini et al., 2011; Caldwell & Dickinson, 2009; Caldwell et al., 2008; Letourneau & Armstrong, 2008; Letourneau et al., 2009b; Letourneau et al., 2010; Stevenson et al., 2013), yet scholarly research assessing the unintended consequences of registration for juvenile offenders is virtually non-existent. This study was conducted to help fill, in part, that gap, Current sex offender registration was found to predict increased severity of depression in juvenile offenders who have matured into adulthood. Additionally, specific characteristics associated with registration were explored to better understand their relationship to depression in those who have had to register for a juvenile.

Findings from data analysis were interpreted, and emerging issues and themes are highlighted and discussed in the context of the existing research. Limitations of this study are addressed and recommendations for further research are provided. Lastly, the implications these findings may have for social change regarding juvenile justice policy and conclusions drawn from this study are presented.

Interpretation of Findings

Current sex offender registration for a juvenile offense predicted higher severity of depression scores in persons who have matured into adulthood than in adults who have never had had to register, after controlling for depression-related covariates. As discussed in Chapter 4, the effect size was meaningful for multiple regression analysis, with the model explaining 34% of the variance, of which 5% was explained by current sex offender registration for a juvenile offense. Moderate levels of depression were found for the current registrant group (mean depression score = 11.5) using the PHQ-9 interpretation of total score (see Table 26), while the never-registered group had borderline minimal to mild levels of depression (mean depression score = 4.5). These depression scores quantitatively confirm findings of Comartin, et al. (2010) in a qualitative, peer-reviewed study in which parents shared concerns about depression in their children who were required to register as a sex offender for an adolescent offense. They also validate the perception of treatment providers that juvenile sex offender registrants experience increased negative consequences to mental health from registration (Harris et al., 2015).

Adulthood requires the development of skills to maintain independence, self-sufficiency, and the maintenance of intimate relationships (Mahmoud et al, 2012). Achieving this is a challenge for most people, and one would expect even more so for persons labeled as a sex offender registrant. This may very well be a consequence of registration that significantly contributes to increased severity of depression in the current

registrant criterion group. Struggles to cope with the label assigned to them and their “spoiled identity” likely also contributes to severity of depression.

Table 26

Interpretation of PHQ-9 Total Score

Total score	Depression severity
1 - 4	Minimal depression
5 - 9	Mild depression
10 - 14	Moderate depression
15 - 19	Moderately severe depression
20 - 27	Severe depression

Note. Adapted from “The PHQ-9: Validity of a brief depression severity measure,” by K. Kroenke, R. L. Spitzer, and J. B. W. Williams, 2001, *Journal of General Internal Medicine*, 16(9), p. 608.

No additional peer-reviewed research was found that explored unintended consequences of juvenile sex offender registration from the perspective of the registrants—much less mental health, or after they’ve matured into adulthood. This study extends the existing research in a number of aspects: (a) data was obtained directly from actual juvenile offender registrants as opposed to being obtained indirectly about registrants from non-registrant sources such as parents and treatment providers, (b) it specifically used a depression instrument to quantitatively determine severity of depression in registrants, and (c) it explored a consequence of registration years after the registrant had matured into adulthood.

Former sex offender registration for a juvenile offense did not predict higher severity of depression scores in persons who have matured into adulthood than in adults who have never had to register, after controlling for depression-related covariates.

While mild levels of depression were found for the formerly-registered group (mean depression score = 7.4) and borderline to low levels of depression for the group of adults who have never registered, the change in mean scores was not found to be significant. No studies were found in the literature regarding consequences of registration on persons formerly required to register for a juvenile offense from the perspective of the former registrant. In addition to the items mentioned previously, this research question extends the knowledge regarding consequences of registration about former juvenile sex offender registrants and used data obtained directly from the former registrant. After registrants were relieved of their duty to register as a sex offender, the mean depression score and level of depression reduced substantially, such that former registration did not significantly predict an increase in severity of depression over that of adults who have never registered. This suggests that while mental health may be significantly impacted in current registrants, and a minimally persistent effect does appear to exist, in that depression scores remain elevated after the sex offender registrant label has been removed, mean depression scores are markedly reduced and more strongly approach those of never-registered adults than those of adults currently registered for a juvenile sexual offense.

Current sex offender registration for a juvenile offense was found to predict higher severity of depression scores in persons who have matured into adulthood than in adults who have formerly registered for a juvenile offense. The effect size was meaningful for multiple regression analysis, with the model explaining 32% of the variance, of which 6% was explained by current sex offender registration for a juvenile

offense. As a group, the depression level dropped from moderate depression in current registrants to mild depression in former registrants when interpreting the mean PHQ-9 total score.

Again, because no studies were found regarding former juvenile sex offender registrants, in addition to the contributions previously mentioned, findings related to the analysis of the third research question further extends the knowledge regarding consequences of registration on current and former juvenile sex offender registrants. After registrants were relieved of their duty to register as a sex offender, the mean depression score decreased significantly. This may indicate that juvenile sex offender registrants exhibit some level of resilience regarding depression once they are no longer a registrant.

Findings when comparing current and former registrant groups is especially meaningful. The ideal control group for this study would have been to obtain severity of depression scores from adults who have never had to register but had been adjudicated, convicted, or received some provision of the court for a juvenile sexual offense. However, that population is virtually impossible to find given that juvenile offense information is, in most cases, confidential, and that several years have passed since such individuals had been involved in the justice system. It is unlikely that as adults such individuals would be associated with advocacy groups regarding registration, or lawyers and mental health professionals regarding their juvenile sexual offense. Even if they were, it is doubtful they would be willing to revisit such an issue from their past that they may have put behind them—or, more likely, are trying to put behind them. It is also

doubtful that they would be willing to risk disclosure of such an offense in their adult life. In this test of current and former registrant levels of depression, the formerly-registered group most closely represented the ideal control group. After controlling for six covariate predictors of depression, and given that both current and former registrant groups had committed a sexual offense as a juvenile that was addressed by the court, the finding that current registration significantly predicts severity of depression compared to that of former registrants is especially meaningful. It would be reasonable to expect that individuals in a sample of the ideal control group would have mean severity of depression scores somewhere between that of those never-registered and those formerly-registered. If current registration significantly predicts increased severity of depression compared to that of former registrants, than it is probable that current registration will predict increased severity of depression compared to that of never-registered adults who were adjudicated or convicted of a juvenile sexual offense.

In reviewing the analysis of the six potential registration-related predictors, two findings were especially significant. Individuals whose registration information remained nonpublic had higher severity of depression scores than those whose information was made public, either on the internet or through some other form of dissemination such as flyers, letters, or e-mail notifications. This finding was not expected. Those who were nonpublic current registrants had mean severity of depression scores of 16.82, representing moderately severe depression—the highest mean severity of depression score of public and nonpublic subgroups by current and former registration status. Nonpublic former registrants had the lowest mean severity of depression score amongst

the four groups, representing mild depression. This provides great promise that potentially iatrogenic effects of registration may alleviate after the sex offender registrant label is removed.

Eight-four percent of nonpublic registrants were adjudicated in juvenile court. The fact that mean severity of depression scores was greater for this group, and at the level of moderately severe depression, may have something to do with the expectations of youth adjudicated in juvenile court. It is possible that these youth expected to be impacted less by juvenile justice interventions for their misdeeds. After all, the basic tenet of the juvenile justice system is rehabilitation and the avoidance of stigma for youthful indiscretions (*United States v. Brian N.*, 1990; *United States v. One Juvenile Male*, 1994). As they mature into adulthood, they may begin to realize how significantly they are impacted by the sex offender registrant label, even when they have demonstrated rehabilitation has been achieved. When state sex offender registration laws include juvenile offenders it is not uncommon that they must abide by many of the same requirements as adult offenders with regards to their duty to register with law enforcement, frequency of registration, information registered, length of registration, residency restriction, travel restrictions/requirements, and other secondary registration-related laws. To better understand the reason for increased severity of depression in nonpublic registrants, and to validate this finding, further research is needed.

Not surprising, dependency on another person for housing was also found to predict increased severity of depression. Maintaining independence and self-sufficiency are key elements of adulthood (Mahmoud et al., 2012). Emerging adults consider no

longer living with parents to be an essential criterion to be considered fully adult (Arnett, 2004; Arnett, 2001). This study did not collect data regarding housing dependency from never-registered participants. It is possible that analysis of that same question for never-registered persons could also predict severity of depression in that population just as it did with the registered population.

Registration-related characteristics including age at registration, years registered, whether the offense was handled in the adult or juvenile justice system, whether the offense was a felony or misdemeanor, whether it required Tier III registration status, or whether there was a subsequent registerable offense, each did not predict increased severity of depression. Exploration of the effects of these specific registration-related characteristics on juvenile offender registrants carves a new path in registration research, and may indicate that the act of labeling a person as sex offender has more significance to the individual than the specific characteristics of registration associated with it.

Increased severity of depression along with the prevalence of suicidal ideation in currently-registered juvenile offenders, with 53% of participants having these thoughts on several days in the past two weeks, and 11% nearly every day, is consistent with the association between suicidal ideation and depression in the existing literature (Bhatta, Jefferis, Kavadas, Alemagno, Shaffer-King, 2014; Hooven, Snedker & Thompson, 2012; Lamis, et al., 2014; Stokes, McCoy, Abram, Byck, and Teplin, 2015). Issues with social integration can leave young adults without a “blueprint” for the role they assume in adult life and contributes to hopelessness and depression (Hooven, et al., 2012). Isolation is a key factor in suicide risk (Gould & Kramer, 2001; Hooven et al., 2012; Johnson et al.,

2002). Both social integration and isolation are common issues with juvenile sex offender registrants as they mature into adulthood, so it is not surprising that findings of depression and suicidal ideation in current registrants in this study support the existing literature.

Theoretical Interpretation

Merton's concept of manifest and latent effects of purposive social action urged researchers to analyze both intended, or manifest, functions resulting from an action, and the unintended consequences, or latent, functions, as well. He stressed the importance of functional analysis to determine both functional and dysfunctional consequences that contribute to the net effect of an action such as sexual offender registration of juvenile offenders. Analyzing and interpreting findings in the context of this theoretical framework, results from this study support that a relationship *does* exist between sanctioning juvenile sexual offender registration and latent impacts to a registrant's mental health, specifically depression, later in the registrant's adult life. A number of researchers have analyzed whether the policy of registering juvenile sex offenders has achieved its intended purpose (Batistini, et al., 2011; Caldwell & Dickinson, 2009; Caldwell et al., 2008; Letourneau & Armstrong, 2008; Letourneau et al., 2009b; Letourneau et al.; 2010; Stevenson et al., 2013). Knowledge from these studies, coupled with the findings regarding consequences documented here, contribute to a more accurate understanding of the net effects of juvenile sex offender registration policy.

Lemert's secondary deviance proposition of labeling theory asserts that deviant labeling for a criminal act creates negative consequences for the person labeled that can

lead to secondary deviant criminal behavior. Exploring new and different aspects of deviance as Kitsuse (1975) suggested, this study built upon existing labeling theory by suggesting and testing an *alternate non-criminogenic* secondary deviance proposition. Analysis and findings indicate that the policy of registering a juvenile as a sex offender is indeed related to an alternate non-criminogenic form of secondary deviance--depression. This finding expands the existing knowledge regarding labeling theory and secondary deviance.

Limitations of the Study

A limitation of this study is the small sample size. Larger sample sizes reduce standard error that may result from random fluctuations in the sample (Vogt, 2005). I anticipate that this might be a common issue with future research on this subject as well. Finding juvenile offender registrants is difficult, and once found, fears about potential disclosure of a registrant's status, doubts about the researcher's motives for conducting the study, and levels of hopelessness seem to influence participation.

Two-thirds of former registrants and one-half of current registrants were from Michigan. This limits generalizability of the study. In addition, geographic and demographic variables were not analyzed in relation to the research questions.

While this study established predictability, the presence of a relationship, and *potential* causality, as a non-experimental ex post-facto study it cannot establish causality. By accessing participants for the current and former registrant groups largely through advocacy, mental health, and legal organizations, a selection bias could threaten internal validity. By controlling for variables to minimize differences between groups,

this threat was reduced. This method of participant selection limits generalizability to the broader population of sex offender registrants registering for a juvenile offense. By obtaining participants through their affiliation with advocacy, mental health, and legal support groups, severity of depression scores could possibly be lower than actually found in the general juvenile offender registrant population. These individuals may have stronger support systems than juvenile sex offender registrants in general. In addition, mean depression scores could also be lower because persons suffering from depression may be less likely to participate. Conversely, participant bias (trustworthiness) could have resulted in inflated severity of depression scores. In an attempt to reduce the likelihood of this from occurring, participants were asked to confirm that they agree to be honest when taking the survey. Given that both the current registrant and former registrant groups had normally distributed PHQ-9 scores, it does not seem likely that bias resulted in inflated severity of depression scores.

Findings are limited by the accuracy of the PHQ-9 instrument, which were not validated using clinical interview. This was an impossibility because the survey was anonymous in order to bolster participation. Participant PHQ-9 scores were, however, found to highly correlate to CESD-R severity of depression scores.

Another limitation of this study is that the PHQ-9 instrument measures severity of depression for major depressive disorder, and as such, questions only relate to characteristics experienced in the past two weeks. Some registrants may still suffer from depression (ex. persistent minor depressive disorder) but could, at the time of this study, not be experiencing symptoms.

Recommendations for Future Research

Future research is recommended using a larger sample of current and former juvenile sex offender registrants to reduce standard error. That said, I fully understand how difficult it is to reach this population—especially former registrants. Reaching this population is only half the battle; it is an even greater challenge to gain the trust of eligible participants, especially regarding objectivity and confidentiality, such that they are willing to participate.

A larger study including more participants who currently or formerly registered in states other than Michigan could yield different mean severity of depression scores, as might studies of participants who are not affiliated with advocacy, mental health, or legal organizations. Longer-term studies to screen same-subjects for depression over time might also yield different severity of depression scores.

Same subject studies are suggested in which adults currently registering for a juvenile offense are surveyed for severity of depression, with follow-up several years later to survey a subgroup of persons who may no longer have to register. A comparison of same subject levels of depression may provide a stronger indication of whether improvements in the consequence of depression are realized.

Forging a new path in sex offender registration research, findings from this study inform a number of areas for further exploration. The unexpected finding that nonpublic registration predicts higher severity of depression scores warrants further study to confirm or refute findings in this study, and to delve deeper into why mean scores of current, former, and never-registered individuals are statistically different. Given this

study found that registration relates to non-criminal forms of secondary deviance, the propositions set forth by modified labeling theory which assert more specifically why deviance may occur after an individual is labeled also needs to be explored.

Assessing severity of depression using other scales of depression (e.g. BDI, HAM-D, SCID) is also recommended to validate findings.

Further, it is recommended that other potential consequences of registering juvenile offenders as sex offenders are studied. For example, this might include anxiety, hopelessness, resilience, coping, and harassment. Such studies would contribute to a more accurate evaluation of the net effect of juvenile registration policy.

Future analysis of the consequences of juvenile sex offender registration using a control group of juvenile's who committed a sexual offense that were not required to register is also suggested. As previously mentioned, this population will likely be very difficult to access--even more difficult than was experienced in this study when attempting to reach former juvenile offender registrant.

Implications for Social Change

This study explored consequences of juvenile sex offender registration and identified an *unintended* outcome of this policy. The practice of labeling juveniles with sexual behavior issues as sex offender registrants was found to have a predictive relationship with the latent iatrogenic effect, depression. This finding has a number of implications for social change that benefit policymakers, treatment providers, and juvenile offender registrants.

Implications for Policy

The policymaking process requires an accurate view of policy that is informed by the study of policy outcomes (Meier, 1994). In studying policy outcomes, the subjective categories of motivation must not be confused with the objective categories of function, or objective functional consequences (Merton, 1967, p. 115). Findings from this study provide knowledge that informs a more accurate view of juvenile sexual offender registration policy.

When existing policies carry high price-tags to implement and administer, when evidence of efficacy is lacking, empirical evidence does not justify need, and unintended consequences are found to create further deviance that increases individual harm and burden on society, it can be argued that policymakers have a responsibility to act and to initiate social change. We know from this study that juvenile sexual offender registration has a predictive relationship to increased severity of depression. Knowledge obtained from this study, coupled with research findings documented in the current literature will assist policy makers in better understanding and evaluating the effects of juvenile sex offender registration policy.

In addition, findings from this study support social mindfulness of the need to examine other juvenile justice policies for their unintended consequences as well.

Implications for Individuals

Importantly, the results of this study contribute to positive social change by informing the way in which societal responses, such as juvenile sex offender registration, may impact the health and well-being of children. They might influence future responses

intended to effectively further the prevention of sexual abuse, while at the same time safeguarding against potential harm to the very class of individuals this policy seeks to protect--children. Lemert (1967) forewarned that the “devaluation of the self on society’s terms ordinarily has a sequel of internal or psychic struggle, greatest where the sense of continuity of the self is massively threatened” (p. 53).

With old world philosophies of punishment and treatment, an individual’s *actual* threat to society provided less justification for imposing social control on a person “than by someone’s authoritative judgement of his potential menace” (Lemert, 1967, p. 59). It can be argued that these philosophies are still prevalent today. Our system needs to address the issues of sexual abuse squarely and honestly. There is no doubt that sexual abuse is a very important issue. Given low juvenile sexual offender recidivism rates, the creation of juvenile sex offender registration policies as we know them today, or the failure to change existing policies that neither achieve their intended purpose nor consider objective functional consequences is irresponsible. And especially if such policies cause harm to those upon which they are imposed, such practice is unethical.

Results from this study have implications for the early and on-going mental health services provided by the juvenile justice system to juveniles who commit a sexual offense who are subject to sex offender registration. This knowledge may also influence the interactions of those who work in the criminal justice system and how they interface with these individuals.

Theoretical Implications

Findings from this study have theoretical implications to labeling theory and its secondary deviance proposition. Results expand on the existing theory that consequences of labeling have secondary deviant *criminogenic* effects. In finding that labeling juvenile offenders as sex offender registrants predicted increased severity of depression, this study introduces the idea that alternate forms of secondary deviance that are non-criminogenic also exist. The implication is that the impacts of labeling on secondary deviance must not be limited to only those that are criminogenic. Future research of juvenile justice policies that are intended to deter crime should evaluate non-criminogenic effects as well, and in so doing, such research will contribute to a greater understanding of the net effect of a particular justice policy. We should not be too quick to assume that because juvenile sexual recidivism rates are low in youth who have sexually offended that labeling theory missed its mark when it comes to this population of delinquent youth. While the traditional secondary deviance proposition may not be supported, there is evidence that other non-criminogenic deviant effects, such as that of depression found in this study, are present. Further research of the effects of juvenile sexual offender registration and other juvenile justice policies are needed to test the assertions here.

Recommendations for Action

The analytical finding that the purposive social action of sanctioning juveniles with sexual behavior problems as sex offender registrants has a relationship to increased severity of depression narrows scientific implications, and contributes to knowledge that informs political and ideological thinking regarding juvenile sexual offender registration

policy. The goal of such policy is sexual abuse prevention. While research has shown that applying sexual offender registration policies to children does not achieve that goal, and contributes to consequences that appear to be detrimental to those subject to it, that does not minimize the need for policies that prevent sexual abuse by children. Findings from this study, and those in the existing literature related to juvenile sexual offender registration support the need for a broader view of sexual abuse to inform new policies that have greater likelihood of efficacy. Three recommendations are made here.

Revisit existing juvenile sexual offender registration policies. Policymakers, and those who support them, need to revisit existing policies to evaluate the net effect of juvenile sexual offender registration. This net effect includes synthesis of both manifest, or intended consequences of the policy, and the latent, or unintended consequences as well. In evaluating policy, questions need to be asked that are broad enough to encourage exploration of alternative solutions--some of which may even be better solutions than those already implemented (Majchrzak & Markus, 2014).

Focus on treatment. Research has demonstrated the efficacy of mental health treatment at preventing sexual abuse in juveniles with sexual behavior issues (Reitzel, 2005; Reitzel & Carbonell, 2006; Waite et al., 2005; Worling & Curwen, 2000; Worling, et al., 2010). By focusing on treatment that changes behavior, and addressing the needs of an offender holistically, reductions in abuse are realized without the consequences associated with labeling and stigmatizing youth for lengthy periods of time.

Focus on primary prevention. Primary prevention often seems to be a lost element in public policy decision making regarding sexual abuse prevention, but one that

likely holds the greatest promise. In speaking to Patty Wetterling, Chairman of the Board, National Center for Missing and Exploited Children, and mother of Jacob Wetterling, for whom the first federal sex offender registration law was named, I asked her what her wishes were regarding sexual abuse policy. She simply said: “If only we’d spend as much on prevention as we’ve spent on sexual offender registration” (personal communication, May, 2015).

Conclusion

In finding that current sex offender registration for a juvenile sexual offense significantly predicts a relationship to increased severity of depression after a registrant has matured into adulthood, compared to adults who have never had to register, and those who formerly had to register for a juvenile sexual offense, this study extends knowledge regarding the consequences of juvenile sex offender registration policy, and contributes to the analysis of the “net effect” of such policy.

Findings suggest that an alternate form of Lemert’s secondary deviance proposition of labeling theory exists, in that deviant labeling, such as that of “sex offender registrant” sanctioned upon juveniles with sexual behavior issues, creates negative consequences for the person labeled that can lead to secondary deviant behavior that is non-criminogenic—depression.

Further, in considering the lack of significance of registration-related variables (i.e. length of registration, age at initial registration, risk tier, public/nonpublic registration information, court of adjudication/conviction, misdemeanor/felony offense type, and subsequent sexual offense) to predict an increase in severity of depression, and

that current registration significantly increases severity of depression, it must be questioned whether it may simply be the act of labeling a juvenile offender as a sex offender registrant and the requirements and restrictions associated with it, that causes the greatest harm.

The most important contribution this research may provide, is in answering the question found in existing literature and the U.S. DOJ Sex Offender Management Assessment and Planning Initiative project report regarding whether the policy of labeling and registering a juvenile with sexual behavior issues as a sex offender registrant has potentially iatrogenic effects (Caldwell, 2002; Chaffin & Bonner, 1998; Chaffin et al., 2002; Letourneau & Miner, 2005; Trivits & Reppucci, 2002; U.S. Department of Justice, Office of Justice Programs, 2014; Zimring, 2004). Findings from this research support that it does.

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Appendix A: PHQ-9 Instrument

PATIENT HEALTH QUESTIONNAIRE-9 (PHQ-9)				
Over the <u>last 2 weeks</u> , how often have you been bothered by any of the following problems? (Use <input checked="" type="checkbox"/> to indicate your answer)	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself — or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed? Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3
FOR OFFICE CODING <u>0</u> + _____ + _____ + _____ =Total Score: _____				
If you checked off <u>any</u> problems, how <u>difficult</u> have these problems made it for you to do your work, take care of things at home, or get along with other people?				
Not difficult at all <input type="checkbox"/>	Somewhat difficult <input type="checkbox"/>	Very difficult <input type="checkbox"/>	Extremely difficult <input type="checkbox"/>	

Developed by Drs. Robert L. Spitzer, Janet B.W. Williams, Kurt Kroenke and colleagues, with an educational grant from Pfizer Inc. No permission required to reproduce, translate, display or distribute.

Note. From “Patient Health Questionnaire-9 (PHQ-9),” by R. L. Spitzer, J. B. W. Williams, K. Kroenke, and Colleagues, n.d. Retrieved from http://www.phqscreeners.com/pdfs/02_PHQ-9/English.pdf. Permission not required to reprint.

Appendix B: PHQ-9 Permission

Janet B.W. Williams, PhD
7 Random Road
Princeton, NJ 08540

September 10, 2014

Sharon Denniston
1136 Hill Line Trail
Bloomfield Hills, MI 48301

Dear Ms. Denniston:


Regarding authorization to use the PHQ-9 instrument for depression screening:

Permission is not required to reproduce, translate, display or distribute the PHQ-9 depression instrument, as it is in the public domain. You are free to use it in your survey for your dissertation research without restrictions.

In addition, there are no formal restrictions on who can use or score the PHQ-9. No special training is required. As a non-mental health professional you can certainly do so. It is quite simple to score and you do not need permission to do this.

Good luck to you on your dissertation.

Best regards,



Janet B.W. Williams, PhD
Professor Emerita
Depts. of Psychiatry and Neurology
Columbia University
bw5@columbia.edu

Appendix C: CESD-R Instrument

Center for Epidemiologic Studies Depression Scale – Revised (CESD-R)

Below is a list of the ways you might have felt or behaved. Please check the boxes to tell me how often you have felt this way in the past week or so.	Last Week				Nearly every day for 2 weeks
	Not at all or Less than 1 day	1 - 2 days	3 - 4 days	5 - 7 days	
My appetite was poor.	0	1	2	3	4
I could not shake off the blues.	0	1	2	3	4
I had trouble keeping my mind on what I was doing.	0	1	2	3	4
I felt depressed.	0	1	2	3	4
My sleep was restless.	0	1	2	3	4
I felt sad.	0	1	2	3	4
I could not get going.	0	1	2	3	4
Nothing made me happy.	0	1	2	3	4
I felt like a bad person.	0	1	2	3	4
I lost interest in my usual activities.	0	1	2	3	4
I slept much more than usual.	0	1	2	3	4
I felt like I was moving too slowly.	0	1	2	3	4
I felt fidgety.	0	1	2	3	4
I wished I were dead.	0	1	2	3	4
I wanted to hurt myself.	0	1	2	3	4
I was tired all the time.	0	1	2	3	4
I did not like myself.	0	1	2	3	4
I lost a lot of weight without trying to.	0	1	2	3	4
I had a lot of trouble getting to sleep.	0	1	2	3	4
I could not focus on the important things.	0	1	2	3	4

REFERENCE: Eaton, W. W., Smith, C., Ybarra, M., Muntaner, C., Tien, A. (2004). Center for Epidemiologic Studies Depression Scale: review and revision (CESD and CESD-R). In ME Maruish (Ed.). *The Use of Psychological Testing for Treatment Planning and Outcomes Assessment* (3rd Ed.), Volume 3: Instruments for Adults, pp. 363-377. Mahwah, NJ: Lawrence Erlbaum.

Note. From “Center for Epidemiologic Studies Depression Scale: Review and revision (CESD and CESD-R),” by W. W. Eaton, C. Smith, M. Ybarra, C. Muntaner, and A. Tien, 2004. In M. E. Maruish (Ed.), *The Use of Psychological Testing for Treatment Planning and Outcomes Assessment, 3rd ed.: Instruments for Adults* (p. 369), Mahwah, NJ: Lawrence Erlbaum Associated. Permission not required to reprint.

Appendix D: CESD-R Permission

Subject: RE: Permission to use and score the CESD-R
Date: 9/10/2014 10:00:58 P.M. Eastern Daylight Time
From: weaton1@jhsph.edu
To:

Shartyle@aol.com

Sent from the Internet ([Details](#))

Sharon

You are free to use the CESD-R in whatever way you wish. The scoring algorithm is provided on the website <http://cesd-r.com>.

Bill

William W. Eaton, PhD
 Professor
 Department of Mental Health
 Johns Hopkins Bloomberg School of Public Health
 Room 880B, 624 North Broadway
 Baltimore, MD 21205
 phone: 410 955 3923
<http://www.jhsph.edu/dept/mh/>

From: Shartyle@aol.com [mailto:Shartyle@aol.com]
Sent: Wednesday, September 10, 2014 9:55 PM
To: weaton@jhsph.edu
Subject: Permission to use and score the CESD-R

Dr. Eaton,
 I am a Ph.D. student in Public Policy at Walden University. I am currently working on my dissertation. I am studying the latent impact of a juvenile justice policy on mental health in adulthood. I would like to use the CESD-R instrument in my survey. I have two questions:

I notice that the CESD-R instrument is in the public domain, so I am free to use it in my research, including the inclusion of the questions in my survey, correct?

As a non-mental health professional, do I need special permission to score the CESD-R for research purposes? If so, from whom, and how, do I obtain that? Is there special training required to score it? From the information available online through the Center for Epidemiologic Studies, it does not appear to be difficult to score. The scores will not be provided to the participant, nor will they be used for clinical purposes.

Thank you so much.

Sharon Denniston
 248-933-3982
shartyle@aol.com
sharon.dennistontylenda@waldenu.edu

Appendix E: Juvenile Sex Offender Registration Impact Survey

It is important that you review the JSOR Impact Study Consent Form so that you understand some important things about this study before you decide whether you want to participate. The consent form is found on pages 2 and 3 of this survey.

By participating in this study and completing the survey, it is assumed that you allow your answers to be used for research purposes.

The purpose of this study is to learn how juvenile sexual offender registration laws might affect people.

You are eligible to participate in this study if you currently live in the United States and are between 21 and 39 years of age, and meet one of the following conditions:

- You have *never* had to register as a sex offender
- You are *currently* required to register as a sex offender only because of 1 or more offenses that occurred when you were less than 18 years of age
- You *were* required to register as a sex offender *in the past* only because of 1 or more offenses that occurred when you were less than 18 years of age, but you no longer have to register

Your responsibilities in this study are to:

- Read the entire consent form before participating,
- Answer on-line survey questions using the internet that take approximately 20 to 30 minutes to complete

If you have any questions about this study, or to obtain the results of this study after the answers to the questions in this study have been analyzed, please contact the researcher at edumission@aol.com. You can also find the results posted at:

<https://www.scribd.com/doc/262257637/JSOR-Survey-Summary-Results>

Being in this type of study may involve some risk of minor discomfort similar to what you might encounter in daily life, such as stress, or becoming upset as you recall your experiences. If you feel discomfort and would like mental health assistance, call or go on-line to:

The National Hopeline Center

1-800-442-HOPE or <http://hopeline.com/gethelpnow.html>

Thank you for your participation in this very important study.

For the purpose of this survey, regardless of whether you were required to register as a sex offender or not, a sexually related offense includes:

- distribution of sexual photos of a minor
- gross indecency
- indecent exposure
- pandering
- possession of child pornography or child sexually abusive material
- rape
- sexual abuse
- sexual assault
- sexual battery
- sexual conduct
- sexual contact (sexual touching)
- sexual molestation
- sexual penetration using mouth, penis, or other object into the mouth, anus, or vagina
- sodomy
- soliciting child for sexual purposes (via internet, in person, or other means of communication)
- soliciting for prostitution
- surveillance/voyeurism
- any other offense similar to any or the above
- any other offense that by its nature constitutes a sexual offense
- any other offense that required/requires sex offender registration
- any attempt at any of the above offenses

Table A1

Survey Questions

Questions (81)	Valid Values	Data Type	Function	Related Research Question
Qualifying, Demographic, and Historical Questions (49) for all participants				
1. Do you willingly consent to participate in this research study?	0 = No 1 = Yes	Dichotomous	Qualification	
2. Do you agree to answer questions honestly, to the best of your ability, and to complete this survey only once?	0 = No 1 = Yes	Dichotomous	Qualification	
3. What is your current age?	Years/Months	Continuous	Qualification	
4. Do you live in the United States	0 = No 1 = Yes	Dichotomous	Qualification	
5. Are you currently, or have you in the past been required to register as a sex offender for an offense (the act itself) occurred when you were 18 years of age or older?	0 = No 1 = Yes	Dichotomous	Qualification	
6. What is your gender?	0 = Female 1 = Male	Dichotomous (Control Variable)	Analysis	RQ1 RQ2 RQ3
7. What is your race/ethnicity?	White (Non-Hispanic) Black (Non-Hispanic) Hispanic Asian Other	Categorical (Control Variable)	Analysis	RQ1 RQ2 RQ3
8. What is your relationship status?	0 = Not in a committed relationship 1 = In a committed relationship	Dichotomous (Control Variable)	Analysis	RQ1 RQ2 RQ3

9. How many years of education have you completed (do not include kindergarten)?	Number (Years)	Continuous (Control Variable)	Analysis	RQ1 RQ2 RQ3
10. What is your approximate annual income?	Number (Dollars)	Continuous (Control Variable)	Analysis	RQ1 RQ2 RQ3
11. Is there a history of psychiatric problems in your family?	0 = No 1 = Yes	Dichotomous (Control Variable)	Analysis	RQ1 RQ2 RQ3
12. Have you ever had a substance abuse problem?	0 = No 1 = Yes	Dichotomous (Control Variable)	Analysis	RQ1 RQ2 RQ3
13. Have you ever been a victim of child abuse or neglect?	0 = No 1 = Yes	Dichotomous (Control Variable)	Analysis	RQ1 RQ2 RQ3
14. Have you ever been a victim of sexual abuse?	0 = No 1 = Yes	Dichotomous (Control Variable)	Analysis	RQ1 RQ2 RQ3
15. Have you ever been diagnosed with a learning or physical disability?	0 = No 1 = Yes	Dichotomous (Control Variable)	Analysis	RQ1 RQ2 RQ3
16. Have you ever been confined to a juvenile detention facility, jail, prison, or correctional facility for more than 30 days?	0 = No 1 = Yes	Dichotomous (Control Variable)	Analysis	RQ1 RQ2 RQ3
17. Do you take medication for your mental or emotional health?	0 = No 1 = Yes	Dichotomous (Control Variable)	Analysis	RQ1 RQ2 RQ3
18. When you were a child were your parents ever jailed or imprisoned for a crime?	0 = No 1 = Yes	Dichotomous (Control Variable)	Analysis	RQ1 RQ2 RQ3

For questions 19 – 24 consider only sexually related offenses (the act itself) that occurred when you were less than 18 years of age: (Note: Each offense should be included in only 1 of the 6 responses, so the total of the responses to these questions adds up to the total number of sexual offenses that occurred when you were less than 18 years of age; if you had no sexual offenses when you were less than 18 years of age, all of these questions should be 0; use the definition of sexual offenses as defined above):	Questions 19 - 24, 26 – 31, 32 – 34, and 35 - 37 are tallied to provide the number of offenses as a control variable in analysis of the dichotomous variable for Criminal History	Dichotomous (Control variable)	Authentication & Analysis	RQ1 RQ2 RQ3
19. How many did you plead guilty or no contest to in juvenile, family, or probate court?	Number	Continuous	Authentication & Analysis	RQ1 RQ2 RQ3
20. How many were you found guilty of in juvenile, family, or probate court?	Number	Continuous	Authentication & Analysis	RQ1 RQ2 RQ3
21. How many were you permitted to participate in a program by the juvenile, family, or probate court that allowed you to not have a criminal record	Number	Continuous	Authentication & Analysis	RQ1 RQ2 RQ3
22. How many did you plead guilty or no contest to in adult court?	Number	Continuous	Authentication & Analysis	RQ1 RQ2 RQ3
23. How many were you found guilty of in adult court?	Number	Continuous	Authentication & Analysis	RQ1 RQ2 RQ3
24. How many were you permitted to participate in a program by the adult court that allowed you to not have a criminal record?	Number	Continuous	Authentication & Analysis	RQ1 RQ2 RQ3

25. Regarding the sexual offenses you counted in question 19 - 24, how many of these required you to register as a sex offender?	Number	Continuous	Qualification Authentication & Differentiation of Groups	RQ1 RQ2 RQ3
For question 26 – 31, consider only non-sexual offenses (the act itself) that occurred when you were less than 18 years of age (Note: Each offense should be included in only 1 of the 6 responses, so the total of the responses to these questions adds up to the total number of non-sexual offenses that occurred when you were less than 18 years of age; if you had no non-sexual offenses when you were less than 18 years of age, all of these questions should be 0):	Questions 19 - 24, 26 – 31, 32 – 34, and 35 - 37 are tallied to provide the number of offenses as a control variable in analysis of the dichotomous variable for Criminal History	Dichotomous (Control Variable)	Authentication & Analysis	RQ1 RQ2 RQ3
26. How many did you plead guilty or no contest to in juvenile, family, or probate court?	Number	Continuous	Authentication & Analysis	RQ1 RQ2 RQ3
27. How many were you found guilty of in juvenile, family, or probate court?	Number	Continuous	Authentication & Analysis	RQ1 RQ2 RQ3
28. How many were you permitted to participate in a program by the juvenile, family, or probate court that allowed you to not have a criminal record?	Number	Continuous	Authentication & Analysis	RQ1 RQ2 RQ3
29. How many did you plead guilty or no contest to in adult court?	Number	Continuous	Authentication & Analysis	RQ1 RQ2 RQ3
30. How many were you found guilty of in adult court?	Number	Continuous	Authentication & Analysis	RQ1 RQ2 RQ3
31. How many were you permitted to participate in a program by the adult court that allowed you to not have a criminal record?	Number	Continuous	Authentication & Analysis	RQ1 RQ2 RQ3

<p>For questions 32 – 34, consider only sexually related offenses (the act itself) that occurred when you were 18 years of age or older (Note: Each offense should be included in only 1 of the 3 responses, so the total of the responses to these questions adds up to the total number of sexual offenses that occurred when you were 18 years if age or older; if you had no sexual offenses when you were 18 or older, all of these questions should be 0; use the definition of sexual offenses as defined above):</p>	<p>Questions 19 - 24, 26 – 31, 32 – 34, and 35 - 37 are tallied to provide the number of offenses as a control variable in analysis of the dichotomous variable for Criminal History</p>	<p>Dichotomous (Control Variable)</p>	<p>Authentication & Analysis</p>	<p>RQ1 RQ2 RQ3</p>
<p>32. How many did you plead guilty or no contest to in adult court?</p>	<p>Number</p>	<p>Continuous</p>	<p>Authentication & Analysis</p>	<p>RQ1 RQ2 RQ3</p>
<p>33. How many were you found guilty of in adult court?</p>	<p>Number</p>	<p>Continuous</p>	<p>Authentication & Analysis</p>	<p>RQ1 RQ2 RQ3</p>
<p>34. How many were you permitted to participate in a program by the adult court that allowed you to not have a criminal record?</p>	<p>Number</p>	<p>Continuous</p>	<p>Authentication & Analysis</p>	<p>RQ1 RQ2 RQ3</p>
<p>For questions 35 –37, consider only non-sexual offenses that occurred when you were 18 years of age or older (Note: Each offense should be included in only 1 of the 3 responses, so the total of the responses to these questions adds up to the total number of non-sexual offenses that occurred when you were 18 years of age or older; if you had no non-sexual offenses when you were 18 or older, all of these questions should be 0.)</p>	<p>Questions 19 - 24, 26 – 31, 32 – 34, and 35 - 37 are tallied to provide the number of offenses as a control variable in analysis of the dichotomous variable for Criminal History</p>	<p>Dichotomous (Control Variable)</p>	<p>Authentication & Analysis</p>	<p>RQ1 RQ2 RQ3</p>
<p>35. How many did you plead guilty or no contest to in adult court?</p>	<p>Number</p>	<p>Continuous</p>	<p>Authentication & Analysis</p>	<p>RQ1 RQ2 RQ3</p>

36. How many were you found guilty of in adult court?	Number	Continuous	Authentication & Analysis	RQ1 RQ2 RQ3
37. How many were you permitted to participate in a program by the adult court that allowed you to not have a criminal record?	Number	Continuous	Authentication & Analysis	RQ1 RQ2 RQ3
38. Have you ever been diagnosed by a medical doctor or mental health professional with depression?	0 = No 1 = Yes	Dichotomous	Validation	RQ1 RQ2 RQ3
39. Please select one of the following (please read all choices before responding):	a. I have never been required to register as a sex offender for a juvenile or adult offense. b. I am currently required to register as a sex offender solely for 1 or more offenses that occurred when I was less than 18 years of age. c. In the past I was required to register as a sex offender solely for 1 or more offenses that occurred when I was less than 18 years of age, but I am no longer required to register as a sex offender	Categorical	Qualification Differentiation of Groups based on Independent Variable	RQ1 RQ2 RQ3
Question for current registrants only (1)				
40. How many total years are you required to register?	Years	Continuous (Potential Covariate)	Authentication	RQ1 RQ2 RQ3
Question for former registrants only (1)				

41. What was your age when registration was discontinued?	Years/Months	Continuous (Potential Covariate)	Authentication	RQ1 RQ2 RQ3
			Analysis	RQ3
Questions for current and former registrants only (10)				
42. What was your age when you first had to register?	Years/Months	Continuous (Potential Covariate)	Authentication	RQ1 RQ2 RQ3
			Analysis	RQ3
43. In what type of court was the first offense requiring registration handled in?	0 = Juvenile/Probate/ Family Court 1 = Adult Court	Dichotomous (Potential Covariate)	Authentication	RQ1 RQ2 RQ3
			Analysis	RQ3
44. Was/is your registration information available to the public? (For example, on the internet or through other forms of community notification like e-mails, flyers, postcards)	0 = No 1 = Yes	Dichotomous (Potential Covariate)	Authentication	RQ1 RQ2 RQ3
			Analysis	RQ3
45. Were any of the offenses for which you had/have to register a felony?	0 = No 1 = Yes	Dichotomous (Potential Covariate)	Authentication	RQ1 RQ2 RQ3
			Analysis	RQ3
46. Regarding the sexually related offenses you counted in questions 19 – 24 that occurred when you were less than 18 years old, were the charges part of:	0 = A single court case with 1 or more offenses 1 = Multiple court cases handled separately	Dichotomous (Potential Covariate)	Authentication	RQ1 RQ2 RQ3
			Analysis	RQ3
47. What was/is your registration risk level?	No designation Low or Tier 1 Medium or Tier 2 High or Tier 3 Other	Categorical (Potential Covariate)	Authentication	RQ1 RQ2 RQ3
			Analysis	RQ3
48. Are you dependent on someone else for your housing?	0 = No 1 = Yes	Dichotomous (Potential Covariate)	Authentication	RQ1 RQ2 RQ3
			Analysis	RQ3

49. In what state were you first adjudicated or convicted of a registerable offense?	U.S. States & District of Columbia	Categorical	Authentication	RQ1 RQ2 RQ3
50. In what state were you first required to register?	U.S. States & District of Columbia	Categorical	Authentication	RQ1 RQ2 RQ3
51. In what state did you last register?	U.S. States & District of Columbia	Categorical	Authentication	RQ1 RQ2 RQ3
<u>PHQ-9 Questions (9) for all participants</u>	Questions 52 – 60 result in a total score for severity of depression using the PHQ-9 instrument	Scale Continuous (Dependent Variable)	Analysis	RQ1 RQ2 RA3
Over the past 2 weeks, how often have you been bothered by any of the following:				
52. Little interest or pleasure in doing things?	0 = Not at all 1 = Several Days 2 = More than half the days 3 = Nearly every day			
53. Feeling down, depressed, or hopeless?	0 = Not at all 1 = Several Days 2 = More than half the days 3 = Nearly every day			
54. Trouble falling or staying asleep, or sleeping too much?	0 = Not at all 1 = Several Days 2 = More than half the days 3 = Nearly every day			
55. Feeling tired or having little energy?	0 = Not at all 1 = Several Days 2 = More than half the days 3 = Nearly every day			
56. Poor appetite or overeating?	0 = Not at all 1 = Several Days 2 = More than half the days 3 = Nearly every day			

57. Feeling bad about yourself—or that you are a failure or have let yourself or your family down?

0 = Not at all
1 = Several Days
2 = More than half the days
3 = Nearly every day

58. Trouble concentrating on things, such as reading the newspaper or watching television?

0 = Not at all
1 = Several Days
2 = More than half the days
3 = Nearly every day

59. Moving or speaking so slowly that other people could have noticed? Or the opposite—being so fidgety or restless that you have been moving around a lot more than usual?

0 = Not at all
1 = Several Days
2 = More than half the days
3 = Nearly every day

60. Thoughts that you would be better off dead, or hurting yourself in some way?

0 = Not at all
1 = Several Days
2 = More than half the days
3 = Nearly every day

Questions 61 – 80
result in a total score
for severity of
depression using the
CESD-R instrument

Scale &
Categorical
Conversion

Validation

RQ1
RQ2
RA3

CESD-R Questions (20) for all participants

Below is a list of the ways you might have felt or behaved. Please check the boxes to tell me how often you have felt this way in the past week or so.

61. My appetite was poor.

0 = Not at all or less than 1 day
1 = 1-2 days
2 = 3-4 days
3 = 5-7 days
4 = Nearly every day for 2 weeks

62. I could not shake off the blues.

0 = Not at all or less than 1 day
1 = 1-2 days
2 = 3-4 days
3 = 5-7 days
4 = Nearly every day for 2 weeks

63. I had trouble keeping my mind on what I was doing.
- 0 = Not at all or less than 1 day
1 = 1-2 days
2 = 3-4 days
3 = 5-7 days
4 = Nearly every day for 2 weeks
64. I felt depressed.
- 0 = Not at all or less than 1 day
1 = 1-2 days
2 = 3-4 days
3 = 5-7 days
4 = Nearly every day for 2 weeks
65. My sleep was restless.
- 0 = Not at all or less than 1 day
1 = 1-2 days
2 = 3-4 days
3 = 5-7 days
4 = Nearly every day for 2 weeks
66. I felt sad.
- 0 = Not at all or less than 1 day
1 = 1-2 days
2 = 3-4 days
3 = 5-7 days
4 = Nearly every day for 2 weeks
67. I could not get going.
- 0 = Not at all or less than 1 day
1 = 1-2 days
2 = 3-4 days
3 = 5-7 days
4 = Nearly every day for 2 weeks
68. Nothing made me happy.
- 0 = Not at all or less than 1 day
1 = 1-2 days
2 = 3-4 days
3 = 5-7 days
4 = Nearly every day for 2 weeks
69. I felt like a bad person.
- 0 = Not at all or less than 1 day
1 = 1-2 days
2 = 3-4 days
3 = 5-7 days
4 = Nearly every day for 2 weeks

70. I lost interest in my usual activities.
- 0 = Not at all or less than 1 day
 1 = 1-2 days
 2 = 3-4 days
 3 = 5-7 days
 4 = Nearly every day for 2 weeks
71. I slept much more than usual.
- 0 = Not at all or less than 1 day
 1 = 1-2 days
 2 = 3-4 days
 3 = 5-7 days
 4 = Nearly every day for 2 weeks
72. I felt like I was moving too slowly.
- 0 = Not at all or less than 1 day
 1 = 1-2 days
 2 = 3-4 days
 3 = 5-7 days
 4 = Nearly every day for 2 weeks
73. I felt fidgety.
- 0 = Not at all or less than 1 day
 1 = 1-2 days
 2 = 3-4 days
 3 = 5-7 days
 4 = Nearly every day for 2 weeks
74. I wished I were dead.
- 0 = Not at all or less than 1 day
 1 = 1-2 days
 2 = 3-4 days
 3 = 5-7 days
 4 = Nearly every day for 2 weeks
75. I wanted to hurt myself.
- 0 = Not at all or less than 1 day
 1 = 1-2 days
 2 = 3-4 days
 3 = 5-7 days
 4 = Nearly every day for 2 weeks
76. I was tired all the time.
- 0 = Not at all or less than 1 day
 1 = 1-2 days
 2 = 3-4 days
 3 = 5-7 days
 4 = Nearly every day for 2 weeks

77. I did not like myself. 0 = Not at all or less than
1 day
1 = 1-2 days
2 = 3-4 days
3 = 5-7 days
4 = Nearly every day for
2 weeks
78. I lost a lot of weight
without trying to. 0 = Not at all or less than
1 day
1 = 1-2 days
2 = 3-4 days
3 = 5-7 days
4 = Nearly every day for
2 weeks
79. I had a lot of trouble
getting to sleep. 0 = Not at all or less than
1 day
1 = 1-2 days
2 = 3-4 days
3 = 5-7 days
4 = Nearly every day for
2 weeks
80. I could not focus on the
important things. 0 = Not at all or less than
1 day
1 = 1-2 days
2 = 3-4 days
3 = 5-7 days
4 = Nearly every day for
2 weeks

Closing Question (1) for all
participants

- | | | | |
|---|-------------------|-------------|---------------|
| 81. This concludes the study.
Do you agree that you
consent to participate in
this study and that the data
you provided may be used
for research purposes? | 0 = No
1 = Yes | Dichotomous | Qualification |
|---|-------------------|-------------|---------------|
-

Note. Functions include: Qualification, Differentiation, Analysis, Validation, and Authentication

Thank you for your participation in this very important study.

If you feel you need mental health assistance after completing this survey, please call or go on-line to:

The National Hopeline Center
1-800-442-HOPE or <http://hopeline.com/gethelpnow.html>

Study results can be found at the following internet link when completed:

<https://www.scribd.com/doc/262257637/JSOR-Survey-Summary-Results>

They may also be obtained by contacting the researcher at edumission@aol.com