Youth-At Risk Behaviors within the School System in Trinidad and Tobago

Se-Anne Chance

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Youth-At Risk Behaviors within the School System in Trinidad and Tobago

By

Se-Anne Chance

A Dissertation submitted in partial satisfaction of the requirements for the degree Doctor of Philosophy in Family Studies

May 2020
Each person whose signature appears below certifies that this dissertation in his/her opinion is adequate, in scope and quality, as a dissertation for the degree Doctor of Philosophy.

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Table of Contents

Approval Page.................................................................................................................. iii

List of Tables .................................................................................................................... ix

List of Figures ................................................................................................................... x

List of Abbreviations ....................................................................................................... xi

Abstract ........................................................................................................................... xii

CHAPTER 1 ....................................................................................................................... 1

INTRODUCTION .............................................................................................................. 1

  Statement of the Problem............................................................................................... 2
  Background ..................................................................................................................... 4
  Study Objectives .......................................................................................................... 5
  Significance and Purpose of the Study .......................................................................... 6
  Cultural Setting ............................................................................................................. 6
  Purpose of the study ....................................................................................................... 9
  Chapter Summary ......................................................................................................... 11

CHAPTER 2 ....................................................................................................................... 12

CONCEPTUAL FRAMEWORK ......................................................................................... 12

  Basic Tenets of the Theory of Human Development ................................................... 13
    Key Propositions ......................................................................................................... 14
  Definitions of Key Concepts ......................................................................................... 15
  Ecological Systems of Human Development ............................................................... 15
  The Role of Individual Characteristics in Human Development ................................. 17
  The Duality of Individual and Contextual Characteristic in Proximal Processes .......... 18
  A Bioecological Approach to the Study At-risk Youth .................................................. 19
    Risk Domains of Youth in Diverse Settings ................................................................. 19
  Features of the Bioecological Model: Process, Person, Context, and Time (PPCT) ......... 19
  The Ecological Risk/Protective Theoretical Model ....................................................... 23
  Chapter Summary ......................................................................................................... 24

CHAPTER 3 ....................................................................................................................... 25

LITERATURE REVIEW ................................................................................................. 25

  Definition of At-risk Youth ............................................................................................ 25
<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Characteristics of At-risk Youth</td>
<td>25</td>
</tr>
<tr>
<td>Caribbean At-Risk Youth Profiles</td>
<td>26</td>
</tr>
<tr>
<td>Profiles of Trinidad and Tobago At-risk Youth</td>
<td>26</td>
</tr>
<tr>
<td>Risk and Protective Factors of the Social Development Model (SDM)</td>
<td>27</td>
</tr>
<tr>
<td>School-Based Interventions for At-risk Youth</td>
<td>28</td>
</tr>
<tr>
<td>School-wide Positive Behaviors Support (PBS), Social, Emotional, Behavioral (SEB) Programs /Social Emotional Learning (SEL)</td>
<td>29</td>
</tr>
<tr>
<td>Social, Emotional, Behavioral (SEB) Programs /Social Emotional Learning (SEL)</td>
<td>29</td>
</tr>
<tr>
<td>School Climate</td>
<td>30</td>
</tr>
<tr>
<td>Chapter Summary</td>
<td>32</td>
</tr>
<tr>
<td>CHAPTER 4</td>
<td>37</td>
</tr>
<tr>
<td>METHODOLOGY</td>
<td>37</td>
</tr>
<tr>
<td>Research Questions/Hypotheses</td>
<td>37</td>
</tr>
<tr>
<td>Study Design</td>
<td>39</td>
</tr>
<tr>
<td>Planning and Pre-Study Design</td>
<td>39</td>
</tr>
<tr>
<td>Participants</td>
<td>40</td>
</tr>
<tr>
<td>Recruitment</td>
<td>40</td>
</tr>
<tr>
<td>Sampling</td>
<td>40</td>
</tr>
<tr>
<td>Informed Consent</td>
<td>41</td>
</tr>
<tr>
<td>Survey Instrument/Measures</td>
<td>42</td>
</tr>
<tr>
<td>Data Collection Methods</td>
<td>45</td>
</tr>
<tr>
<td>Data Analysis</td>
<td>47</td>
</tr>
<tr>
<td>Chapter Summary</td>
<td>48</td>
</tr>
<tr>
<td>CHAPTER 5</td>
<td>49</td>
</tr>
<tr>
<td>ARTICLE 1</td>
<td>49</td>
</tr>
<tr>
<td>ABSTRACT</td>
<td>49</td>
</tr>
<tr>
<td>Introduction</td>
<td>50</td>
</tr>
<tr>
<td>Problem Behavior Defined</td>
<td>50</td>
</tr>
<tr>
<td>Background</td>
<td>51</td>
</tr>
<tr>
<td>Interventions for At-risk Youth</td>
<td>52</td>
</tr>
<tr>
<td>Youth Behavior Problems within the Caribbean Context</td>
<td>52</td>
</tr>
<tr>
<td>Study Setting</td>
<td>54</td>
</tr>
<tr>
<td>Current Study</td>
<td>54</td>
</tr>
<tr>
<td>Methods</td>
<td>56</td>
</tr>
<tr>
<td>Consent and Data Collection</td>
<td>56</td>
</tr>
<tr>
<td>Sampling/Participants</td>
<td>56</td>
</tr>
<tr>
<td>Measures</td>
<td>57</td>
</tr>
</tbody>
</table>
## Summary and Implications

Summary of Findings ........................................................................................................ 135
Modifications Made from Original Proposal ................................................................. 136
Implications ....................................................................................................................... 137
Limitations ......................................................................................................................... 139
Chapter Summary ............................................................................................................. 141
References ......................................................................................................................... 143

## Appendices

......................................................................................................................................... 158
List of Tables

Table 1: Descriptive of Demographic and Outcome Measures of Lifetime Substance Use, Witnessed/Perpetrated Violence and Antisocial Behavior as Reported by Adolescents

Table 2: Correlation Between School Risk and Protective Factors and Lifetime Substance Use, Antisocial Behavior and Perpetrated/Witnessed Violence as Reported by Adolescents

Table 3: Wald and Odd Ratio Parameter Estimates for Lifetime Substance Use, Antisocial Behavior and Violence Perpetration

Table 4: Parameter Estimates for Logistic Regress Model of School, Family and Individual Predictors of Lifetime Substance Use as Reported by Adolescents

Table 5: Parameter Estimates for Logistic Regress Model of School, Family and Individual Predictors of Witnessed/Perpetrated Violence as Reported by Adolescents

Table 6: Parameter Estimates for Logistic Regress Model of School, Family and Individual Predictors of Antisocial Behavior as Reported by Adolescents

Table 1.1: Significant Direct Effects Between Family, School, and Individual Variables and Problem Behavior Outcomes Proposed with the SEM

Table 2.1: Significant Indirect Effects Between Family, School, and Individual Variables and Problem Behavior Outcomes Proposed with the SEM
List of Figures

Figure 1.1: Direct and Indirect Pathways of the Theorized Model of Family, School and Individual Variables and Violence Perpetration, Lifetime Substance Use and Antisocial Behavior
List of Abbreviations

TTYS: Trinidad and Tobago Youth Survey
CARICOM: Caricom Community
CTC: Community that Cares Survey
SDM: Social Development Model
PYD: Positive Youth Development
PBT: Problem Behavior Therapy
AYS: Arizona Youth Survey
RPFP: Risk and Protective Factor
USE: Universal Secondary Education
GORTT: Government of the Republic of Trinidad and Tobago
UNDP: United Nations Development Programme
UNSAID: United States Agency International Development
SDRG: Social Development Research Group
FCU: Family Check-Up
RtI: Response-to-Intervention Framework
SWPBS: School Wide Positive Behavioral Support
SDQ: Strengths and Difficulties Questionnaire
SEB: Social Emotional and Behavioral Programs
SEL: Social Emotional Learning
Abstract

The purpose of this study was to investigate how the interplay of risk and protective factors within the home, school, and individual domains may influence problem behaviors in youth ages 12 to 19 years. Moreover, this research was one of the most recent studies in Trinidad and Tobago that focused primarily on school risk and protective factors. It aimed to examine how school, family, and individual characteristics may shape adolescents’ substance-using, violent, and antisocial behaviors. This relationship was analyzed using the measures of the Community that Cares or CTC instrument. Notably, within relevant literature, it was revealed that teenage behavior problems might predict the likelihood of adverse outcomes. Therefore, this study builds on previous research to provide a deeper understanding of the complexities of youth-at-risk behaviors that may serve as trajectories towards maladjustment problems. Moreover, the findings contribute to existing knowledge of the unique features of the Caribbean region as it relates to the issue of school misconduct, which is currently lacking. Thus, the research findings serve to better inform appropriate interventions for policy and decision-makers and aid in the proper design and implementation of youth-based initiatives to support and promote prosocial approaches within the school and broader education settings.
CHAPTER 1

INTRODUCTION

This study was conducted in 2018 as the Trinidad and Tobago Youth Risk-Behavior High School Survey. This survey primarily comprised of measures from the Community That Cares (CTC) or CTC instrument. This tested instrument was found to be valid and reliable when applied in both developed and developing countries (Maguire & Fishbein, 2016). It is a useful tool when used to understand behavioral problems that predict detrimental outcomes for endangered youth. The CTC is grounded in the Social Development Model (SDM), which has provided insights into risk and protective factors at the level of the child and their immediate social environments. The domains of risk and protective factors include- the school (e.g., academic failure, alienation from school, etc.), the family (e.g., abuse and neglect, etc.), the community (e.g., lack of informal social control, etc.), and individual or peer influences (e.g., bullying, friends’ drug use, rebelliousness, etc.) (Fleming, Catalano, Haggerty & Abbott, 2010).

This dissertation aimed to examine how risk and protective factors of the home, school, and individual contexts, may influence problem behaviors in youth 12 to 19 years. This study was one of the first studies of its kind to focus primarily on adverse behaviors of the school system. Given the intervening between the peer and family domains (Van Ryzin, 2012), it is highly likely that familial and peer influences on student misconduct might be significant. Previous research has shown that parental and peer controls shape adolescents’ patterns of behaviors (Connell et al., 2010). Parental and peer norms impact the socialization of children (Fallu et al., 2010; Laninga-Wijen et al., 2016), demonstrating the role of the family and peer-group on school performance and
the critical importance of parental and peer interactions on student readiness (Wang & Fredricks, 2014).

Based on the above, this research elucidates a more profound understanding of social interactions that may influence the self-reported substance use, violence perpetration, and antisocial behaviors of at-risk students. Upon completion, an official report is to be submitted to the Ministry of Education Trinidad and Tobago to assist in decision-making at the school’s level and broader context. The findings from this study may provide essential considerations for implementing appropriate policies and programs geared towards reducing school misconduct and promoting prosocial behaviors in school-age youth. Moreover, it may inform the formulation of national youth profiles and assists in better understanding the behavioral practices and contexts that increase youth’s chances of poor social outcomes. Thus, it also aids in addressing the consequences of adverse behavior on vulnerable youth.

Additionally, this study may help schools in better targeting at-risk students and meeting the diverse needs of disadvantaged youth. The investigator intends to disseminate the findings in relevant academic journals and print and electronic media. This approach could provide a deeper understanding of the issue at hand and facilitate knowledge enhancement concerning the contextual impact of the school and the broader education system on at-risk youth.

**Statement of the Problem**

Within the existing body of literature, the issue of adolescent misconduct has received substantial attention (Dishion & Yasui, 2015; Pipquero et al., 2016; Reinke,
Splett, Robeson, & Offutt, 2009). More specifically, in school-based research, student misbehavior has raised much concern due to the significant challenges of providing a range of services that would better succeed at mitigating risks (Dishion & Yasui, 2015; Pipquero et al., 2016; Reinke et al., 2009). School administrators have mainly utilized risk-based approaches, of which, though promising, have engendered the proliferation of problem-oriented programs (Guerra & Bradshaw, 2008). These risk-based applications tend to focus on treating risk behaviors as separate and independent, with little consideration for the interconnectedness or causal pathways (Guerra & Bradshaw, 2008). Therefore, Problem Behavior Therapy or PBT might support a piecemeal understanding of multiple risks and or untenable behavior pathways. PBT usually is polarized with the perspective of positive youth development (Osher, Sprague, & Doyle, 2010). PBT asserts common behavioral risk and protective factors that are correlational but not causal (Melkman, 2015).

In contrast, Positive Youth Development (PYD) emphasizes the presence of positive attributes rather than the absence of risks. PYD applications foster competency by preventing problems and attending to clustered and or cumulative risks (Guerra & Bradshaw, 2008). Recent developmental studies have emphasized individual and familial contributors to problem behavior pathology (Kumper, 2014) but also highlight the potential role of school factors, which may also be more malleable to change (Wang & Degol, 2015). These findings, examining the school’s contribution to reducing maladaptive practices, have been primarily addressed in school climate research (Kõiv, 2014; Ripski & Gregory, 2009; Wang, Selman, Dishion, & Stormshak, 2010; Wang & Degol, 2015). In this regard, one theory that has been prominent in school climate
research is the ecological model (Bronfenbrenner, 1979). The ecological or environmental approach has, as such, earned its place as a well-grounded tradition in school-based interventions, addressing multiple domains of risk of troubled youth (Reinke et al., 2009).

**Background**

The risk and protective factor paradigms (RPFPs), to which prevention science has fostered integration has allowed for extensive knowledge of the influence of risk and protective factors on adolescent developmental pathways (Bumbarger, Perkins, & Greenberg, 2010). Grounded in the theory of the Social Development Model or SDM, the RPFPs have introduced a variety of mechanisms to provide a range or continuum of school-based services (universal, selective, and indicated) (see Bumbarger et al., 2010). Further, the SDM has provided insights into risk and protective factors at the child’s level and their immediate social environment to target through early prevention. These risks may include disruptive and aggressive behaviors, cognitive and emotional impairment, limited social support, poverty, and weak family interactions (Loeber et al., 2008).

This focus on the early prevention of conduct problems has predominantly highlighted “the importance of discrete risk factors that increase the probability of risk behavior and protective factors that function to mitigate risk” (Guerra & Bradshaw, 2008, p.2). Notably, since, risk and protective factors are developmental, and context-based, the risk, and protective factors paradigms (RPFPs) are compatible with the bioecological framework. This integration of the RPFPs engrained in the SDM and the bioecological approach is likely to be of more significant benefit to practitioners working with youth.
and families (Guerra & Bradshaw, 2008). Moreover, it has guided practice, and treatment modalities by considering how skills and competencies develop across multiple and intersecting development contexts (e.g., families, peers, schools and communities) (Guerra & Bradshaw, 2008).

Within the study locale, school practitioners have experienced substantial challenges. These include a lack of appropriate resources, poor classroom climate, poor classroom methodologies and teaching strategies, lack of training and expertise in student assessment and diagnoses, weak management structures, lack of teaching competency, poor articulation of existing policies and programs and a lack of appropriate educational programs and interventions (DeLisle, Smith, Jules, 2010; Kats & Fox, 2010; Thompson, 2009).

**Study Objectives**

In light of the above challenges this study sought to achieve three main objectives:

1. To measure the prevalence of specific problem behaviors of the school domain.
2. To measure the relationship between the school, family, and individual risk and protective factors on student misbehavior.
3. To examine the interdependence of the school, home, and individual/peer domains on adolescent conduct problems.

Given the trajectories for poor school outcomes, including unhealthy patterns of teacher-student and parent-child relations; psychosocial and behavioral problems; low school performance and slow academic progress; low rates of school completion, and
lack of employment readiness (Clunies-Ross et al., 2008; Dishion, & Stormshak, 2009; Reinke et al., 2009; Tyler-Merrick, & Church, 2013; Piquero, & Jennings, 2012; Wang et al., 2010); this study provided answers to the following questions:

1) How often do particular problem behaviors occur within the school setting?
2) What is the difference in the rate of involvement in problem behaviors between students exposed to cumulative risks and those exposed to fewer risks?
3) What is the relationship between risk and protective factors and the problem behaviors of at-risk students?

Based on the above, this study can benefit school officials by elucidating the most extenuating behaviors that are predominant within the school or education system.

**Significance and Purpose of the Study**

**Cultural Setting**

The twin-island state of the Republic of Trinidad and Tobago is a small developing nation located seven miles off the northern coast of Venezuela (Johnson, & Kochel, 2012). Trinidad and Tobago has experienced an exponentially high rate of violence, with a steady increase in murders from 93 in 1999 to 547 in 2008 (Maguire & Fishbein, 2016). Critics have argued that this proliferation in violent crimes is mostly due to the international drug trade for which Trinidad and Tobago has become a crucial transshipment point (United Nations Office on Drugs and Crime, 2007).

This alarmingly high rate of homicides (488% increase) represents a tip of the iceberg with regards to the social problems facing this small (i.e., 1.3 million people) but economically vibrant developing nation (Maguire & Fishbein, 2016). Further, the
increasing levels of youth who have perpetrated violence, joined gangs, carried illegal weapons, abused illicit substances and become school dropouts remain a cause for significant concern (Katz & Fox, 2010; Kuhns & Maguire, 2012; Maguire, Willis, Snipes, & Gantley, 2008; Maguire, Wells & Kats, 2011; Wells, Katz, & Kim, 2010). These risk clusters of diverse youth, demonstrate the urgent need for research concerning context-driven initiatives to buffer the adverse effects of the weak local conditions.

Also, of significant concern is school violence that compounds the challenges of poor school attainment, low parental involvement, teacher absenteeism, student disengagement, and poor school climate (Government of the Republic of Trinidad and Tobago, n.d.). Additionally, with the establishment of Universal Secondary Education (USE) laws - the school system is now ripe with teaching and administrative challenges due to the drawbacks of USE on student outcomes (Thompson, 2009). These difficulties may have arisen as a result of compulsory placements across the board, despite a general lack of competency or school readiness of the vast majority of students (Thompson, 2009).

Amidst the moral decay of the nation’s schools, there is a growing consensus of school violence reaching critical proportions (e.g., there were 6,673 severe violence incidences between 2012 to 2015) (Parliament of the Republic of Trinidad and Tobago, 2017/2018, n.d.). Accordingly, media reports of school-perpetrated gang violence, fighting, weapon assaults, bullying, and acts of aggression, despite based solely on a few isolated incidents, support the view that youth crime is spiraling out of control (Seepersad, 2016). For example, one headline in the Trinidad Guardian on February 4, 2014, proclaimed “School Violence at Presentation College: One Stabbed and Another
Slits Wrist,” while yet another on January 31, 2018, declared “School Violence Has Remained the Same,” and a third reported, “Form One Student Beats his Teacher.”

These headlines illustrate the negative impact of the media on public perception when, in reality, the evidence suggests that youth violence is the exception and not the rule (Seepersad, 2016). However, given the fear and dismay of outraged citizens, it is believed that a prevailing sense of ‘moral’ panic has braced the nation. Notwithstanding, there is still cause for significant concern, due to the implications of violence exposure on school-age youth, media sensationalization of school violence presents a danger to tackling the problem in a non-punitive manner.

In response, the government has expressed plans to undertake research that would serve to demystify the causes of aberrant behavior and support the development of policies and programs on a national scale (GORTT, n.d.). These diagnostic steps would enable improvements in the enforcement of disciplinary practices and help to eradicate school misconduct on all levels (i.e., classroom, school, district, nation, and the region). Continuous talks on education reform continue, while the current political administration has sought to implement policies that may address the academic crisis plaguing the nation.

In 2015, the government embarked on transformational strategies to revamp systemic failures through the enhancement of ICT and human resource (HR) platforms. For example, hand-held scanners were introduced for usage by School Security Officers, along with the installation of CCTV cameras, across schools, throughout the country. Also, the Ministry of Education recruited 280 remedial teachers, close to 330 substitute
teachers, and a full complement of student support services, including Guidance Counselors, School Social Workers and Clinical Psychologists (GORTT, n.d.).

These measures aimed to reduce school violence within the national sphere and to bolster adequate school supervision and management strategies across the board. Also, practitioners sought to implement school level and country-wide, evidence-based risk-prevention, and or risk-reduction strategies (Baker-Henningham, Meeks-Gardner, Chang, & Walker, 2009). Though difficult to achieve, given the social complexity of Caribbean schools, to which the upsurge of violence remains a severe problem, minimal but steady progress has been made in this regard, by Trinidad and Tobago, within neighboring Caribbean states, and across the region (Baker-Henningham et al., 2009).

**Purpose of the study**

In light of the previous discussion, this study draws on the risk and protective factors of the Social Development Model (SDM) (see Sullivan & Hirschfield, 2011). Fashioned after the SDM, the Community that Cares Survey or CTC instrument has become a leading behavioral assessment tool used in a myriad of youth settings (Maguire & Fishbein, 2016). A current gold standard, the CTC, provides a comprehensive approach to the understanding of risk and protective factors in shaping youth behavior outcomes (Fienberg, Ridenour, & Greenberg, 2007). The CTC has a validated track record for validity and reliability when applied to diverse school contexts. Also, the CTC is one of the few survey instruments to date that has been used both in developing and developed nations (Maguire & Fishbein, 2016).
In 2006, risk and protective measures of the Arizona Youth Survey which borrows from the CTC were modified to fit the local context of Trinidad and Tobago. These measures, modeled after the AYS and CTC, assessed risk and protective factors relating to self-reported drug use, gang membership and violence on four domains (i.e., school, community, family, peer/individual) (Maguire, 2013; Maguire & Fishbein, 2016). A few studies have examined the role of family (Maguire, 2013; Maguire & Fishbein, 2016), and community (Katz & Fox, 2010; Maguire, Wells, & Katz, 2011) risk and protective factors on youth behaviors, using data from the 2006 Trinidad and Tobago Youth Survey.

This present research builds on those previous studies by focusing primarily on school risk and protective factors unique to the research context. A deeper understanding of the profound influences of the family and peer-group on the behavioral and social outcomes of endangered youth was of critical importance, given the purpose of the study. Moreover, this research emphasized the crucial need for the successful integration of school-based, family-centered, and universally ‘inclusive’ interventions catering to all students (Reinke et al., 2009).

Additionally, data concerning disparities with regards to gender and academic performance, as well as race and ethnicity, were of significant interest, considering the complex nature of the issue at hand. For example, previous reports have shown that girls consistently outperform boys and that girls from Indo-Caribbean backgrounds perform better academically than girls from Afro-Caribbean heritage (USAID, 2013). Consequently, this study informs the formulation of national youth profiles for improved policy and program design and implementation to better target and meet the diverse
needs of at-risk students. It also facilitates a deeper understanding of the school’s socio-cultural impact and the social implications of the broader educational system on at-risk youth.

Accordingly, the findings provide empirical support for integrating disaggregated approaches to improve detrimental outcomes for children and youth (Adeleman & Taylor, 2010). This measure could enable Trinidad and Tobago and Caribbean schools to improve the delivery of services to at-risk children and adolescents using a variety of risk-based applications utilized globally. In turn, the comparative benefits of the research from the use of the CTC to homogenous groups of at-risk youth from diverse contexts (i.e., Caribbean immigrants living in the U.S., U.K., and Canada) are unambiguous with regards to the purpose and significance of this study.

**Chapter Summary**

The previous discussion provided an overview of the study objectives, purpose and significance. Moreover, it outlined the benefits of the present study in advancing educational reform policies and programs within the school system in Trinidad and Tobago and the wider Caribbean. It explained how this study might help to improve the delivery of school-based family-centered services and assists in meeting the diverse needs of vulnerable students. In general, the study is believed to inform the formulation of national youth profiles and to help with improving the design, and implementation of relevant strategies in addressing student misbehavior. The following chapter will outline the theoretical basis of this study.
CHAPTER 2

CONCEPTUAL FRAMEWORK

This study on youth-at-risk behaviors is best suited to understanding the impact of risk and protective factors on problem behavior outcomes concerning school-age youth. An excellent way in which this study achieved this objective was through the interrogation of how domains of risk and protective factors (i.e., the home, school, peers, and communities) shape both maladaptive and prosocial behaviors in teenage children (Bumbarger et al., 2010). Using an ecological perspective, explanations into the social processes that influence negative behaviors of youth and the interconnections between the home, school and individual/peer-group domains to the immediate (i.e., community) and broader social contexts (i.e., the nation, region, and international community) were best articulated (Reinke et al., 2009).

Moreover, the integration of the social development or learning model with the ecological framework provided a comprehensive approach to examining the extent to which risk and protective factors derived from the social development model (SDM) influenced adolescent problem behaviors primarily associated with the school or education system. In this respect, crucial aspects of the bioecological theory, namely its core assumptions, propositions, and concepts, are subsequently outlined. Afterward, the integration of the bioecological theory with the social development model deemed most beneficial to the present research, is addressed, given the cusp of risk and protective factors ingrained within the social development perspective.
Basic Tenets of the Theory of Human Development

Notably, the ecology theory of human development underwent a series of incremental changes right up until Bronfenbrenner died in 2005. Therefore, the following discussion highlights the bioecological perspective’s critical features from the original model to its most complete form. In this regard, the following discourse outlines core theoretical tenets and developments of the emerging theory or bioecological model.

Core Assumptions

Five core assumptions fundamentally underpin the ecological framework that broadly explains:

1. The biological and social nature of individuals and groups;
2. The critical importance of the environment to human survival (e.g., how air, water, and food help to sustain human life);
3. The dependent relationship of individuals with each other;
4. The spatial organization of social responses; and
5. The layered context(s) on which to best explain child and or adolescent behavior(s) (White, Klein, & Martin, 2015)

These five central tenets implicitly illustrate two fundamental or essential ideas concerning the model. First, Bronfenbrenner held that the interaction of individual and context explained the process through which human development occurs. This notion relates to adaptation, which is one of the fundamental principles of the ecological framework. Second, Bronfenbrenner stressed the critical importance of the environment in promoting human interaction on various levels. These perspectives introduce the core assumptions of the theory explained below.
Key Propositions

The ecological model amassed a range of propositions, introduced in 1979 by Bronfenbrenner, during the initial stages. However, most of these ideas, though critical to the theory, are beyond this discussion’s scope. As such, the researcher briefly outlines two of the most original assertions that explain the basis of the approach.

Proposition 1.

Bronfenbrenner believed that the individual and his or her environment interacted, and adapted to one another, bi-directionally. In that, the individual and the environment are interdependent and co-exist mutually. He also described this interdependency as a way through which human interaction promoted change during social development and adaptation (See Bronfenbrenner, 1979).

Proposition 2.

Bronfenbrenner posited, that the home provides the most immediate context for interchanges between the child and others, and serves as an essential socializing agent concerning the developing organism. Human development, as such, is believed to occur within the context of the individual and the environment. This relationship is characteristic of the home or microcosm, that is, the family. In light of these two propositions, the foundation of the theory should be more apparent and would become more evident from the fundamental concepts defined below.
Definitions of Key Concepts

The Ecological Theory of Human Development was initially proposed in the early 1970s by the theorist, Urie Bronfenbrenner, before being formally renamed the bioecological theory. This change was due to the inclusion of several biological features. In its earliest form, the ecological approach derived its name from its central focus on ecology. The term ecology means “an adjustment between organism and environment” (Bronfenbrenner, 1975, p.439). Further, Bronfenbrenner defined ecology as:

The scientific study of the progressive, mutual accommodation between an active, growing human being and the changing properties of the immediate settings in which, the developing person lives, as this process is affected by relations between these settings, and by the broader contexts within which the parameters are embedded (1979, p.21).

Bronfenbrenner developed the term ecology further (i.e., Barker and White’s first proposed the concept in 1954). He suggested four systems (i.e., the microsystem, mesosystem, exosystem, and macrosystem) of environmental interactions (Brofenbrenner, 1976, 1977, 1979). Notably, Brim’s (1975) works, introduced three of the four ecological systems as structures (i.e., micro, meso, and macro) (Rosa & Tudge, 2013); which Bronfenbrenner later modified to embrace four nested ecosystems briefly explained in the proceeding discussion.

Ecological Systems of Human Development

The closest proximal setting to the human organism is the microsystem. Bronfenbrenner described this system as the home, child care, playground, or work
environment in which an individual can interact with others on a face-to-face basis. This domain may promote interpersonal role sharing and physical relations throughout the development stages.

Bronfenbrenner (1977, 1979) defined the mesosystem as the relations among two or more microsystems in which the developing person participates (Bronfenbrenner, 1976, p.163; 1977, p. 46; 1979, p.25). This relationship, in turn, creates a third dimension or exosystem, to which the micro and mesosystems belong. Bronfenbrenner explained the ecosystem to mean a structure in which the child is not situated directly but is impacted by and can influence it (Bronfenbrenner (1977, 1979). Consequently, he regarded the exosystem to have an indirect effect on development. For example, when a parent’s workplace has a resulting impact on what transpires within the home (Bronfenbrenner, 1974). The fourth and final domain or macrosystem consists of social structures, including economic, social, educational, and political systems (Brofenbrenner,1976). These broader structures affect the functioning of basal settings (e.g., family and school), of which contextual experiences are similar for individuals within the same group due to shared beliefs and or ideologies (Brofenbrenner,1976).

In summary, Bronfenbrenner (1976,1977,1979) reiterated the significance of normative changes in roles and environments or what he termed ecological transitions. For example, when a child transitions from home to a child care setting, or when a young adult leaves school to enter the world of work. Ecological transition stood at the forefront of much of what he conceptualized the theory of ecology to represent. He also stressed the critical importance of the environment in human interactions, which was pivotal to his
emerging interest in the individual features of development. He paved the way for the nomenclature of models that emerged during the final stages of theory development.

The Role of Individual Characteristics in Human Development

Leading up to the final stages, Bronfenbrenner reviewed his previous works. He, redefined specific concepts (e.g., microsystem and macrosystem), and introduced the Process-Person-Context model (Bronfenbrenner, 1988, 1989). Accordingly, Bronfenbrenner (1986, 1988) described the PPC, as providing a deeper understanding of developmental outcomes stemming from interactions of person and context. Further, he believed that the PPC provided an opportunity to examine developmental processes that can achieve realization (Bronfenbrenner, 1989).

Subsequently, he proposed the concept of time, which he termed the chronosystem, which accounts for lifetime changes resulting from events and or experiences (i.e., context) (Bronfenbrenner, 1986, 1988, 1989). Ultimately, due to the variety of models that braced this period, the environmental paradigm was born. Therefore, Bronfenbrenner (1993) viewed human development as a function of interpersonal interactions, precipitated over time, within an individual’s immediate context. He also, epitomized, individual and contextual characteristics relevant to the study of ecology and proposed the concept of instigative traits or features that can either invite or discourage reactions from the environment (e.g., fussy babies) (Bronfenbrenner, 1989, 1993).

In general, Bronfenbrenner re-conceptualized his focus on the individual. He also responded to his previous lack of clarity on the individual’s contribution to his or her
development. Consequently, much of the model conceptualization that took place during this period became fully realized in the final moments.

**The Duality of Individual and Contextual Characteristic in Proximal Processes**

The cornerstone of the final model was proximal processes. Bronfenbrenner (1994, 2000; 2006) viewed the proximal process as the driving forces of human development. He also contended that in stable environments, individual and contextual influences that are both spatial and temporal drive proximal processes that can lead to positive developmental outcomes in children. In contrast, proximal processes or the “engines” of development function dissimilarly in unstable environments by slowing or impeding the consequences of dysfunctional patterns.

From the point of departure in person-context interrelatedness, Bronfenbrenner grew more noticeably concerned with the processes of human development. As such, he focused his attention on the Process-Person-Context-Time model or PPCT that ultimately evolved into the bioecological model—the mature form of the theory (Bronfenbrenner, 2000; Bronfenbrenner & Morris, 2006). The bioecological approach imbibes components of the PPCT (i.e., Process, Person, and Context) while also addressing proximal processes (Bronfenbrenner's 1994, 2000). The following discussion explains how the respective framework has benefitted the investigation of youth behavior problems in light of the theoretical basis for applying the bioecological approach to the present study.
**A Bioecological Approach to the Study At-risk Youth**

*Risk Domains of Youth in Diverse Settings*

Usually, family, peer, school, and community are viewed as the primary domains of risk or environmental conditions of influence on young people (Bronfenbrenner, 1979, 1986). Since ecological perspective posits that development is a product of transactions between the organism and the context, a bioecological view could frame how investigators examine the influence of context on children, adolescents, and families. This aspect of the research methodology mostly informs how proximal processes or *process* interactions shape adolescents’ development.

Concerning this study, the researcher examined data on students’ interactions with teachers, peers, and family members. Notably, Tudge et al. (2009) advised of the need to exercise caution in the usage of the varied forms of the theory, which may prove critical, to avoid improper application and or misrepresentation(s). This criterion required the researcher to be mindful of the range of modifications that define how the bioecological model emerged and or took shape.

**Features of the Bioecological Model: Process, Person, Context, and Time (PPCT)**

Tudge et al. (2009) provided examples of how the three additional elements of the PPCT could be used appropriately in a typical study (i.e., Person, Context, and Time). First, Tudge et al. (2009) advised that trait characteristics, such as age, appearance, gender, etc. or attributes of the individual, represent the initial element of the PPCT. Thus, regarding this study, the investigator examined how “force” characteristics (e.g., rebelliousness, daringness, and responsiveness to others) influenced specific youth
behavior outcomes. Given these considerations, a primary goal was to interrogate how individual risk factors (e.g., favorable attitudes towards antisocial behavior and drug use) explained individual differences in adolescent problem behaviors. An excellent way in which this goal was achieved within the research context was by disaggregating data on disparities in gender, age, and ethnicity.

Secondly, contextual effects were also of primary importance to this study. Consequently, the investigator sought to understand how the school, home, and individual microcosms integrated to form a single mesosystem (e.g., the parent-child and teacher-student combined systems) to socially impact the problem behaviors of at-risk youth. Notwithstanding, a thorough understanding of the role of the community (i.e., exosystem) on youth problem behaviors, could have gleaned additional insights into the research problem. Likewise, the socio-cultural impact (i.e., the macrosystem) of multiple systems (e.g., home, school, and peer-group) on youth adverse behaviors was critically important.

Thus, the study sought to answer two overarching questions such as (1) What are the cumulative risk factors or influences of the home, school, and individual domains that may contribute to student misbehavior?, and (2) How might external forces of the school, such as family, personal, and peer-group characteristics, contribute to detrimental student outcomes? These questions stimulated meaningful understanding concerning the culture of violence and school disruptive practices, which are burgeoning issues of the Trinidad and Tobago school system (Maguire, 2013; 2016; Maguire et al., 2011).

Thirdly, the function of time was of relevance to this study. Accordingly, longitudinal research is paramount to allow for proper examination of how proximal
processes are influenced by young people and their social environment(s) within a historical period. Consequently, the high rates of truancy and student withdrawal, which relates to the education system of Trinidad and Tobago (GORTT, n.d.), may disadvantage schools regarding undertaking research over lengthy or extended durations.

For this reason, the researcher conducted a cross-sectional study instead of longitudinal research. Despite notable limitations, this type of study provides a foundation for future inquiry and better informs risk prevention and behavioral interventions within the school. However, the lack of resources that tends to plague low to middle-income countries such as Trinidad and Tobago (Carrington-Blaides, 2017) remains a crucial challenge. This challenge has resulted in inadequate behavioral assessments and measurement of prevalence estimates of students’ maladaptive behaviors (Carrington-Blaides, 2017).

Based on the preceding discussion, an ecological approach to the study of at-risk youth was crucially valid. More importantly, the application of the principles of risk, protection, and resilience that undergird environmental theory, are instrumental in narrowing the divide between theory, research, and practice on the growing body of knowledge on at-risk youth (Frey, Walker, & Perry, 2011).

For these reasons, a bioecological framework could better inform a diverse range of interventions that can improve the ability to meet the demands of at-risk youth. But what about this model demonstrates its benefits to youth-at-risk research? And what aspects of this particular approach can be successfully administered in a variety of risk-focused youth settings?
The Application of the Ecological Model in Prevention School-Based Interventions

Concerning at-risk youth, the ecological framework provided a prime model on which this study was undertaken. Moreover, as a context-based model, it offered a broad lens through which the topologies of human growth and the processes operating within those contexts, to shape development (Woolley & Bowen, 2007), were better understood. It also improved the ability to enhance knowledge of risk (i.e., an event or condition that increases the possibility of problem behaviors) and protective factors (i.e., characteristics or traits that buffer exposure to risk) an essential feature of promoting the advancement of youth-based practice.

Undoubtedly, principles of risk, protection, and resilience often underpin the prevention and treatment of children and adolescents in multiple settings (Jenson, & Fraser, 2011). When used in the education realm, these principles promote a comprehensive understanding of risk, protection, and resilience concerning at-risk students (Guerra & Bradshaw, 2008). This focus on at-risk youth “has led to a proliferation of research highlighting the importance of discrete risk factors that increase the probability of risk behavior and the role of protective factors that function to mitigate risk” (Guerra & Bradshaw, 2008, p.2).

Since risk and protective factors are contextually-premised, the RPFPs are compatible with the bioecological framework. Moreover, an integrated model that combines the principles of both the RPFPs and the ecological theory proved to be the most beneficial approach to knowledge enhancement of the individual and contextual effects of risk and protective factors within the present study. For example, justice-involved young people may also attend high-risk schools, live in disadvantaged
communities, and associate with antisocial peers. For this reason, the researcher integrated both theories (bioecological and the Social Development Model) to form what Bogenschneider (1996) referred to as the ecological risk/protective theoretical model, to which the researcher believed the use of the environmental model was conceptually enhanced.

The Ecological Risk/Protective Theoretical Model

According to Bogenschneider (1996), “the ecological risk/protective theory contends that a myriad of processes shapes human development and that these processes must be identified in multiple levels of the human ecology” (pp. 129-130). Thus, the model is two-pronged, comprising of aspects or features of the ecological systems theory and developmental contextualism (Duncan, 2011). Bogenschneider, in her early description of the model, posited that the risk and protective factor paradigms fit developmental contextualism by setting the ecological model on course to progress through time while emphasizing the dynamic nature of human development concerning the child, social changes, and historical features. At the time, however, studies of the etiologies of risk and protective factors were conducted independently. Practitioners also viewed the two paradigms as independent and believed that the resiliency or protective thrust was more valuable to preventionists.

Hence, regarding the integration of the two approaches into a single model, to which Bogenschneider has proposed, the investigator believed that this was the best course of action for engendering the complexity of youth development issues. The researcher also held the perspective that the RPFPs are more than just interdependent but
also interactive. Put another way, she believed that the relationship between risk and protective factors supported a balancing effect. Meaning, in the absence of harm, protective factors are the least influential or impacting, whereas, in the presence of an abundance of increasing threats, protective elements may provide the most rewards for mitigating or reducing risks (Frey et al., 2011).

Therefore, the two different approaches may be complementary and are arguably linked in such a way to bolster protective factors, while reducing the propensity for harm. Based on this perspective, the researcher utilized a combined ecological and risk and protective factor approach to the study of youth-at-risk behaviors. Such an approach provided a useful premise for exploring the behavioral complexities of school-age youth.

Chapter Summary

The applied ecological approach to the study of at-risk youth behaviors enabled the researcher to understand better the contextual effects of the social environment on adolescent’s behavioral responses. Moreover, integrating the environmental perspective with the risk and protective factor paradigms to form the ecological/risk protective theory better enabled a deeper understanding of the implementation of behavioral interventions for children and youth specifically designed for the school and broader education settings. Thus, the application of ecological/risk protective theory in the present study engendered risk and protective factors of the social development model relevant to the environmental approach that was particularly insightful.
CHAPTER 3
LITERATURE REVIEW

Definition of At-risk Youth

According to Guerra and Bradshaw (2008), “youth who are most likely to become involved in one or more risk behaviors [are] labeled at-risk youth or youth-at-risk” (p.2). These risk behaviors may include failing school and or early school leaving, violence, substance use, and sexually permissive practices (Guerra & Bradshaw, 2008). Additionally, youth-at-risk may be exposed to risk clusters, leading to detrimental outcomes relating to school or academic achievement.

Characteristics of At-risk Youth

Cunningham et al. (2008) categorized at-risk young people mainly into three distinct groups. Firstly, group one consists of young people who are isolated due to their exposure to risk factors but have not yet begun to engage in risky behavior. These youths are somehow able to withstand the harmful effects of risk exposure but may still be predisposed to specific risks.

Secondly, category two comprises of young people who demonstrate risk behaviors in the form of early sexual activity, premature employment, and dropping out of school but are not yet at the level of their peers in group three. Lastly, young people in category three are the worse off regarding experiencing the detrimental impact of co-occurring risks. These include youth who may have left school, parented children, sought premature employment, battled drug addiction, and gotten arrested.
Caribbean At-Risk Youth Profiles

The previous descriptions represent a significant proportion of Caribbean youth, given the high rates of homicides, wounding, illicit drugs, and gang warfare that characterize CARICOM member states, (Gentle-Genitty, Kim, Yi, Slater, Reynolds, & Bragg, 2016; UNDP, 2012). Insofar, 6% of youth are affiliated with gangs and experience adverse social outcomes of underemployment, minimal educational opportunities, violence exposure, and lack of civic engagement (UNDP, 2012). Additionally, across the region, there have been reports of an escalation in school violence, whereas severe acts of violence have become more severe in recent times (UNDP, 2012)

Profiles of Trinidad and Tobago At-risk Youth

Based on the features outlined above, cumulative risk factors such as those, disproportionately affect young people in Trinidad and Tobago and put them in harm’s way for experiencing negative developmental trajectories (Maguire, 2013, 2016; Maguire, Wells, & Katz, 2011). Also, Katz and Fox (2010) and Williams (2013) identified factors such as peer association, lack of positive social bonds and opportunities for prosocial involvement, and low commitment to school, as primary factors for youth violence and gang involvement (Gentle-Genitty et al., 2016). Consequently, social ills such as delinquency, violence, unemployment, poor health outcomes, and criminality (Johnson & Kochel, 2012) that pertain to at-risk youth underscores the urgent need for risk-prevention interventions. Moreover, the high social costs of youth crime on grassroots communities and the nation as a whole (i.e., estimated at 2.88% of the total
GDP) (UNDP, 2012), reverberate the urgent need for policies and programs to prevent and mitigate risk concerning youth, in the most cost-effective manner. Therefore, in the following discussion, the researcher outlines critical behavioral interventions implemented to date, within the U.S. education system and abroad.

**Risk and Protective Factors of the Social Development Model (SDM)**

Domains of risk and protective factors have been explored extensively, under the gamut of the Social Development Model (Fleming, Catalano, Haggerty, & Abbott, 2010; Kim, Oesterle, Hawkins, & Shapiro, 2015; Maguire, & Fishbein, 2016; Maguire, 2013; Obando, Trujillo, & Trujillo, 2014; Ruprah, Sierra, & Sutton, 2016; Sullivan, & Hirschfield, 2011; Maguire, Wells, & Katz, 2011). This model is an integrative theory that brings together ideas from social learning, control, and differential association theories (Maguire et al., 2011, p.595). According to the SDM, four domains of youth - the community, school, family, peer/individual shape adolescent behaviors (Maguire, & Fishbein, 2016; Maguire, 2013; Maguire et al., 2011; Ruprah et al., 2016). These domains serve as risk and protective factors that contribute to prosocial or at-risk behaviors during childhood and or adolescence (Maguire, & Fishbein, 2016; Maguire, 2013; Maguire et al., 2011; Ruprah et al. 2016).

Moreover, risk and protective factors include individual characteristics (e.g., family relationships, self-esteem, religiosity, etc.), family influences (e.g., substance abuse or domestic violence in the household), and peer and community networks (Ruprah et al., 2016). These risk and protective factors are context-specific and are primarily not universal regarding diverse social settings (Maguire, & Fishbein, 2016; Maguire, 2013).
Thus, the following section highlights interventions used predominantly within the United States and other developed nations, since research concerning approaches that may succeed in developing territories such as the Caribbean is currently lacking (Maguire, & Fishbein, 2016; Maguire, 2013).

**School-Based Interventions for At-risk Youth**

Despite significant challenges, there has been steady progress in reducing student misconduct around the globe (Sklad, Diekstra, DeRitter, & Ben, 2012). Through a range of interventions, schools have provided social, emotional, and behavioral (SEB) programs to enhance learning and adjustment, and have managed to improve teaching and learning curricular on a universal level (Sklad et al., 2012). Among these school-based interventions the School-Wide Positive Behavior Support (SWPBS) approaches, have reported sufficient gains (Barrett, Bradshaw, & Lewis-Palmer, 2008; Lewis, Jones, Horner, & Sugai, 2010; Osher et al., 2010; Sugai, & Horner, 2009; Vincent, & Tobin, 2011).

Also, student risk screening tools (i.e., Systematic Screening for Behavior Disorders, Student Risk Screening Scale, and Strengths and Difficulties Questionnaire), have been applied in detecting risk behavior tendencies in younger children (Lane, Kalberg, Parks, & Carter, 2008; Tyler-Merrick, & Church, 2013). Because practitioners have utilized these instruments in identifying behavioral problems at the inception of the life course, except for the SDQ, which schools have used across the continuum; schools have tended to promote the extensive usage of SWPBS, in seeking to address problem behaviors in at-risk students (Tyler-Merrick, & Church, 2013).
Likewise, schools have provided parental support in promoting prosocial behaviors in children (e.g., praising them they behave appropriately), while discouraging harsh disciplinary practices, through parental training and monitoring (Jalling et al., 2015). Given the critical importance of school-family interventions, the involvement of families in schools on a deeper level has resulted in educational and behavior improvements in the lives of children and youth (Reinke et al., 2009). Consequently, School-Wide Positive Behavior Support (SWPBS), and Social, Emotional, and Behavioral (SEB) programs, or Social Emotional Learning (SEL), have been beneficially utilized in multiple school settings.

**School-wide Positive Behaviors Support (PBS), Social, Emotional, Behavioral (SEB) Programs /Social Emotional Learning (SEL)**

*School-wide Positive Behavior Support*

School-wide positive behavior support (SWPBS) is a set of disciplinary practices, for which schools hold all students to the same behavioral standards (Vincent, & Tobin, 2011, p.218). SWPBS involves:

1. teaching behavioral expectations;
2. reinforcing expected behaviors;
3. establishing consequences;
4. monitoring student behaviors; and
5. tracking students’ support needs (Vincent & Tobin, 2011).

SWPBS programs are indicative of school-wide systems to communicate and teach rules and incorporate function-based interventions (Osher et al. 2010). SWPBS
programs also provide schools with a comprehensive approach in assessing student behavior through the collection and review of student data (Barett et al. 2008; Osher et al. 2010; Vincent & Tobin, 2011). These assessments are conducted at the levels of both the student and the school to provide measures of support for meeting learners’ needs by integrating broader systemic and classroom-based strategies (Osher et al. 2010).

In general, SWPBS is a system-based approach that improves schools’ safety and security by reducing school behavior problems and promoting a favorable school climate (Sprague, & Horner, 2007). Thus, school-wide positive behavior support interventions have helped to improve healthy behaviors among teachers and students, and have been proven effective, in addressing problem behaviors that impede academic progress in mainstream education (Osher et al., 2010).

**Social, Emotional, Behavioral (SEB) Programs/Social Emotional Learning (SEL)**

A similar program model to SWPBS is Social Emotional Behavioral (SEB) programs or Social Emotional Learning (SEL). These programs incorporate approaches that emphasize “self-awareness, self-management, social awareness, relationship skills, and responsible decision making” (Osher et al., 2010, p. 50). Unlike SWPBS, which have tended to be teacher-centered, SEL programs have been mostly student-centered. Such a feature has envisaged instructional engagement strategies with behavioral components (Osher et al., 2010). Sometimes referred to as social, emotional learning, or SEL, these types of school-based interventions are useful in promoting the social and emotional development of students. Therefore, SEB programs may consist mainly of classroom
curricula or may combine classroom curricula with non-classroom activities, involving school personnel, parents, and communities (Sklad et al., 2012).

In practice, SEL programs help to enhance self-esteem in children while promoting positive behaviors and decision-making (Sklad et al., 2012). The core competence of SEB is emotional intelligence, which includes skills that enable students to manage emotions, solve problems, and maintain positive relationships (Sklad et al., 2012). SEL skills serve as protective factors to reduce the likelihood of students’ problematic behaviors (Durlak, Dymnicki, Weissberg, & Schellinger, 2011; Sklad et al., 2012).

These features explain why SEL initiatives are among the most useful strategies for promoting positive youth development in school-age youth (Payton, Weissberg, Durlak, Dymnicki, Taylor, Schellinger, & Pachan, 2008). Moreover, SEL programs have led to improvements in student outcomes regarding socio-emotional skills, attitudes regarding self and others, school connection, positive social behavior, and academic performance (Payton et al., 2005). In so doing, SEL programs have enabled schools to reduce conduct and emotional problems in challenging students.

However, like many school-based interventions, SEL programs, are limited in scope (Osher et al., 2010), thereby, resulting in significant challenges for educational practitioners in providing comprehensive educational tools to meet the social, emotional and academic needs of all students (Osher et al., 2010). In this regard, schools have combined SWPBS with SEL programs to improve the effectiveness of teaching strategies (Osher et al., 2010). However, despite modest effects, SWPBs and SEL programs have been widely implemented within the U.S. school system and abroad and have
demonstrated considerable promise in reducing problem behaviors concerning high-risk students (Durlak et al., 2011; Osher et al., 2010; Osher et al., 2007; Payton et al., 2008).

**School Climate**

School climate remains a critical concern with regards to the high level of exposure of school violence on diverse students (Fahsl, & Luce, 2012; Kõiv, 2014; Pauwels, & Svensson, 2015; LeBlanc et al., 2008). Hence, studies report a range of adverse effects that result from the prevalence at which students and teachers witness school violence in diverse contexts (Fahsl & Luce, 2012; Kõiv, 2014; Pauwels, & Svensson, 2015; Ladrum, Scott, & Lingo, 2011; LeBlanc et al., 2008; Wang & Dishion, 2011). These effects may account for the high rate of school violence reported within the U.S. (about 76% from 2007-2008) to which; negative peer association serves to reinforce various types of problem behaviors on a growing scale (Fahsl, & Luce, 2012; Pauwels, & Svensson, 2015; Wang & Dishion, 2011).

In contrast, a favorable school climate promotes healthy behaviors among staff and students (e.g., academic support, behavior management, teacher social support, and peer social support) (Kõiv, 2014; Fahsl, & Luce, 2012; Pauwels, & Svensson, 2015). Favorable school climate is thus, an integral part of schools measuring their teaching effectiveness based on student performance and devising multiple ways in which they may lower the frequency of problem behaviors within their walls (Jonosz, Archambault, Pagani, Pascal, Morin, & Bowen, 2008; Kõiv, 2014; LeBlanc et al., 2008).

Within the U.S., zero-tolerance and other punitive measures (i.e., suspension, expulsion, alternative education), have been adopted to curb the rate of violence and
aggression in schools (Bristo, 2013; Hemphill, Herrenkohl, Plenty, Toumbourou, Catalano, & McMorris, 2012). These responses have provided little or no benefits concerning reducing and or preventing school-based problem behaviors. At the same time, the alarming rate of suspensions and expulsions serves to exacerbate further the issue of school misbehavior on a larger scale (Aker, 2009).

Similarly, within the Caribbean, the upsurge of school violence has become a severe problem, with little or no progress reported by nation schools (Baker-Henningham et al., 2009). Consequently, children are exposed to high levels of violence, while the prevalent use of corporal punishment remains a critical concern (Baker-Henningham et al., 2009). Given the harmful effects of violence exposure on student outcomes, the issues surrounding school violence has resulted in widespread public outcry (Baker-Henningham et al., 2009).

Also, of significant concern is student indiscipline. This issue may compound systemic problems, including poor attainment and literacy levels, low parental involvement, teacher absenteeism, student disengagement, and poor school climate (Government of the Republic of Trinidad and Tobago, n.d.). Though perpetrated by a minority of youth deemed at-risk drug use, gambling, sexual misconduct, fights, and stabbings, usually top the list (Thompson, 2009).

These behaviors are among a few of the conduct problems plaguing Caribbean schools, reported to present further challenges due to universal secondary education (USE) or compulsory educational laws (Thompson, 2009). Further, with the establishment of USE- the school system is now ripe with teaching and administrative challenges due to the drawbacks of USE on student outcomes (Thompson, 2009). These
challenges may have arisen as a result of compulsory placements across the board, despite a general lack of competency or school readiness of the vast majority of students (Thompson, 2009).

Consequently, USE laws have contributed to students leaving school at an earlier age (i.e., students drop out due to school unreadiness), despite research confirming that school attendance serves as a protective factor for many children and adolescents (Maguire et al. 2011). Additionally, general classroom disruptive behaviors, teacher frustration in attempting to manage problem behaviors, time-wasting due to classroom interruptions, high classroom tension, and the need for frequent instructions, warnings, and managing non-compliant behavior; are also possible outcomes of universal secondary education (Thompson, 2009). Thus, given that the majority of Caribbean secondary schools have implemented components of USE, –many will experience tough times ahead in attempting to minimize the drawbacks of USE on student outcomes.

In addressing these challenges, Caribbean nations have focused primarily on risk and protective factors that better reflect the unique features of youth from across the region (Maguire, & Fishbein, 2016; Maguire, 2013). With regards to Trinidad and Tobago, Maguire and Fishbein (2016) examined youth risk and protective factors in terms of nine behavioral outcomes such as: “acting on a dare, (b) drinking alcohol, (c) fighting, (d) selling drugs, (e) minor theft, (f) grave robbery, (g) robbery, (h) attacking someone to hurt them seriously and (i) breaking and entering” (Maguire, & Fishbein, 2016, p.122). Maguire and colleagues measured these risk and protective factors concerning the family, in which a history of parental antisocial behavior and parental attitudes favorable towards antisocial behavior and substance use, were the strongest
predictors. This earlier study contributed to a better understanding of how family risk and protective factors shape problem behaviors in Trinidad and Tobago’s high-risk youth.

However, this present study expanded the focus to include risk and protective factors from the school domain, in which research seems to be inadequate. Moreover, the school environment is both a microcosm and a robust socializing agent for young people, given, on average, a 6 to 8-hour window spent each day attending classes. As a result, the likelihood of risk and protective exposure may intensify, causing youth to behave accordingly, depending on the extent of presenting harm and or ‘mitigating’ factors. In this regard, this research focused primarily on Trinidad and Tobago’s school system as it relates to at-risk youth.

Concerning the school system, the study addressed three forms of student misbehavior, namely, lifetime substance use, violence perpetration, and antisocial behavior. Notably, these types of problem behaviors are universal to high schools in multiple contexts. They may also increase the likelihood of a variety of adverse psychological, social, and health-compromising outcomes (Kazdin, 2010). Consequently, with regards to the school system in Trinidad and Tobago, these behaviors were indeed not rare and needed to be tackled at the root of the problem, to address the issue firsthand; thus, reinforcing the critical importance or significance of this study.

Chapter Summary

In general, youth-at-risk or problem behaviors have received substantial attention. Moreover, student problem behaviors present numerous challenges for developed and developing nations regarding the school or education system. Consequently, these
behaviors have raised significant concerns for parents and educational practitioners, for which schools have used a range of school-based interventions and or strategies to address the problem head-on.

These have resulted in moderate effects, though, demonstrating much promise in improving student academic and behavioral outcomes on a school-wide and broader scale. Concerning the Caribbean region, school-based interventions, have been challenging to implement, though, exhibiting slow progress. Consequently, school indiscipline has presented complex challenges in reducing the high level of student misbehavior in Caribbean schools.
CHAPTER 4

METHODOLOGY

Research Questions/Hypotheses

This research sought to examine the extent to which measures of risk and protective factors of the school, family, and individual domains predicted problem behaviors of the school or education system. As such, the researcher utilized the application of a survey instrument. This instrument comprised a range of questions that were designed to measure youth self-reported behaviors and attitudes on four critical domains- the home, school, neighborhood, and peer group. This study targeted high school youth between the ages of 12 to 19 years, from public schools in the most urban and high-risk school districts of Trinidad and Tobago.

Because of the need to collect a wide range of data from a large sample, the researcher utilized a quantitative approach with a questionnaire as the data collection method (Leavy, 2017). This approach offered the unique advantage of measuring prevalence estimates for specific problem behaviors (i.e., substance use, violence perpetration, and antisocial behavior). More importantly, it was ideal for ranking and disaggregating the most extenuating risks and or behavioral practices, intending to mitigate those risks and behaviors and bolster protective elements to which the research conveyed the most promise. In this regard, relevant data was collected to test the following questions:

(1) Are the influences of the family, school, and individual on adolescent behavioral problems, distinct yet interdependent?
(2) Does the extent of risk, and protective exposure predict the outcomes in regards to adolescent school-related behaviors?

(3) Does a significantly higher level of behavioral problems result from the interdependence of school, family, and individual risk factors?

Based on the above, the researcher was guided by the following assumptions.

(1) An increase in risk exposure will lead to more serious behavioral problems, while an increase in promotive attributes will result in a reduction in risks and or problem behaviors.

(2) A high level of risk exposure will result in a significantly positive effect (i.e., an increase) on behavioral problems if there is low protective exposure.

(3) A high level of risk exposure will result in a significantly negative or reducing effect on problem behavior if there is high protective exposure.

(4) A low level of risk exposure will result in protective factors having a neutral (insignificant) or a benign effect on problem behaviors.

(5) Substantial cumulative risks will lead to a significantly higher level of conduct problems if there are no combined protective elements (i.e., the home, school, and peer-group).

(6) The level of involvement in specific types of problem behaviors will be dependent on age, gender, and race/ethnicity.
Study Design

Planning and Pre-Study Design

To secure deeper buy-in during the preliminary stages, the investigator held consultations with school officials. During this time, the researcher sought approval from the Ministry of Education to embark on the study, which she undertook in 10 high-risk, urban, public secondary schools from five of the eight eligible school districts throughout Trinidad and Tobago. Upon seeking the necessary approval, the researcher requested from the Ministry, a list of five of the most high-risk, public secondary schools. This measure yielded a composite index of twenty-five (25) Ministry-identified high-risk schools. Of the twenty-five schools, the researcher selected eleven (11) schools to participate in the study, of which one (1) school declined to participate. This selection of only 11 schools represented a reduction from a previous study conducted in twenty-two (22) high-risk secondary schools within the research context (See Maguire et al., 2011) for which the researcher replicated.

Challenges were anticipated with obtaining the required information due to issues concerning insufficient data (Katz & Fox, 2010). This limitation prohibited the use of a random sampling approach (Johnson & Christensen, 2008). Further, the researcher submitted a request to the Ministry of Education for information regarding the student-teacher classroom ratio of the Ministry-identified schools, which provided an estimated total of the student population. The sample size was determined based on the rule of thumb for logistic regression, of which the recommended guideline was at least 500 (Bujang et al., 2018).
In keeping with set protocols, the researcher liaised with representatives from the University of the West Indies, Trinidad and Tobago- the local IRB equivalent. The entire preliminary process took at least four months before the actual study got underway. The researcher proceeded to commence the study, where the unit of analysis was at-risk students. The study utilized an individual cross-sectional design with one survey instrument. This modified questionnaire consisted of measures of the 2006 Trinidad and Tobago Youth Survey (TTYS). The researcher administered the questionnaire during the 2018/2019 school term between September to December 2018.

Participants

Recruitment

Before commencing the study, the investigator contacted the principals of each of the 11 selected schools. This measure was intended to secure further consent and to finalize the dates for administering the questionnaire, which was subject to the availability of students and teachers. Students between the ages of 12 to 19 years completed the survey according to the eligibility criteria (i.e., attending high-risk, urban secondary schools).

Sampling

The researcher collected data from a sample of approximately 864 students. Previous research suggested that a low response rate was expected due to high truancy and absenteeism (Fox, 2008). Consequently, the researcher oversampled the study at a rate of 25% (i.e., 216), amounting to a baseline figure of 648 students. Also, due to
possible variations in class sizes, the additional 25% of surveys accounted for both the expected low response rate and disproportions in class distributions.

Concerning the baseline figure of 648 students, the researcher selected through convenient sampling, entire form classes (i.e., form 1-6, equivalent to grades 7 through 12 of the U.S. system) of the Ministry-identified high-risk secondary schools. This change in the sampling approach (previously random sampling) took place because of high student absenteeism and disproportionate or varied class sizes. Students’ agreement preceded letters of parental consent to the respective form classes. Due to the anonymous nature of the study, there was no expected breach of confidentiality. Parents provided their written permission as an indication of their approval for their child’s participation in the study.

Informed Consent

Students’ consent was obtained two weeks prior to survey administration. The researcher addressed each of the randomly selected form classes from the 11 selected schools, to obtain students’ agreement to participate in the study and explain the purpose of the study. Only the students who were in agreement were provided with parental consent forms. The students were instructed to give the documents to their parents and return them within two weeks with their parents’ signatures only if their parents agreed for them to participate in the study. On survey day, only the students who were in attendance and returned a signed consent form were allowed to participate. The researcher collected all consent forms on the survey day.
Survey Instrument/Measures

The Social Development Research Group (SDRG) originally designed the Community that Cares or CTC instrument used for this study (Arthur et al., 2007). The researcher, specifically, chose this instrument due to its validated track record and application in the international community (i.e., developing and developed countries) (Katz & Fox, 2010). Further, in 2006, with the assistance of the Ministry of Education of Trinidad and Tobago, investigators modified the instrument to cater to the local vernacular and culture (social activities, organizations, etc.) (Fox, 2008). The researcher further amended this earlier version to reflect recent shifts in the local condition. The final survey contained no more than 222 items measuring 25 risk and 13 protective factors, from the school, family, community, and individual/peer domains.

Of the 25 assessed risk factors, the concept of school risk was operationalized within the scope of failure beginning in late elementary school and low school commitment (Feinberg, Ridenour, Greenberg, 2007). School failure comprised of the question “Putting them all together, what were your grades like last year?”. The school commitment questions consisted of two items (e.g., “During the last four weeks, how many days have you missed before you skipped class?” and “How interesting are most of your subjects to you?”). School commitment also assessed students’ enjoyment and engagement in school activities (e.g., “How often did you enjoy, hate, tried your best, or thought of school as useful?”). These school risk factors examined behaviors negatively linked to protective factors that provide opportunities and rewards for prosocial involvement (e.g., high interaction in school activities, receiving acclamations from teachers, open discussion with teachers, and positive perception of school safety).
Family risk and protective factors may either be disadvantageous to adolescents (i.e., parents favoring alcohol and drug use and antisocial behavior) or enriching to parent-child relations (e.g., family opportunities and rewards for prosocial involvement) (Maguire & Fishbein, 2016). Examples include “My parents know if I’ve done my homework and if I did not come home on time?” and “People in my family have serious arguments and often insult and yell at each other?”. Also, questions such as “How wrong do your parents feel it would be for you to steal something worth more than five dollars and or pick a fight with someone?” and “How wrong do your parents feel it would be for you to have one or two drinks of beer, wine or hard liquor every day?” measured negative parental attitudes. The family history of antisocial behavior subscale (e.g., “Have anyone in your family ever had an alcohol or drug problem?”) also measured familial risks (Feinberg et al., 2007).

Conversely, there were three family protective factors. These were: (1) family attachment (e.g., “I share my thoughts and feelings with my mother and or father?”); (2) opportunities for prosocial involvement (e.g., “My parents give me lots of opportunities to do fun things with them”); and (3) rewards for prosocial involvement (e.g., “My parents notice when I am doing a good job and let me know about it”) (Feinberg et al., 2007).

Comparatively, eight subscales of the individual domain were analyzed in this study, which represented individual and peer risk factors. These were:

1. Rebelliousness (e.g., “I like to see how much I can get away with”);
2. Early Initiation of Drug Use (e.g., “How old were you when you first drank or smoke or used alcoholic beverages at least once or twice a month?”);
3. Favorable Attitude Towards Antisocial Behavior (e.g., “How wrong do you think it is for someone your age to take a handgun to school?”);  
4. Favorable Attitudes Towards Drug Use (e.g., “How wrong do you think it is for someone your age to have, one or two drinks of beer?”);  
5. Perceived Risk of Drug Use (e.g., “How much do you think people risk hurting themselves if they smoke one or more packs of cigarette a day?”);  
6. Rewards for Antisocial Behavior (e.g., “What are your chances of being seen as cool if you smoke cigarettes and drank regularly?”);  
7. Interaction with Antisocial Peers (e.g., “How many of the four friends you felt closest to in the past 12 months had engaged in criminal activity?”) and;  
8. Friends’ Drug Use (e.g., “How many of the four friends you felt closest to in the past 12 months consumed drugs and or alcohol?”).

These risk factors of the peer and individual domain may predict adverse behaviors mitigated through students’ prosocial involvement (e.g., “How many times in the past 12 months did you participate in clubs, organizations, or activities at school?”).

The above constructs represented the meaning of school, family, and peer and or individual risk and protective factors within this study. Operationally, problem behaviors were defined as violence (i.e., externalized and witnessed), lifetime substance use, and antisocial behavior. Comparatively, risk or problem behavior has been broadly defined, as, behavioral responses that include “school failure and early school leaving, youth violence, substance use, and high-risk sexual behaviors” (Guerra & Bradshaw, 2008, p. 2). These behaviors also indicate the presence of risk factors for which Jenson & Fraser (2011) also explained to mean “individual, school, peer, family, and community
influences that increase the likelihood that a child or adolescent will experience a social or health problem” (p.9). These responses may offset protective elements, which are resources individual or environmental that minimize the impact of risk (Jenson & Fraser, 2011, p.11).

Similarly, resilience is characterized by “successful adaptation in the presence of risk or risk or adversity” (Jenson & Fraser, 2011, p. 11). Therefore, school conduct problems (DV), involving violent perpetration, lifetime substance use, and antisocial behavior, were regressed unto the school, family, and peer and individual risk and protective factors (IVs) previously spelled out. The majority of the CTC subscales rated on a 4-point scale, and previous research has found them to have high validity and reliability ratings among 6th to 11-grade students with the highest reliability measure of .82 (Maguire & Fishbein, 2016).

Data Collection Methods

Data collection took place over four months, from September to December 2018. The researcher met beforehand with representatives from the various schools, to address questions or concerns regarding the study. These preliminary meetings enabled her to ensure that the process ran smoothly and appropriately. Only students in attendance on the survey day and had received parental consent were allowed to participate.

The investigator informed students of their right to withdraw from completing the survey, which took one class period. Students received instructions on how to complete and return the questionnaires (e.g., leave a question that they did not choose to answer blank and return their completed instruments to the researcher), at the end of the
designated or allotted timeframe. Ongoing consultations were held with each school principal to ensure that students were granted sufficient time for suitably completing the administered questionnaire.
Data Analysis

Standard analytic procedures were applied in the collation and examination of completed questionnaires. Participants were asked to indicate whether they had been honest in filling out the survey. This exclusion criterion guided the removal of instruments, in which the item was left blank or suggested that the students had not been honest in most of their responses. Likewise, if students reported having partaken of the non-existent drug phenoxydine, their questionnaires were subsequently omitted from the analyses. Also, the data cleaning process involved the usual research protocols (e.g., dummy coding categorical variables). The researcher also identified the pattern of missing data and followed the recommended guidelines outlined in Tabachnick & Fidel (2013) for testing univariate and multivariate assumptions.

The researcher employed the use of Mplus vs. 8.1 (Muthén and Muthén, 2008), in generating preliminary statistics. She anticipated that the relationship between the school, family, and individual risk and protective factors and the proclivity for specific school at-risk behaviors was significant. Also, an assumption was that higher-risk exposure might increase the likelihood of more substantial involvement in problem behaviors, with more significant protective exposure having the inverse effect. These effects were expected to vary by age, gender, and ethnicity. Therefore, given that the study examined the influences of the school, family, and individual risk and protective factors on school conduct problems, three separate binomial logistic regressions were run. Moreover, for each of the models, the researcher regressed school risk and protective factors unto the outcome behaviors while controlling for family and individual variables along with age, gender, and ethnicity.
These analyses provided further a unique opportunity to understand better the extent to which the CTC measures could be universally applied. Some of the subscales’ reliability and validity were unknown concerning the study locale. Consequently, this research yielded valuable insights into the impact of formidable risk and protective factors of the school, family, and individual domains, using the adapted measures of the CTC.

It also has enabled a comprehensive understanding of distinct risk clusters, through the collection of relevant data on four respective domains (i.e., school, individual family, peer, and neighborhood). However, it is noteworthy that within the scope of the study, broader contextual effects (e.g., laws, policies, economic structures, etc.) were not sufficiently addressed, thereby emphasizing the need for additional and or future research to enhance further and or build on the research findings.

**Chapter Summary**

The previous discussion described the study methodology. It first provided a general explanation of the reasons for the choice of methods and explained the research approach regarding the hypotheses, sampling method, instrument, and data collection procedures. Finally, data analysis was explained while also addressing issues of reliability and validity concerning the use of the survey instrument. Before concluding, the researcher emphasized the need for future research to build on or enhance the research findings.
CHAPTER 5

ARTICLE 1

The Interplay of School, Family and Individual Characteristics on Problem Behaviors Among High-Risk Caribbean Students

ABSTRACT

Conduct problems among adolescents impede academic progress resulting in poor school outcomes. School, family, and peer or individual risk factors contribute to these behaviors, with resulting adverse effects for students and teachers alike. In light of these concerns, this study examined the prevalence of school-based misconduct and how school risk and protective factors predicted specific problem behaviors relative to family and individual domains. Participants were 529 adolescents between the ages of 12 to 19 years (n=330 females; 199 males). About two-thirds of students reported substance use, while slightly above half indicated involvement in perpetrating or witnessing violence and a similar amount admitted to having engaged in antisocial behavior. The school environment did not predict the outcome behaviors though the family and individual domains did predict substance use, antisocial behavior, and violence perpetration. Implications include the need for more family school-based interventions that strive to mitigate adolescent problem behaviors through a more nuanced understanding of the onset and persistence of risk behaviors. Studies that inform strategies for the enhancement and promotion of positive youth attributes and resiliency are also imperative. Future research directions should direct closer attention to the influence of social context. The ecological and life-course perspectives are primary considerations in framing policies and programs for Caribbean at-risk youth.
Introduction

The factors that may contribute to adolescent problem behaviors have received considerable attention (Dishion & Yasui, 2016; Pipquero et al., 2016; Reinke et al., 2009). Research shows that the potential for the vast majority of at-risk students to be left behind academically or to fall through the cracks increases without some level of intervention aimed at preventing or mitigating adverse consequences (Dishion & Yasui, 2016; Pipquero et al., 2016; Reinke et al., 2009). Student misconduct is, as such, a severe social problem (Dishion & Yasui, 2016; Pipquero et al., 2016; Reinke et al., 2009).

Problem Behavior Defined

Risk and or problem behaviors refer to “school failure and early school leaving, youth violence, substance use, and high-risk sexual behavior” (Guerra & Bradshaw, 2008, p. 2). These behaviors indicate the presence of risk for which Jenson & Fraser (2011) have defined as “individual, school, peer, family, and community influences that increase the likelihood that a child or adolescent will experience a social or health problem” (p.9). Such responses offset the influence of protective or promotive factors, which are resources individual or environmental that minimize the impact of risks (Jenson & Fraser, 2011, p.11).

Consequently, youth with moderate to severe conduct behavior problems are less likely to succeed academically than peers with low to no conduct problems (Dishion & Yasui, 2016; Pipquero et al., 2016; Reinke et al., 2009). Additionally, these youth may experience significant challenges in completing their education successfully and on time.
They may also encounter adverse health and psychosocial consequences involving chronic substance abuse and addiction, underemployment, early sexual initiation, sexually-transmitted diseases, and criminal behavior (Guerra & Bradshaw, 2008).

**Background**

In Trinidad and Tobago, the high rate of teen conduct problems in some areas of the country has come to the awareness of local educators, researchers, and policymakers (Charles, 2011). In one study examining these issues, it was estimated that on a national scale, 20% of students had learning, behavioral, and emotional difficulties, with an additional 10% requiring therapeutic and academic interventions (Carrington-Blaides & Ramoutar, 2017). Some of the factors that may have contributed to these challenges included a lack of appropriate resources, poor classroom management strategies, lack of training and expertise and inadequate teaching competency (DeLise, Smith, Jules, 2010; Brown & Conrad, 2007; Kats & Fox, 2010; Thompson, 2009). These challenges may serve as trajectories for poor student outcomes including weak social skills, severe behavioral and emotional adjustment problems, low school performance and or slow academic progress, low school completion, and criminal justice involvement (Clunies-Ross et al., 2008; Reinke et al., 2009; Tyler-Merrick & Church, 2013; Piuero & Jennings, 2012; Wang et al., 2010). Thus, it is imperative to have an informed understanding of the issues surrounding the challenges of school misbehavior.
Interventions for At-risk Youth

There is substantial evidence to support the need for interventions that target high-risk students (Dishion & Yasui, 2016; Pipquero et al. 2016; Reinke et al. 2009). However, before effective interventions can be developed and implemented, a proper understanding of the risk and protective factors that should be targeted must be identified and understood. This study sought to address this need by examining how the school, family, and peer or individual domains might shape the problem behaviors of at-risk students. It conceptualized these domains through an ecological framework. Specifically, it also assessed the unique features of Caribbean schools within Trinidad and Tobago. Therefore, this study expands on research within this region that previously examined family and community characteristics that shape the behavior problems of at-risk youth (Maguire, Wells & Kats, 2011; Maguire, 2013; Maguire & Fisbein, 2016). Moreover, these earlier studies did not find significant effects related to protective factors of both the family and community domains. Findings from this present study aims to improve understanding of the risk and protective factors that contribute to adolescent conduct problems insufficiently addressed in the handful of studies conducted within the research setting.

Youth Behavior Problems within the Caribbean Context

Within the Caribbean drug use, gambling, sexual misconduct, fights, and stabbings are some of the most common conduct problems reported (Thompson, 2009). In Trinidad and Tobago, Maguire & Fishbein (2016) examined risk and protective factors for behaviors such as
1. acting on a dare,
2. drinking alcohol,
3. fighting,
4. selling drugs,
5. minor theft,
6. serious theft,
7. robbery,
8. attacking someone to seriously hurt them, and

They found that a history of parental antisocial behavior, and parental attitudes favorable towards antisocial behavior and substance use, were the most influential contributors to the engagement in the nine behavioral outcomes.

This previous study has contributed to a deeper understanding of how family risk and protective factors influence problem behaviors in high-risk Caribbean youth. However, one domain not considered in Maguire and Fishbein’s (2016) study was the potential role of school-based risk and protective factors. This present study extends the scope of this previous work by examining the role of school-related risk and protective factors on adolescent problem behaviors. The school system’s importance is addressed in relevant literature (Sklad et al., 2012), of which it is expected to have a significant impact on problem behaviors given the length of time students spend at school (i.e., on average, about 6 hours). This study was one of the first significant studies particularly conducted in urban high-risk secondary schools in Trinidad and Tobago.
Study Setting

In Trinidad and Tobago, school practitioners have experienced a plethora of challenges (DeLisle, Smith, Jules, 2010; Kats & Fox, 2010; Thompson, 2009). These challenges thwart school-wide efforts to address the issue of student misconduct. They include a lack of appropriate resources, inadequate classroom methodologies, weak management structures, poor articulation of existing policies and programs, and insufficient educational programs and interventions (DeLisle, Smith, Jules, 2010; Kats & Fox, 2010; Thompson, 2009).

Current Study

Given the challenges mentioned above, this study seeks to examine how school, family, and individual risk and protective factors predict adolescent behavior problems. By investigating the social impact of the school when controlling for family and personal factors, this research provides a more nuanced understanding of the relationship of risk and protective elements and school-related violence, lifetime substance use, and antisociality. Given concerns regarding school violence (Fahsl & Luce, 2012) that negatively impact academic engagement (Bender, 2012) and school outcomes (Connell et al., 2010; Li et al., 2011), this study addresses two overarching questions such as:

1. What are the prevalence rates of violence perpetration, lifetime substance use, and antisocial behavior among at-risk school-age youth?

2. Do school-related risk, and protective factors uniquely contribute to adolescent problem behaviors after controlling for individual and family risk and protective factors?
We utilized a survey of self-reported measures on four ecological domains (i.e., the home, school, neighborhood, and individual/peer group) of youth. The sample consisted of students between the ages of 12 to 19 years, currently attending high-risk public secondary schools within Trinidad and Tobago. The self-reports of 864 students, provided a unique advantage on which to measure prevalence estimates for problem behaviors and offered an appropriate strategy for ranking, and disaggregating data clusters of the most extenuating conduct problems of the school environment. Given the application of an ecological approach, we asserted five underlying assumptions:

1. An increase in risk exposure may predict severe behavioral consequences with the reverse effect resulting from higher protective exposure.

2. Increasing school risks may affect the impact of family and individual contributions on academic, behavioral problems.

3. School, family, and personal protective factors may mitigate how the school domain influences risk-related behaviors.

4. Confounding variables of the school, family, and individual contexts may contribute to adverse behavioral outcomes.

5. Demographic characteristics of age, gender, and ethnicity may serve to differentiate involvement in maladaptive practices, depending on the influence of the school, family, and individual/peer domains.
Methods

Consent and Data Collection

The data collection phase took place over four months, from September to December 2018. Initially, the researchers met with school officials to address concerns about the study. Procedural matters were discussed during the preliminaries to ensure that the research process ran smoothly and appropriately. Only students who were in attendance on survey day and received parental consent were allowed to participate. Before the questionnaire administration, the investigators explained the right to withdraw and or to discontinue at any time. They also outlined the appropriate steps to follow and the anticipated duration of one class period. Approval was sought from the respective schools, to secure sufficient time for filling out the survey.

Sampling/Participants

Standard research conventions guided the selection of form classes of levels one to five (equivalent to grades 7 through 11 of the U.S system) from each of the ten authorized schools. Only one of the eleven initially designated schools did not agree to engage in the study. Students who willingly participated in the anonymously administered surveys were assured safeguards from breach of confidentiality. Parental consent forms were sent out and returned as a mandated requirement for student involvement.
Measures

School Risk Factors

Academic Failure. This grade performance measure was administered to assess cumulative grades over the past twelve months. The measure includes two items (1) Putting them all together, what were your grades like last year? And (2) Are your school grades better than the grades of most students in your class? The two items rated on a 5-point scale ranging from 1=Mostly A’s to 5=Mostly F’s. Only the question regarding individual grade performance was analyzed because of specific interest in the respondents’ non-comparative academic progress.

School Commitment. This subscale comprises seven items on three separate rating scales 1=Never to 5= Almost Always; 1=Very Important to 5=Not at All Important; and 1=None to 7=11 or More Days. Examples include “During the last four weeks, how many days have you missed before you skipped class?” And “How interesting are most of your subjects to you?” Cronbach alpha =.65.

School Protective Factors

Opportunities and Rewards for prosocial involvement. Students were asked to report on their involvement in school activities and one-on-one discussions with teachers (i.e. opportunities for prosocial involvement) (e.g., “In my school, students have lots of chances to help decide things like class activities and rules and to be part of class discussions or activities”), as well as recognition received from teachers (i.e. Rewards for prosocial involvement) (e.g., “My teachers notice when I am doing a good job and let me know about it; and the school lets my parents know when I have done something well”).
Both measures were assessed across nine items on a 4-point scale ranging from 1=No to 4=Yes! Cronbach’s alphas were .65 and .84, respectively.

*Family Risk Factors*

*Family management.* Students reported on how much time was spent in the absence of adult supervision (e.g., “My parents know if I’ve done my homework”) or monitoring (e.g., “My parents know if I did not come home on time”). The students responded to the items using a 4-point scale ranging from 1=Strongly disagree to 4=Strongly agree. Cronbach’s alpha = .65.

*Family conflict.* Negative family interactions were assessed across three items on a scale ranging from 1=Strongly disagree to 4=Strongly agree with an alpha of .70. Examples include: “People in my family have severe arguments, often insult and yell at each other and argue about the same things over and over”. Cronbach’s alpha = .70.

*Parental attitudes favorable to antisocial behavior.* To assess parental attitudes that support antisocial behavior students responded to seven items (e.g., “How wrong do your parents feel it would be for you to steal something and or pick a fight with someone?”). The items were scored on a 4-point scale ranging from 1=Very wrong to 4=Not at all wrong. Cronbach’s alpha = .71.

*Parental attitudes favorable to drug use.* Parental attitudes that favor drug use (e.g., “How wrong do your parents feel it would be for you to have one or two drinks of beer, wine, or hard liquor every day?”) were assessed across three items on a 4-point scale of 1=Strongly disagree, 2=Disagree, 3=Agree, and 4=Strongly agree, with an alpha of .69.
**Family Protective Factors**

*Family history of antisocial behavior.* This measure consists of eight-items that are commonly used in assessing kinship patterns of antisocial norms. Examples include: “Have any of your sibling’s drunk beer, wine, or hard liquor?” And “about how many adults have you known personally who in the past 12 months have sold or dealt drugs?” There are three response categories within this subscale. The first response category for four items is 1= No, 2=Yes, and 3= I don’t have any brothers or sisters. The second response category for one question is 1=No, 2=Yes, and the third response category for three items is 0 Adults=1, 1 Adult=2, 2 Adults=3, 3, or 4 Adults=4 and five or more adults =5. Cronbach’s alpha = .66.

*Opportunities for prosocial involvement.* This subscale consists of three items (e.g., “My parents give me lots of chances to do fun things with them”). It rates on a 4-point scale of 1=Strongly disagree, 2=Disagree, 3=Agree, and 4=Strongly agree. Cronbach’s alpha = .72.

*Rewards for prosocial involvement.* This measure comprises a subscale of four items (e.g., “My parents notice when I am doing a good job and let me know about it”). It is assessed across two response categories of 1=Never or almost never to 4=All the time, and 1=Strongly disagree, to 4=Strongly agree. Cronbach’s alpha = .65.

*Family attachment.* This subscale consists of four itemized questions (e.g., “I share my thoughts and feelings with my mother and or father?”). It rates on a 4-point scale of NO=1 to YES!=4. Cronbach’s alpha = .73.
Individual Risk Factors

Rebelliousness. This is a three-item subscale that measures the extent of reported involvement in rule-breaking behaviors. Examples of questions of rebelliousness were: “I do the opposite of what people tell me, to get them mad”; “I ignore rules that get in my way,” and “I like to see how much I can get away with.” The response category of 1=Very false, 2=Somewhat false, 3=Somewhat true, and 4=Very true was utilized for this subscale. Cronbach’s alpha = .72.

Early initiation of drug use. This four-item subscale of the onset of drug use (e.g., “How old were you when you first drank or smoke or used alcoholic beverages at least once or twice a month?”), rates on an 8-point scale ranging from 0=Never to 8=Ages 8 or younger through to age 10, with a Cronbach’s alpha of .71.

Favorable attitudes to antisocial behavior and favorable attitudes towards drug use. A combined total of eight items comprise these two subscales. In terms of both measures, students were asked “How wrong do you think it is for someone your age to: have one or two drinks of beer?”, “Smoke marijuana?” “Smoke cigarettes,” “Take a handgun to school? “Steal anything worth more than $5?”, “Pick a fight with someone?” “Attack someone with the idea of seriously hurting them,” and “Stay away from school all day?”. Both measures rate on a 4-point scale ranging from 1=Very wrong to 4=Not at all wrong. Cronbach’s alphas ranged from .79 to .81.

Perceived risk of drug use. This four-item subscale rates on a 4-point scale of 1=No risk, 2=Slight risk, 3=Moderate risk, and 4=Great risk. For example, how much do you think people risk harming themselves if they: “Smoke one or more packs of
cigarettes per day?”, “Try marijuana once or twice?” “Smoke marijuana regularly?” And “take one or two drinks of alcohol every day?” Cronbach’s alpha = .85.

Rewards for antisocial involvement. This subscale comprises of four items for which students were asked: what are the chances you would be seen as cool if you smoked, drank regularly, and or carried a handgun. The items were assessed on a 5-point scale of No or very little chance= 1, Little chance= 2, Some chance= 3, Pretty good chance= 4, and Very good chance =5. Cronbach’s alpha =.88.

Interaction with antisocial peers and friends’ drug use. These measures consist of a combined total of ten items describing deviant peer interactions and friends’ drug use (e.g., “Think of your four friends you feel closest to, how many of them have failed or received a school suspension; engaged in criminal or illegal activity; and consumed drugs and or alcohol”). Both subscales were assessed on a 4-point scale ranging from 0=0 Friends to 4=4+ Friends. Cronbach’s alphas were .82 and .75, respectively.

Individual Protective Factor

Prosocial involvement. This is a dual-item subscale that measures students’ response to the questions “How many times in the past 12 months did you participate in clubs, organizations, or activities?” and “How many times did you complete individual academic work?” These two items were assessed on a 5-point scale ranging from 1=Never to 5=Ten or more times. Cronbach’s alpha = .78.
Outcomes Measures

Current and Lifetime Substance Use. A subscale of eight items was used to measure substance use over 30 days and across the lifespan. This complete index is coded 0 for 0 to 8 occasions and 1 for 9 to 40+ times. However, within the study only extensive drug-use was of specific interest and or concern. Thus, the full index of eight questions was not utilized within the analyses. Instead, four items measuring lifetime substance use (e.g., “On how many times have you: Had alcoholic beverages?”, “Used marijuana?” “Used cocaine or crack”? And, “used the non-existent drug phenoxydine?”) were utilized. The combined Cronbach’s alphas was .71.

Violence perpetration. This measure of physical aggression consists of three items that assess the number of times during the past 12 months of witnessing or committing a violent act. Students responded to: “How many times during the past year, have you attacked someone with a weapon?”, “Seen someone attacked with a weapon, other than a gun, such as a knife, bat, bottle, or chain?” “And, seen someone shot or shot at?” These three items were measured on a 5-point scale ranging from 1= Never to 5=Ten or more times. Cronbach’s alpha = .66.

Antisocial behavior. Students reported the frequency of involvement during the previous year in criminal acts or misdemeanors using a total of twelve items (e.g., “How many times in the past year were you suspended from school?” “Have you carried a handgun? And have you sold illegal drugs?”). All items were scored on a scale ranging from 1 =Never to 5=Ten or more times, with a Cronbach’s alpha of .80.
Data Analysis

Standard analytic procedures guided the collation and examination of completed questionnaires during the data management phase. Participants were asked to indicate whether they had been honest in filling out the survey. This exclusion criterion led to the removal of questionnaires from the survey pool. Likewise, if students stated that they did partake of the non-existent drug phenoxydine, the surveys were omitted. The data cleaning process involved conventional research standards for testing assumptions of logistic regression (Tabachnick & Fidel, 2013). After it was determined that the assumptions were met appropriately, the next stage involved data inspection and generation of preliminary statistics (See Table 1).

We ran multiple imputation (MI) analysis in Mplus vs. 81 (Muthén and Muthén, 2008) using the recommended procedures outlined by Johnson & Young (2010) to retain most of the survey data and ensure a more thorough overview of the parameter estimates. A preliminary review in SPSS Mac vs. 25 of missing values determined the distribution pattern, before running the primary analyses of logistic regression. The report revealed missing not at randomness or MNAR. We selected multiple imputation (MI) analysis as the best method of handling the extreme non-random data (see Johnson & Young 2010) that characterized the pattern of missingness.

After addressing missing data, we conducted bivariate analyses to explore the data further. Three binomial logistic regression analyses were subsequently performed. We examined possible contributions of the school on lifetime substance use, violence perpetration, and antisocial behavior.
In terms of lifetime substance use, four school factors: low school commitment, academic failure, opportunities for prosocial involvement, and rewards for prosocial involvement were regressed unto the first model. The independent variables were entered as a partial model before controlling for risks and protective factors of the family and individual domains together with race, gender, and ethnicity (see Table 2). This process was repeated for the two remaining binomial outcomes of violence perpetration and antisocial behavior.

A significant relationship was anticipated between risk and protective factors of the school, family and individual domains (IVs), and the proclivity for specific problem behaviors (DV$s$), namely lifetime substance use, antisocial behavior, and violence perpetration. We assumed that the relationship predicted these adverse behavior outcomes depending on the extent of risk exposure and that these effects would vary by age, gender, and ethnicity. To test these hypotheses, we ran logistic regressions for each of the three binomial outcomes, as was previously mentioned.
Table 1: Descriptives of Demographic and Outcome Measures of Lifetime Substance Use, Witnessed/Perpetrated Violence, and Antisocial Behavior as Reported by Adolescents

<table>
<thead>
<tr>
<th></th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>37.2</td>
</tr>
<tr>
<td>Female</td>
<td>62.4</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>1.1</td>
</tr>
<tr>
<td>13</td>
<td>22.7</td>
</tr>
<tr>
<td>14</td>
<td>27.6</td>
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<td>15</td>
<td>25.5</td>
</tr>
<tr>
<td>16</td>
<td>14.7</td>
</tr>
<tr>
<td>17 or older</td>
<td>7.4</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
</tr>
<tr>
<td>East Indian</td>
<td>12.7</td>
</tr>
<tr>
<td>Black/African</td>
<td>34.4</td>
</tr>
<tr>
<td>White/Caucasian</td>
<td>1.1</td>
</tr>
<tr>
<td>Mixed</td>
<td>48.4</td>
</tr>
<tr>
<td>Other</td>
<td>3.7</td>
</tr>
<tr>
<td><strong>Form/Grade</strong></td>
<td></td>
</tr>
<tr>
<td>1st</td>
<td>5.7</td>
</tr>
<tr>
<td>2nd</td>
<td>32.7</td>
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<tr>
<td>3rd</td>
<td>17.4</td>
</tr>
<tr>
<td>4th</td>
<td>20.8</td>
</tr>
<tr>
<td>5th</td>
<td>19.7</td>
</tr>
<tr>
<td>6th</td>
<td>3.2</td>
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<td>Lifetime Substance Use</td>
<td>65</td>
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<tr>
<td>Witnessed/Perpetrated Violence</td>
<td>53.9</td>
</tr>
<tr>
<td>Antisocial Behavior</td>
<td>53.3</td>
</tr>
</tbody>
</table>
Approximately 13% of students were Indo-Trinidadian, 34% Afro-Trinidadian, 1% Euro-Trinidadian, 48% Mixed-Trinidadian, and 4% Other. About 77% of respondents were 13 to 15 years. Roughly two-thirds were female (62%). Regarding substance use, 65% percent of students reported using substances at least once in their lifetime, with more than half (53.9%) reporting to have seen or perpetrated violence, and a similar amount (53.3%) indicating prior involvement in antisocial behavior.
Table 2: Correlations Between School Risk and Protective Factors and Lifetime Substance Use, Antisocial Behavior and Perpetrated/Witnessed Violence as Reported by Adolescents

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
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<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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<tbody>
<tr>
<td>1. Low School Commitment</td>
<td>—</td>
<td>.130**</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>2. Academic Failure</td>
<td>—</td>
<td>—</td>
<td>.089**</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>3. School Opportunities for Prosocial Involvement</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>.301**</td>
<td>.089**</td>
<td>.089**</td>
<td>.082**</td>
</tr>
<tr>
<td>4. School Rewards for Prosocial Involvement</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>.138**</td>
<td>.135**</td>
<td>.092**</td>
</tr>
<tr>
<td>5. Lifetime Substance Use</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>.259**</td>
<td>.220**</td>
<td>—</td>
</tr>
<tr>
<td>6. Antisocial Behavior</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>.358**</td>
</tr>
<tr>
<td>7. Perpetrated/Witnessed Violence</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

*p. <.05; **p. <.01
Results

Overall, school risk and protective factors did not influence the outcome variables despite pair correlations at the bivariate level (See Table 2). As expected, the school factors were significantly related to these outcomes, except for violence perpetration, which was not associated with academic failure. However, subsequent tests of binomial logistic regression revealed the previously discussed insignificance of the school variables.

A test of the first model showed that a history of antisocial behavior $\chi^2(1, N = 529) = 5.699, p < .05$, family opportunities $\chi^2(1, N = 529) = 5.149, p > .05$ and rewards $\chi^2(1, N = 529) = 6.260, p < .05$ for prosocial involvement and a premature onset age $\chi^2(1, N = 529) = 35.874, p > .001$ predicted lifetime substance use. Weak family management practices did not predict substance involvement $\chi^2(1, N = 529) = 2.019, p > .05$, as did not a favorable attitude towards drug use $\chi^2(1, N = 529) = .928, p > .05$. Neither race, gender nor ethnicity (See Table 4) were significantly related to extensive substance use but friends’ drug use $\chi^2(1, N = 529) = 15.234, p < .001$ was a significant predictor.
Table 3
Wald, and Odd Ratio Parameter Estimates for Life-time Substance Use, Antisocial Behavior and Violence Perpetration

<table>
<thead>
<tr>
<th>Effect</th>
<th>Lifetime Substance Use</th>
<th>Antisocial Behavior</th>
<th>Violence Perpetration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( x^2 )</td>
<td>Exp(b)</td>
<td>( x^2 )</td>
</tr>
<tr>
<td><strong>School</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low School Commitment</td>
<td>.668</td>
<td>.967</td>
<td>.323</td>
</tr>
<tr>
<td>Academic Life</td>
<td>1.106</td>
<td>1.275</td>
<td>.704</td>
</tr>
<tr>
<td>Opportunities Prosocial Involvement</td>
<td>.625</td>
<td>.935</td>
<td>.590</td>
</tr>
<tr>
<td>Rewards Prosocial Involvement</td>
<td>2.234</td>
<td>.905</td>
<td>2.667</td>
</tr>
<tr>
<td><strong>Family</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family History of Antisocial Behavior</td>
<td>5.699*</td>
<td>1.065</td>
<td>1.562</td>
</tr>
<tr>
<td>Poor Family Management</td>
<td>2.019</td>
<td>.954</td>
<td>.917</td>
</tr>
<tr>
<td>Family Conflict</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Attitudes Favorable Drug Use</td>
<td>.160</td>
<td>1.089</td>
<td>—</td>
</tr>
<tr>
<td>Attitudes Favorable Antisocial Behavior</td>
<td>—</td>
<td>—</td>
<td>1.106</td>
</tr>
<tr>
<td>Family Attachment</td>
<td>—</td>
<td>—</td>
<td>.039</td>
</tr>
<tr>
<td>Opportunities Prosocial Involvement</td>
<td>5.149*</td>
<td>.817</td>
<td>.135</td>
</tr>
<tr>
<td>Rewards for Prosocial Involvement</td>
<td>6.260*</td>
<td>1.206</td>
<td>1.917</td>
</tr>
<tr>
<td><strong>Individual</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Early Initiation of Drug Use</td>
<td>35.874***</td>
<td>1.165</td>
<td>9.333**</td>
</tr>
<tr>
<td>Interaction with Antisocial Peers</td>
<td>—</td>
<td>—</td>
<td>8.788**</td>
</tr>
<tr>
<td>Friend’s Drug Use</td>
<td>15.234***</td>
<td>1.231</td>
<td>.054</td>
</tr>
<tr>
<td>Rebelliousness</td>
<td>—</td>
<td>—</td>
<td>5.605*</td>
</tr>
<tr>
<td>Attitudes Favorable Drug Use</td>
<td>.928</td>
<td>1.089</td>
<td>.002</td>
</tr>
<tr>
<td>Attitudes Favorable Antisocial Behavior</td>
<td>—</td>
<td>—</td>
<td>6.404*</td>
</tr>
<tr>
<td>Reward for Antisocial Behavior</td>
<td>—</td>
<td>—</td>
<td>.195</td>
</tr>
<tr>
<td>Prosocial Involvement</td>
<td>.152</td>
<td>.977</td>
<td>.642</td>
</tr>
<tr>
<td>Gender (M)</td>
<td>.517</td>
<td>.820</td>
<td>4.457*</td>
</tr>
<tr>
<td>Age</td>
<td>.267</td>
<td>.977</td>
<td>1.142</td>
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<tr>
<td>Race (E)</td>
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<td>.245</td>
</tr>
<tr>
<td>Race (A)</td>
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<td>1.582</td>
<td>.165</td>
</tr>
<tr>
<td>Race (C)</td>
<td>1.322</td>
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<td>.030</td>
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<tr>
<td>Race (M)</td>
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<tr>
<td>Race (O)</td>
<td>.000</td>
<td>1</td>
<td>.719</td>
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</tbody>
</table>

*Note.* N= 529, number of effects = 20. CI = confidence interval; LL = lower limit; UL = upper limit. *\( p<.05; \)**\( *p<.01; \)**\( **p<.001 \) Race (E)= Indo-Trinidadian; Race (A)= Afro-Trinidadian; Race (C)= Euro-Trinidadian; Race (M) Mixed-Trinidadian; Race (O) Other
Table 4
Parameter Estimates for Logistic Regress Model of School, Family and Individual Predictors of Substance Use as Reported by Adolescent

<table>
<thead>
<tr>
<th>Effect</th>
<th>Estimate</th>
<th>SE</th>
<th>95% CI</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>5.076</td>
<td>4.054</td>
<td>−1.548</td>
<td>11.744</td>
</tr>
<tr>
<td><strong>School Risk and Protective</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low School Commitment</td>
<td>−.033</td>
<td>.041</td>
<td>−.100</td>
<td>.034</td>
</tr>
<tr>
<td>Academic Failure</td>
<td>.243</td>
<td>.231</td>
<td>−.137</td>
<td>.622</td>
</tr>
<tr>
<td>Opportunities Prosocial Involvement</td>
<td>−.067</td>
<td>.084</td>
<td>−.206</td>
<td>.072</td>
</tr>
<tr>
<td>Rewards for Prosocial Involvement</td>
<td>−.099</td>
<td>.066</td>
<td>−.208</td>
<td>.010</td>
</tr>
<tr>
<td><strong>Family Risk and Protective</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor Family Management</td>
<td>−.047</td>
<td>.033</td>
<td>.101</td>
<td>.007</td>
</tr>
<tr>
<td>Family History of Antisocial Behavior</td>
<td>.063</td>
<td>.026</td>
<td>.020</td>
<td>.106</td>
</tr>
<tr>
<td>Family Attitudes Drug Use</td>
<td>.047</td>
<td>.118</td>
<td>.047</td>
<td>.278</td>
</tr>
<tr>
<td>Opportunities Prosocial Involvement</td>
<td>−.201</td>
<td>.089</td>
<td>−.347</td>
<td>−.055</td>
</tr>
<tr>
<td>Rewards for Prosocial Involvement</td>
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<td>.075</td>
<td>.064</td>
<td>.312</td>
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<tr>
<td><strong>Individual Risk and Protective</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Early Initiation of Drug Use</td>
<td>.153</td>
<td>.025</td>
<td>.111</td>
<td>.194</td>
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<tr>
<td>Friend’s Drug Use</td>
<td>.208</td>
<td>.053</td>
<td>.120</td>
<td>.296</td>
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<td>Attitude Favoring Antisocial Behavior</td>
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<td>.089</td>
<td>−.061</td>
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<tr>
<td>Prosocial Involvement</td>
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<td>.058</td>
<td>−.118</td>
<td>.073</td>
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<td>Gender (M)</td>
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<td>.255</td>
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<tr>
<td>Age</td>
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<td>.044</td>
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<td>.050</td>
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<td>Race (E)</td>
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<tr>
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</tr>
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<td>.000</td>
<td>.670</td>
<td>−1.101</td>
<td>1.102</td>
</tr>
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</table>

*Note. N= 529, number of effects = 20. CI = confidence interval; LL = lower limit; UL = upper limit.
*p<.05; **p<.01; ***p<.00. Race (E)= Indo-Trinidadian; Race (A)= Afro-Trinidadian; Race (C)= Euro-Trinidadian; Race (M) Mixed Trinidadian; Race (O) Other
Next, we found that within the second model family history of antisocial behavior $\chi^2 (1, N = 529) = 9.051, p < .01$, poor family management $\chi^2 (1, N = 529) = 4.623, p < .05$, rewards for prosocial involvement $\chi^2 (1, N = 492) = 6.518, p < .05$, early initiation of drug use $\chi^2 (1, N = 529) = 6.585, p < .05$, interaction with antisocial peers $\chi^2 (1, N = 492) = 12.557, p < .001$, and prosocial involvement $\chi^2 (1, N = 529) = 10.158, p < .01$ predicted violence.

However, there were no demographic significant predictors to violent behavior. Similarly, family conflict $\chi^2 (1, N = 529) = .337, p > .05$ and weak family attachment $\chi^2 (1, N = 492) = .457, p < .05$ were insignificant. Prosocial involvement $\chi^2 (1, N = 529) = 10.158, p < .00$, did increase the odds (1.185) of witnessing or perpetrating violence.
Table 5
Parameter Estimates for Logistic Regress Model of School, Family and Individual Witnessed/Perpetrated Violence as Reported by Adolescent

<table>
<thead>
<tr>
<th>Effect</th>
<th>Estimate</th>
<th>SE</th>
<th>95% CI</th>
<th>p</th>
</tr>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>LL</td>
<td>UL</td>
</tr>
<tr>
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<td>2.397</td>
<td>3.846</td>
<td>−3.931</td>
<td>8.724</td>
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<td><strong>School Risk and Protective</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low School Commitment</td>
<td>−.015</td>
<td>.036</td>
<td>−.075</td>
<td>.045</td>
</tr>
<tr>
<td>Academic Failure</td>
<td>.178</td>
<td>.200</td>
<td>−.152</td>
<td>.507</td>
</tr>
<tr>
<td>Opportunities Prosocial Involvement</td>
<td>−.073</td>
<td>.074</td>
<td>−.194</td>
<td>.049</td>
</tr>
<tr>
<td>Rewards for Prosocial Involvement</td>
<td>−.054</td>
<td>.059</td>
<td>−.151</td>
<td>.042</td>
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<tr>
<td><strong>Family Risk and Protective</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor Family Management</td>
<td>.065</td>
<td>.030</td>
<td>.029</td>
<td>.101</td>
</tr>
<tr>
<td>Family History of Antisocial Behavior</td>
<td>.065</td>
<td>.022</td>
<td>.015</td>
<td>.115</td>
</tr>
<tr>
<td>Family Conflict</td>
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<td>.064</td>
<td>−.068</td>
<td>.142</td>
</tr>
<tr>
<td>Family Attachment</td>
<td>−.026</td>
<td>.063</td>
<td>−.129</td>
<td>.077</td>
</tr>
<tr>
<td>Opportunities Prosocial Involvement</td>
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<td>.083</td>
<td>−.257</td>
<td>.015</td>
</tr>
<tr>
<td>Rewards for Prosocial Involvement</td>
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<td>.078</td>
<td>.070</td>
<td>.325</td>
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<tr>
<td><strong>Individual Risk and Protective</strong></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Early Initiation of Drug Use</td>
<td>.048</td>
<td>.019</td>
<td>.017</td>
<td>.079</td>
</tr>
<tr>
<td>Interaction with Antisocial Peers</td>
<td>.168</td>
<td>.048</td>
<td>.090</td>
<td>.247</td>
</tr>
<tr>
<td>Rewards for Antisocial Behavior</td>
<td>.048</td>
<td>.019</td>
<td>.000</td>
<td>.097</td>
</tr>
<tr>
<td>Prosocial Involvement</td>
<td>.170</td>
<td>.053</td>
<td>.082</td>
<td>.258</td>
</tr>
<tr>
<td>Gender (M)</td>
<td>−.088</td>
<td>.251</td>
<td>−.502</td>
<td>.325</td>
</tr>
<tr>
<td>Age</td>
<td>−.066</td>
<td>.044</td>
<td>−.138</td>
<td>.006</td>
</tr>
<tr>
<td>Race (E)</td>
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<td>.123</td>
<td>−.215</td>
<td>.190</td>
</tr>
<tr>
<td>Race (A)</td>
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<td>−1.280</td>
<td>−.053</td>
</tr>
<tr>
<td>Race (C)</td>
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<td>1.581</td>
</tr>
<tr>
<td>Race (M)</td>
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<td>.352</td>
<td>−1.185</td>
<td>−.025</td>
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<tr>
<td>Race (O)</td>
<td>−.094</td>
<td>.643</td>
<td>−1.152</td>
<td>.963</td>
</tr>
</tbody>
</table>

*Note: N= 529, number of effects = 20, DF=1, CI = confidence interval; LL = lower limit; UL = upper limit. *p<.05; **p<.01; ***p<.001. Race (E)= Indo-Trinidadian; Race (A)= Afro-Trinidadian; Race (C)= Euro-Trinidadian; Race (M) Mixed-Trinidadian; Race (O) Other
In the final model we found statistical significance for antisocial peer interactions $\chi^2(1, N = 529) = 8.788, p < .01$ rebelliousness $\chi^2(1, N = 529) = 5.605, p < .05$ and favorable attitudes towards drug use $\chi^2(1, N = 492) = 6.404, p < .01$ in predicting antisocial behavior. Age and ethnicity were insignificant, though gender met significance criteria $\chi^2(1, N = 529) = 4.457, p < .05$. A family history of antisocial behavior $\chi^2(1, N = 492) = 2.537, p > .05$ and weak family management practices $\chi^2(1, N = 492) = 0.209, p > .05$ were also insignificant. Repeatedly, these findings reveal that the strongest effects were found within the individual and or peer domains.
Table 6
Parameter Estimates for Logistic Regress Model of School, Family and Individual Predictors of Antisocial Behavior as Reported by Adolescents

<table>
<thead>
<tr>
<th>Effect</th>
<th>Estimate</th>
<th>SE</th>
<th>95% CI</th>
<th>p</th>
<th>LL</th>
<th>UL</th>
</tr>
</thead>
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<tr>
<td>Intercept</td>
<td>6.363</td>
<td>3.954</td>
<td>.142</td>
<td>12.867</td>
<td>.108</td>
<td></td>
</tr>
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<td><strong>School Risk and Protective</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low School Commitment</td>
<td>-.021</td>
<td>.037</td>
<td>-.082</td>
<td>.040</td>
<td>.570</td>
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</tr>
<tr>
<td>Academic Failure</td>
<td>.171</td>
<td>.204</td>
<td>-.164</td>
<td>.506</td>
<td>.401</td>
<td></td>
</tr>
<tr>
<td>Opportunities Prosocial Involvement</td>
<td>-.060</td>
<td>.078</td>
<td>-.188</td>
<td>.068</td>
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<td></td>
</tr>
<tr>
<td>Rewards for Prosocial Involvement</td>
<td>-.103</td>
<td>.063</td>
<td>-.206</td>
<td>.001</td>
<td>.102</td>
<td></td>
</tr>
<tr>
<td><strong>Family Risk and Protective</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor Family Management</td>
<td>.027</td>
<td>.028</td>
<td>.019</td>
<td>.073</td>
<td>.338</td>
<td></td>
</tr>
<tr>
<td>Family Attitudes Antisocial Behavior</td>
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<td>.028</td>
<td>-.062</td>
<td>.280</td>
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</tr>
<tr>
<td>Family Attachment</td>
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<td>.063</td>
<td>-.092</td>
<td>.117</td>
<td>.844</td>
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<tr>
<td>Family History Antisocial Behavior</td>
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<td>.023</td>
<td>.009</td>
<td>.066</td>
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</tr>
<tr>
<td>Opportunities Prosocial Involvement</td>
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<td>-.109</td>
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<td>.713</td>
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</tr>
<tr>
<td>Rewards for Prosocial Involvement</td>
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<td>.077</td>
<td>-.020</td>
<td>.234</td>
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</tr>
<tr>
<td><strong>Individual Risk and Protective</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interaction with Antisocial Peers</td>
<td>.162</td>
<td>.055</td>
<td>.072</td>
<td>.251</td>
<td>.003**</td>
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<tr>
<td>Early Initiation of Drug Use</td>
<td>.064</td>
<td>.021</td>
<td>.030</td>
<td>.098</td>
<td>.002**</td>
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<tr>
<td>Prosocial Involvement</td>
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<td>.055</td>
<td>-.046</td>
<td>.134</td>
<td>.423</td>
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<tr>
<td>Rebelliousness</td>
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<td>.056</td>
<td>.041</td>
<td>.226</td>
<td>.018*</td>
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<td>Attitude Favoring Drug Use</td>
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<td>-.136</td>
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<td>.058</td>
<td>.274</td>
<td>.011*</td>
<td></td>
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<tr>
<td>Rewards for Antisocial Behavior</td>
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<td>.032</td>
<td>-.039</td>
<td>.067</td>
<td>.659</td>
<td></td>
</tr>
<tr>
<td>Friend’s Drug Use</td>
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<td>-.086</td>
<td>.065</td>
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<tr>
<td>Gender (M)</td>
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<td>.261</td>
<td>-.121</td>
<td>.979</td>
<td>.035*</td>
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</tr>
<tr>
<td>Age</td>
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<td>.045</td>
<td>.122</td>
<td>.026</td>
<td>.285</td>
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<tr>
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<td>-.337</td>
<td>.181</td>
<td>.621</td>
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</tr>
<tr>
<td>Race (A)</td>
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<td>.400</td>
<td>-.496</td>
<td>.821</td>
<td>.684</td>
<td></td>
</tr>
<tr>
<td>Race (C)</td>
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<td>-.2.079</td>
<td>1.684</td>
<td>.863</td>
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</tr>
<tr>
<td>Race (M)</td>
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<td>.378</td>
<td>.773</td>
<td>.470</td>
<td>.688</td>
<td></td>
</tr>
<tr>
<td>Race (O)</td>
<td>.564</td>
<td>.666</td>
<td>-.530</td>
<td>1.659</td>
<td>.396</td>
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</tr>
</tbody>
</table>

*Note. N= 529, number of effects = 20. CI = confidence interval; LL = lower limit; UL = upper limit.
*p<.05; **p<.01; ***p<.001. Race (E)= Indo-Trinidadian; Race (A)= Afro-Trinidadian; Race (C)= Euro-Trinidadian; Race (M) Mixed; Race (O) Other
Discussion

Surprisingly, school risk and protective factors did not seem to significantly or directly predict antisocial, violent, and substance-using behaviors of the adolescents within the study when considered with family, and individual/peer risk and protective factors. However, since Pearson correlations had some indication of significance of the school variables at the bivariate level, it might be useful to test whether there could be possible indirect effects linking the school domain to the behavioral outcomes.

Research reports that adolescent antisocial behavior may emerge from similar patterns of behavior by close kinship (Kelly et al., 201; Fletcher et al., 1995; Van Ryzin et al., 2012). This generational transmission of antisocial traditions may result from a history of antisocial behavior within the home (Fletcher et al., 1995; Van Ryzin et al., 2012). However, we discovered conflicting results within the current sample regarding family traits that were collectively insignificant concerning antisocial norms.

Further perusal of the data revealed a gendered effect. Males reported higher engagement in antisocial behaviors than females. Consistent with previous research (Mobarake, 2015), more parental control was associated with lower antisocial behavior in females than in males (Bacchinni et al., 2011). Conversely, inadequate parental supervision may facilitate negative peer bonds, which may promote substance misuse (Kelly et al. (2011). These results suggest indirect pathways that might explain the insignificance found within this study relating to weak family management and heavy substance use.

We also found that both opportunities and rewards for prosocial involvement significantly predicted lifetime substance use. However, opportunities for prosocial
involvement had a negative or inverse effect (i.e., it reduced participation in substance use), whereas rewards for prosocial behavior increased harmful substance use. These results support the view that extrinsic rewards could undermine intrinsic motivations for prosocial norms that may increase the possibility of drug-using behavior among teens. This perspective has gained support within the literature (Eisenberg et al., 2015) to which the present study is consistent.

Our findings yielded compelling results concerning the age of onset of initial exposure that predicted chronic substance use. We discovered that age was insignificant when modeled as a separate predictor independent of early drug initiation. Meaning, age alone did not predict heavy substance use; instead, the age of onset led to progressive substance engagement. We concluded that perhaps, the timing at which substance use begins (i.e., the life-course initiation) and extensiveness might explain this partly unexpected result. However, further investigation is required to elucidate a more informed understanding. The results also demonstrated that friends’ drug use predicted lifetime usage, to which previous research seems to affirm this finding (Kelly et al., 2012; Obano et al., 2014; Van Ryzin et al., 2012).

The data extrapolation revealed that aggressively disruptive minors might have a family history of antisocial behavior. Comparable research substantiates this relationship (Flemming et al., 2010). The findings also seem to convey congruence with previous research (Wang & Degol, 2015; Wang & Deshion, 2011; Wang et al., 2010) that links interactions with antisocial peers to growing hostility.

Interestingly, studies have shown that males are more likely to perpetrate violence than females (Adams & Mrug, 2018; Hong & Eslelage, 2012; Gentle-Genitty et al., 2017;
Khoury-Kassabri et al., 2009). However, gender disparity found within previous research was inconsistent with the present study. This apparent anomaly might suggest homogeneity in gender conformity to violent norms within the study sample. Another possible explanation might be the probable contextual effects of the study locale, given the overall characteristics of the disadvantage of high-risk Caribbean neighborhoods (e.g., gang affiliations that support the existing culture of violence) (Maguire et al., 2011).

Another key finding relates to prosocial involvement, which increased violent conduct. Hence, prosocially-engaged adolescents were more likely to externalize or witness the act of violence. In this regard, prosocial involvement did not provide a buffer against the risk of violent exposure. Further investigation must, therefore, go into understanding the balancing act of prosocial behavior, since the influence of protective factors appears to be inconsequential when compared to risks.

Regarding the individual domain, a behavioral trait that caught our attention was rebelliousness. We anticipated that such defiance could shape how teens conform and or adapt to set standards, notwithstanding risk-taking experiences, which may lead to rule-breaking behaviors. Upon closer examination, we observed that the students who reported a proclivity for resisting authority were more likely to engage in antisocial practices that their prosocial counterparts. We were not astonished that adolescents who exhibited a lack of behavioral control were prone to the most common forms of antisocial behavior, such as substance use. Investigators have found this association to which risk-taking, deviant and rebellious traits in adolescence predicted habitual smoking into adulthood (Brook et al., 2010).
Based on the previous discussion, we surmise that the family and individual domains were predictive of adolescent behavior problems relative to the school, for which we detected no significance. We, however, believe that though the school did not significantly predict the outcomes (e.g., academic failure may more closely relate to school disengagement), it was indeed necessary to account for school effects given its role as a primary socialization agent. Personal attributes, did, however, contribute to the most concurrent significant results. We also surmized that students’ substance-using, violent, and antisocial habits were reinforced mainly through family and peer norms.

Given the negative implications of disorderly academic conduct, the findings reinforce the urgency for schools to adopt an integrative approach comprising student literacy instruction and self-awareness, and parental coaching, and monitoring (Jailing et al., 2015). These family school-based interventions may assist in facilitating improvements in school-level and classroom management strategies.

Other beneficial educational initiatives involve social, emotional education that targets improvements in behavioral and academic standards (Reinke et al., 2009), and provides the distinct advantage of risk-behavior screening (Tyler-Merrick & Church, 2013) for early detection and prevention. Educational practitioners must, however, expertly implement these strategies in enhancing positive attributes (Sklad et al., 2012) and resiliency in children and adolescents (UNDP, 2012).

**Limitations and Conclusion**

Based on the analytic data procedures, we acknowledge possible construct validity issues due to the utilization of the Community That Cares (CTC) survey within
the research context. In 2006, even with modifications (Fox, 2008); measures of the CTC lacked robustness in the ability to explain the influence of family protective factors on illegal drug use, unlawful gun possession, and gang membership of youth in Trinidad and Tobago (Maguire & Fishbein, 2016; Maguire, Wells & Kats, 2011). Family protective factors demonstrated weak effects though inadequate family management and adult history of antisocial behavior were strongly impacting (Maguire & Fishbein, 2016; Maguire, Wells & Kats, 2011). The CTC instrument was deemed inadequate in measuring the protective familial attributes of youth within the previous study (Maguire & Fishbein, 2016), a viable concern for which we similarly concur. Further, accounting for missing data could plausibly restrict external validity (Schafer & Graham, 2002). However, we firmly believe that the application of multiple imputation analyses allowed for accuracy in estimating sample parameters and preserving data integrity.

Additionally, the methodology is not without its share challenges, particularly with regards to the impact of community influences that may become obscured by explicitly focusing on school, family, and individual domains. Also, constraints regarding the scope of the study are notable. We acknowledge that we may not be able to make inferences beyond the high-risk population of our sample. Because of the use of cross-sectional design of self-reported data, the present research is disadvantaged concerning its generalizability. Research confirms that cross-sectional studies are limited in their ability to establish cause and effect (Sedgwick, 2014), and may result in biased estimates (Jager et al., 2017).

Given the challenges with drawing predictive conclusions from cross-sectional data, we purported plausible effects between the outcomes and ecological domains. We
recognize that convenient sampling may bias the results through the under or over-representation of specific groups within the present study. For example, more than half the study were females, and the more substantial majority were between 13 to 15 years. Therefore, the sample is unlikely to represent all high-risk students within the study locale, though providing useful information. We did, however, strive to achieve homogeneity (Jager et al., 2017) by ensuring basic similarities among the sample participants (e.g., the students attended high-risk secondary schools, mostly located in high-crime neighborhoods).

Despite the previous limitations, our research provided unique insights into plausible school effects since neglecting to do so could have obscured the school’s influence on behavioral problems, notwithstanding the role of the individual, family, and community. Since risk clusters could predict adverse responses of the central units of socialization (family, school, individual, etc.), our investigation concerning the academic conditions that may imbibe concomitant risks, was essential. Notwithstanding the impact of the larger society, socio-cultural and policy implications were beyond this study’s scope. We must emphasize the need for further inquiry to underscore the school’s behavioral complexities given the broader educational setting.

Practitioners require a thorough understanding of the pathways to early and persistent behavioral problems in promoting evidence-based practice. In this regard, future research directions may entail closer attention to the impact of socio-cultural traditions, of which the ecological and life-course perspectives are imperative. These theoretical frameworks may provide a useful premise for tailoring youth-oriented policies
and programs for diverse teens currently lacking within the Caribbean region (UNDP, 2012).

Such interventions must cater to young people from multiple settings, including in-school, out-of-school, and out-of-work youth (UNDP, 2012). Youth service providers that support Caribbean families play an instrumental role in this regard. Though faced with limited resources, the Caribbean Community (CARICOM) may equip member-states with adequate tools to enable collective efficacy for evidence-based planning and decision making and proper delivery of relevant services to high-risk Caribbean students.
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*Psychology in the School, 49*(9), 892-909.


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91

CHAPTER 6
ARTICLE 2
Modeling Direct and Indirect Pathways to Adolescent Problem Behaviors: A Social Development Model (SDM) Approach

ABSTRACT

Adolescent conduct problems may lead to adverse consequences. These may result in development setbacks related to violence and aggression, conflict with law enforcement, acute health conditions, and school failure. This study investigated the direct and indirect effects of school, family, and personal risk and protective factors on three binomial outcomes of violence perpetration, lifetime substance use, and antisocial behavior. Students between the ages of 12 to 19 years were recruited (N=864; 62% females, 37% males). Pathway analysis found fifteen direct pathways leading to the outcome behaviors. Each direct path had a significant but positive effect except for family opportunities for prosocial involvement, which reduced violent behavior. Three indirect pathways met the significance level. Of these indirect pathways, the relationship between weak family management and antisocial behavior was mediated through family attachment, which had an inverse effect. Family opportunities and rewards for prosocial involvement were significant predictors of violence perpetration. However, weak family management and violence perpetration were positively associated, working through family opportunities for prosocial involvement. Family rewards for prosocial involvement did, however, reduce the effect of academic failure on violence perpetration. The convergence of the family and individual domains significantly predicted the outcomes relative to the school. Prosocial enhancement programs may promote appropriate training in emotional regulation and
proper social skills that could benefit schools meaningfully. Future directions may entail investigations into how school climate impacts student behaviors within the Caribbean region, which is currently lacking. Also, the delivery of culturally-sensitive youth-based services may facilitate improvements in behavioral initiatives globally.

**Key words** Risk and protective factors, problem behaviors, ecological domains, pathways

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**Introduction**

Contemporary discourse on the etiology of adolescent problem behaviors has elucidated significant challenges for high-risk students and educational practitioners alike (Wang & Degol, 2016). Additionally, school violence remains a burgeoning issue for school administrators in addressing school culture elements that contribute to student misbehavior (Adams & Mrug, 2019). In response, educators have utilized school-wide behavioral strategies to reduce disruptive practices through student training in social skill awareness and management, emotional regulation, and conflict resolution (Fasl & Luce, 2012).

These initiatives have strived to mitigate adverse behaviors by targeting the school and family unit (Stormark et al., 2016). Within schools, a three-tiered model of interventions (i.e., individual, selected, and universal) to service delivery is most predominant (Stormashak et al., 2016). However, this response-to-intervention (RtI) framework, provides limited coordination of activities between the family and the school system. Family-centered approaches have been applied alternatively and are the most effective in reducing youth behavior problems, despite substantial evidence of low
parental involvement and inadequate treatment of children and adolescents (Stormashak et al., 2016).

These family-school partnerships provide parental training for improved parent-child relations and parent-teacher communication (Stormashak et al., 2016. In general, family-centered models such as the Family-Check-Up (FCU) draw on parents’ assessment of their children’s behaviors, parenting techniques, and appropriate needs for assistance and improved parent-child relations (VanRyzin & Dishion, 2012; Stormshak, Fosco & Dishion, 2010). Both the RTI and FCU are individual-level school applications with promising results of improvements in student outcomes, and in preventing the persistence of school behavioral problems (Stormashak et al., 2016; VanRyzin & Dishion, 2012).

Given the complexities of adolescent misbehavior, youth practitioners require a deeper understanding of the impact of risk and protective factors on adolescent adverse outcomes across four domains- the family, school, community, and the individual. These ecological contexts are assumed to be the most detrimental to adolescents in shaping maladaptive or disruptive practices, to which the neighborhood sphere, though equally valid, is beyond the immediate scope of inquiry (Gentle-Genitty et al., 2017).

**Background**

*Family, School, and Individual Contributions to Adolescent Behavior Problems*

The intergenerational transmission of antisocial norms has drawn significant attention within current research (Coley, Carrano & Lewin-Bizan, 2011; Finan et al., 2015; Hemphill et al., 2013). These studies link behavioral problems to weak parenting
practices. They also show that adolescents model antisocial peer norms to gain popularity status through the process of social mimicry (Moffit, 2015; Coley, Carrano & Lewin-Bizan, 2011). Conditioning and social learning theories explain the role of the family and peer groups in the socialization of teenage children (Cutrín, Gómez-Fraguela & Luengo, 2015; Kelly et al., 2011; Theobald, Farrington & Piquero, 2013). These kindship bonds teach behavior standards (i.e., positive or negative) through parenting practices (Fosco et al., 2012) and peer group interactions (Laninga-Wijnen et al., 2018).

**Problem Behavior and School Disengagement**

Conduct problems linked to school disengagement remains a widespread concern (Kimberly, Knight & Thornberry, 2012; Li et al., 2011; Wang & Fedricks, 2014). Student disengagement may promote substance misuse, violent and antisocial behaviors, and may result in students experiencing poor academic outcomes (Connell et al., 2010). Over time, these consequences create pathways towards significant challenges relating to school withdrawal, delinquency, and drug use (Wang & Fedricks, 2014).

Conversely, school connectedness prevents delinquency and substance use (Wang & Fedricks, 2014). School engagement supports adolescents’ compliance with conventional norms and prosocial bonding with teachers and peers. Consequently, teenage problem behaviors could minimize school engagement leading to academic failure and or school withdrawal (Wang & Fedricks, 2014).
Peer interactions may induce delinquent behaviors in teens (Dishion & Tipsord, 2011). Breach of conventional standards occurs within peer groups that are physically and or emotionally coercive, referred to as deviancy training. Further, through social pressures, children may develop behavioral scripts, which may lead to traditional behavior problems. Of these problem behaviors, violence and aggression may typically occur among teens in unsupervised and disorganized settings (Pauwel & Svensson, 2015).

Parental monitoring of the recreational activities and whereabouts of minors may, in this regard, provide a critical deterrence to deviant peers, through restricted access (Fosco et al., 2012; Piko & Kovács, 2010). Research on parental monitoring has ranked this predictor as best in shaping adolescent behavioral norms (Raz & Mahon, 2011), though inconsistent. Much of this research has misconstrued parental supervision for knowledge (Racz & Mahon, 2011; Kerr & Burke, 2010; Vieno et al., 2009) of adolescents’ whereabouts, leading to considerable ambiguity.

However, few studies reported that parental awareness (considered a product of teen disclosure) negatively predicted delinquency and substance use in younger teens (Laird et al., 2010; Vieno et al., 2009; Willoughby & Hamza, 2011). Further, positive unilateral (Brown & Bakken, 2011) and bidirectional effects also predicted how low adolescent self-disclosure increased delinquency (Keijsers et al., 2010). Thus, adolescents withheld information about their unsanctioned activities and had a higher likelihood of misconduct due to less disclosure. Therefore, parental scrutiny may drive adolescents to divulge unrequested details, devoid of parental attachment (Keijsers et al., 2010).
Alternatively, when modeled with parental control, rigid questioning predicted a higher likelihood of adolescent conduct problems (Willoughby & Hamza, 2011). Disagreeable or rebellious teens might have perceived surveillance as intrusive, leading to assertive defiance and or aggression. These previous findings, though, providing ample support for active parental supervision (i.e., passive would indicate parental reliance on unsolicited details) in staving off adverse childhood behaviors, reinforce the need for balance in parental control of the movements of teenage children.

**Family Contributors to Adverse Youth Practices**

The family unit may promote adolescent engagement in substance use (Obano, Trujillo, & Trujillo, 2014). Further, the parent-child relationship may bolster resistance or acceptance of substance use among like-minded teens through secure peer attachments (VanRyzin, Fosco & Dishion, 2012). These connections, in turn, may coerce or prevent the engagement of maladaptive teens in criminal and or delinquent acts (Fosco et al., 2012).

Premature substance use may result from negative family relations contributing to severe health-compromising practices (Obano, Trujillo & Trujillo, 2014). Familial dysfunctions may, in this regard, result from parental conflict, the approval of alcohol and other drugs, failure to set clear rules, unhealthy family habits, inadequate parental supervision, and weak communication patterns. On the other hand, parental regulation may restrict the use of harmful substances among co-dependent teens (Fosco et al., 2012; VanRyzin et al., 2012).
Conversely, substance endangerment, which increases the risk of adolescent maladjustment, may be enforced through negative peer bonds. Moreover, these social networks may facilitate detrimental drug use leading to severe developmental setbacks, which may worsen over time (Fosco et al., 2012). Adverse consequences may also result from aggression and conduct problems, premature contact with law enforcement, acute health conditions, and academic failure linked to negative family, individual, and school outcomes.

**Domains of Risk and Protective Factors**

Fields of risk and protective factors have been explored extensively, within the literature on the Social Development Model (SDM) (Fleming, Catalano, Haggerty, & Abbott, 2010; Kim et al., 2016; Maguire, & Fishbein, 2016; Maguire, 2013; Obando, Trujillo, & Trujillo, 2014; Ruprah, Sierra, & Sutton, 2016; Sullivan, & Hirschfield, 2011; Maguire, Wells, & Katz, 2011). This model is an integrative theory that merges ideas from social learning, control, and differential association theories (Maguire et al., 2011, p.595).

According to SDM, socio-ecological forces of the family, peer, school, and community shape normative behavior patterns of children and adolescents (Fleming et al., 2010; Kim et al., 2016). These proximal zones, may either increase (i.e., risk factors) or decrease (i.e., protective factors) the likelihood of juvenile misconduct (Maguire, & Fishbein, 2016; Maguire, 2013; Maguire et al., 2011; Obano et al., 2014; Ruprah et al., 2016).
**Risk and Protective Factors of the Family Domain**

Regarding the shaping of problem behaviors, a decisive factor is the breakdown of the family unit that tends to produce household conflict and unfavorable attitudes, including parental approval of drug use (Obano, Trujillo & Trujillo, 2014). Likewise, a family history of substance misuse may predict future consumption of harmful drugs and alcohol by underage youth (McMorris et al., 2011). These negative influences promote weak communication and dysfunctional authority that detrimentally impact children and adolescents of unstable families (Obano, Trujillo & Trujillo, 2014; Russel et al., 2017). Alternatively, open parental dialogue and monitoring, parent-child attachment, clear rule-setting, and parental restraint from substance use, may foster kinship ties that buffer the social consequences of adverse family relations (Obano, Trujillo & Trujillo, 2014).

**Risk and Protective Factors of the School Domain**

School-related risks may promote academic failure, often resulting in early school departure (Henry, Knight & Thornberry, 2012; Li et al., 2011; Wang & Fedricks, 2014). Further, students may demonstrate low school commitment and may become less involved in educational projects, thereby perceiving school activities to be no longer meaningful. Preferably, school protective factors include opportunities and rewards for participation in prosocial behaviors (Obano, Trujillo & Trujillo, 2014). Specifically, teachers provide learners with opportunities to make significant contributions to classroom exercises and recognize student proficiency through academic awards for acceptable performance (Henry, Knight & Thornberry, 2012; Li et al., 2011). These school engagement pursuits may encourage and support ongoing student progress.
Risk and Protective Factors of the Individual Domain

Individual and or peer risk factors such as harmful exploits, peer coercion, low-risk perception, early onset of drug use, a preference for substance use, and a favorable attitude towards violence and delinquency are disadvantageous to youth (Obano, Trujillo & Trujillo, 2014). Also, adolescent connections with substance-using and disruptive peers may reduce compliance with prosocial behaviors (VanRyzin, Fosco, Dishion, 2012).

Conversely, moral, and religious convictions could, in a similar way to prosocial commitment, lower adolescents’ susceptibility to antisocial norms (Obano, Trujillo & Trujillo, 2014). As protective elements, these attributes buffer the adverse repercussions of individual risk factors on teenage children. Given the previously outlined discussion, this research seeks to investigate the direct and indirect effects of school, family, and individual risk and protective factors on adolescent behavioral problems.

Current Study Focus

By investigating the effects of the school, family, and individual domains on lifetime substance use, violence perpetration, and antisocial behavior, this research will elucidate how risk and protective factors are related to adolescent problem behaviors through two fundamental questions:

1. How are adolescent problem behaviors of violence perpetration, antisocial behavior, and lifetime substance related to school, family, and individual risk and protective factors?
2. How do protective elements of the school, family, and personal domains mediate the relationship between the school, family, and individual risk factors and specific adolescent problem behaviors?
Methods

Consent and Data Collection

The 2018 Trinidad and Tobago Youth Risk Behavior High School Survey was administered to 864 students across Trinidad and Tobago in five of the eight school districts. Data collection took place over four months from September to December 2018. Preliminary measures were taken to ensure that we apprised school officials of the nature of the study. We also met with the school principals from each of the eleven (11) Ministry-identified schools to address the research procedures’ immediate questions and concerns.

During the consultation stages, we discussed the survey completion process and informed students of their right to withdraw from engaging in the study at any time. Only students who were in attendance on survey day and received parental consent were allowed to participate. Meetings were held with school administrators to ensure sufficient allotted time for filling out the survey.

Participants

Surveys were administered to approximately 864 high school students between the ages of 12 to 19 years across ten (10) participating public secondary schools throughout Trinidad and Tobago. Of this figure, only 529 surveys met the inclusion criteria for the study. If students reported a lack of honesty when filling out the questionnaire and that they partook of the non-existent drug phenoxydine, their surveys were removed from the survey pool.
The sample comprised of 13% Indo-Trinidadian, 34% Afro-Trinidadian, 1% Euro-Trinidadian, 48% Mixed, and 4% Other. Approximately 62% was female, with the most significant majority falling between the ages of 13 to 16 years (90%). Parental consent forms were distributed and subsequently collected as a mandatory requirement for student participation in the survey.

**Measures**

The 2018 Trinidad and Tobago Youth Risk Behavior Survey (TTYRBS) comprises measures of risk and protective factors that have been model after the Arizona Youth Survey 2016. This instrument draws from risk and protective components of the Community that Cares or CTC study (Maguire & Fishbein, 2016). The initially designed CTC instrument measured clusters of risk and protective factors across four domains of community, school, family, peer, and or individual (Maguire & Fishbein, 2016).

These risk and protective factors correspond to adolescents between the ages of 11-18 years in terms of health and behavior outcomes that pertain to substance abuse, violence, and delinquency (Arthur et al., 2002). The CTC was designed to be administered in a single class period (approximately 50 minutes) and has since undergone modifications to fit diverse social settings. In general, the CTC allows for assessing varying levels of risk and protective factor exposure at different stages of adolescent development (Arthur et al., 2002).
Measures of School Risk and Protective Factors

School risk factors include (1) academic failure, and (2) low school commitment (Arthur et al., 2002). Concerning academic failure, students responded to the question: (1) “Putting them all together, what were your grades like last year?” This subscale assessed educational failure on a 5-point scale ranging from 1=Mostly A’s to 5=Mostly F’s.

Students also responded to seven questions about low school commitment that were measured on four different 5-point scales. These were Very Interesting to Not at all Interesting (e.g., “How interesting most of your subjects are to you?”); Very Important to Not at all Important (e.g., “How important do you think the things you are your learning in school are going to be for you later in life?”); None to 11 or more days (e.g., “During the last 30 days, how many days of school have you missed because you skipped or cut?”) and Never to Almost Always (e.g., “Now thinking back over the past year, how often did you enjoy being in school, hate being in school, tried your best, and or thought school was meaningful?”). Cronbach alpha = .65.

School protective factors consist of two subscales measuring opportunities and rewards for prosocial involvement. The questions ranged on a 4-point scale ranging from Strongly Disagree to Strongly Agree. The responses were assessed across nine items of students’ reported engagement in school activities, the receiving of acclamations from teachers and informed parents, chances to have one-on-one discussions with teachers, and perceptions of school safety (Fox, 2008). For example, “In my school students have lots of chances to help decide class activities and rules”, “My teachers notice when I am doing a good job and let me know about it,” “The school lets my parents know when I
have done something well,” “There are lots of chances to talk with a teacher one-on-one”, and “I feel safe at my school,”. Cronbach’s alphas were .65 and .84, respectively.

**Measures of Family Risk and Protective Factors**

Five subscales measured family risk factors. These were weak family management, family conflict, parental attitudes favorable towards drug use and antisocial behavior, and family history of antisocial behavior (Maguire & Fishbein, 2016). **Weak family management.** Students reported on the extent to which parental controls were placed on their whereabouts or leisure activities (e.g., would your parents know if you did not come home on time?). Responses ranged from 1 =Strongly Disagree to 4 =Strongly Agree. Cronbach’s alpha = .65.

**Family conflict.** Students’ reported on family disputes assessed across three items (e.g., “People in my family often insult or yell at each other”). These items were measured on a scale ranging from 1 =Strongly Disagree to 4 =Strongly Agree. Cronbach’s alpha = .70

**Parental attitudes favorable toward drug use and antisocial behavior.** The response category of 1 =Very Wrong to 4 =Not Wrong at All rated students’ reports of their parents’ attitude towards drug use (e.g., “How wrong do your parents feel it would be for you to drink beer, wine, and hard liquor?”), and antisocial behavior (e.g., “How wrong do your parents feel it would be for YOU to (a) drink beer, wine or hard liquor? (b) steal or (c) pick a fight with someone?”). Cronbach’s alphas ranged from .69 to .71.
Family history of antisocial behavior. Students completed eight items about their family history of antisocial norms (e.g., “Have any of your brothers or sisters ever: (a) drank beer, (b) smoked marijuana, and or (c) taken a handgun to school?”). Three different response categories were used to measure these items ranging from 0 Adults=1, to five or more adults =5; 1=No to 3 =I Don’t Have a Brother or Sister, and 1=No, 2=Yes. Cronbach’s alphas ranged from .65 to .71.

Family protective factors comprise of (1) family attachment, (2) family opportunities for prosocial involvement, and (3) family rewards for prosocial involvement (Maguire & Fishbein, 2016). Family attachment. Students reported on parent-child relationship quality across four items (e.g., “I feel close to my mother”; “I feel close to my father”; “I share my thought and feelings with my mother”; ‘I share my thoughts and feelings with my father”). Responses ranged on a 4-point scale ranging from 1=Strongly Disagree to 4 =Strongly Agree. Cronbach’s alpha = .73.

Opportunities for prosocial involvement. Three questions assessed students’ quality of family interactions. These include “My parents give me lots of chances to do fun things with them”; “My parents ask me what I think before most family decisions affecting me are made”; and “If I had a problem, I could ask my parents for help.” These questions were measured on a scale ranging from 1 =Strongly Disagree to 4 =Strongly Agree, with a Cronbach’s alpha of .72. Rewards for prosocial involvement. Students’ recognition received from parents for prosocial behavior (e.g., “My parents notice when I am doing a good job and let me know about it”), was assessed across four items. All responses were rated on two separate 4-point scales ranging from 1 =Strongly Disagree to
4 = Strongly Agree, and 1 = Never or Almost Never to 4 = All the Time. Cronbach’s alpha = .65.

**Measures of Individual Risk and Protective Factors**

Individual Risk Factors included:

1. Rebelliousness;
2. Early Initiation of Drug Use;
3. Favorable Attitudes Towards Antisocial Behavior;
4. Favorable Attitudes Towards Drug Use;
5. Perceived Risk of Drug Use;
6. Reward for Antisocial Behavior;
7. Interactions with Antisocial Peers and;

**Rebelliousness.** To assess the degree of students’ rule-breaking behaviors three items were used (e.g., “I do the opposite of what people tell me, to get them mad”; “I ignore rules that get in my way”; and “I like to see how much I can get away with”). These items were rated on a 4-point scale ranging from 1 = Very False to 4 = Very True. Cronbach alpha = .72.

**Early initiation of drug use.** Students completed a three-item index to assess their onset age of drug use (e.g., “How old were you when you first drank or smoke or used alcoholic beverages at least once or twice a month?”). These items were measured on an 8-point scale ranging from 0 = Never to 8 = Ages 8 or younger through to age 10. Cronbach’s alpha = .71.
Favorable attitude towards antisocial behavior and drug use. Students’ attitudes towards antisocial behavior (e.g., “How wrong did you think it is for someone your age: to take a handgun to school?”) and drug use (e.g., “How wrong do you think it is for someone your age to have, one or two drinks of beer?”) were assessed across eight items. Responses were measured on a scale ranging from 1 = Very wrong to 4 = Not at all Wrong. Cronbach’s alphas ranged from .79 to .81.

Perceived risk of drug use. Students reported on the perceived risk of harm from drugs use. Four items were assessed (e.g., “How much do you think people risk harming themselves if they: Smoke one or more packs of cigarettes per day”? Or “Take one or two drinks of alcohol every day?”) on a scale ranging from 1 = No Risk to 4 = Great risk. Cronbach’s alpha = .85.

Rewards for antisocial involvement. Students reported on positive responses received from using drugs and acting unlawfully (e.g., “What are the chances you would be seen as cool if you,” “Smoke cigarettes,” “Drank regularly,” “Smoke marijuana,” and “Carried a handgun?”). This four-item subscale ranged from 1 = No or Very Little Chance to 5 = Very Good Chance. Cronbach’s alpha = .88.

Interaction with antisocial peers and friends’ drug use. Deviant peer interactions (e.g., “How many of the four friends they felt closest to in the past 12 months received a school suspension”), and number of drug-using peers (e.g., “How many of the four friends they felt closest to in the past 12 months consumed drugs and or alcohol”), were assessed across ten items. Responses rated on a scale ranging from 0 = No Friends to 4 = 4+ Friends. Cronbach’s alphas were .75 and .82, respectively.
**Individual Protective Factor**

*Prosocial involvement.* Students reported on the number of times in the past year of participating in clubs, organizations, or school activities, and completing individual academic work. Two items were measured on a 5-point scale ranging from 1 =Never to 5 =Ten or more times, with a Cronbach’s alpha of .78.

**Outcomes Measures**

*Lifetime substance use.* Students reported on extensive substance use (e.g., “On how many times have you: Had alcoholic beverages?”) assessed across four items. Responses ranged from 1 =No occasion to 7 =40+ days. Cronbach’s alpha = .71.

*Violence perpetration.* Students reported on violence and victimization during the previous year (e.g., “How many times during the past year have you: attacked someone with a weapon?” or “Seen someone attacked with a weapon?”). Three items assessed the responses on a scale ranging from 1 =Never to 5 =Ten or more times. Cronbach’s alpha = .66.

*Antisocial behavior.* To assess students’ involvement in unlawful or delinquent acts (e.g., “How many times in the past year were you suspended from school or carried a handgun?”), twelve items were used ranging on a 5-point scale from 1 =Never to 5 =Ten or more times. Cronbach’s alpha = .80.

**Analysis**

We conducted preliminary multiple imputation analysis to handle missing data in Mplus vs. 8.1 (Muthén and Muthén, 2008). This initial process enabled us to preserve the
sample size (N=529) and secure data integrity while retaining the original data set’s unique features. After accounting for missing data, we conducted tests of a manifest-path analysis. Within this theoretical model, we specified the three endogenous variables (i.e., violence perpetration, lifetime substance use, and antisocial behavior) as binomial outcomes. We also entered into the Mplus syntax the Maximum-Likelihood (ML) estimator to assess parameter estimates and generate imputations of missing data values.

We subsequently examined the indirect effects of several mediator variables on the three binomial outcomes. We considered the Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR) to assess model fit. The recommended guidelines of a CFI and TLI close to or higher than .95, an RMSEA less than .06, and an SRMR less than .08 represented acceptable to good model fit (Hu & Bently, 1999).
**Figure 1.1** Direct and indirect pathways of the theorized model of family, school and individual variables and violence perpetration, lifetime substance use and antisocial behavior.

Note: Significant indirect pathways are highlighted in red and all pathways depicted were significant.
Result

Model Fit

The path analysis revealed that the goodness of fit indices was acceptable to good (CFI=.94; TLI=.91; SRMR=.05; RMSEA=.03). Thus, upon establishing that the model sufficiently fit the data, we proceeded to evaluate the model paths. Figure 1.1 presents the standardized coefficients and significance levels for all the direct pathways found in the full model. There were twenty-five direct and three significant indirect relationships (i.e., highlighted in blue), as depicted in Figure 1.1. Only the fifteen direct and three indirect significant pathways leading to the three endogenous variables are outlined in Table 1.1 for model clarity.

Direct Pathways

Table 1.1 outlines fifteen direct pathways that were relevant to the outcome variables of violence perpetration, lifetime substance use, and antisocial behavior. As shown, predictors of violence perpetration were: a family history of antisocial behavior, weak family management, rewards for antisocial behavior, interaction with antisocial peers, family rewards for prosocial involvement and family opportunities for prosocial involvement. Of these six predictors, only family opportunities for prosocial involvement had a significant inverse effect on violence perpetration. Thus, an increase in opportunities for family prosocial involvement reduced violent behavior. However, an increase in rewards for prosocial involvement simultaneously increased adolescent’s exposure to violence.
Concerning lifetime substance use, Table 1.1 illustrates four significant predictive pathways, such as early initiation of drug use, friends’ drug use, family history of antisocial behavior, and individual attitudes favorable towards antisocial behavior. Thus, the earlier the onset age of drug use, the higher the level of substance involvement. Further, association with more substance-using peers predicted higher teenage drug use, whereas a family history of antisocial behavior reinforced the likelihood of extended substance engagement. Likewise, a favorable attitude towards antisocial behavior increased adolescent chances of prolonged drug and alcohol consumption.

Also depicted in Table 1.1 are the five significant predictors of antisocial behavior. These were: family attachment, a favorable attitude towards antisocial behavior, early initiation of drug use, rebellion, and violence perpetration. All of these predictors had a significant positive effect on antisocial behavior. Further, each of the direct pathways was linked to higher antisocial behavior, with violence perpetration and early initiation of drug use having the most potent significant effect ($p<0001$).
<table>
<thead>
<tr>
<th>Model</th>
<th>estimate</th>
<th>p</th>
<th>95% CI [LB, UB]</th>
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<td>VP → FHX</td>
<td>.208</td>
<td>.000***</td>
<td>[.110, .307]</td>
</tr>
<tr>
<td>VP → PFM</td>
<td>.170</td>
<td>.009**</td>
<td>[.064, .276]</td>
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<tr>
<td>VP → RWAB</td>
<td>.137</td>
<td>.003**</td>
<td>[.062, .212]</td>
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<tr>
<td>VP → IASP</td>
<td>.178</td>
<td>.000***</td>
<td>[.102, .254]</td>
</tr>
<tr>
<td>VP → FREW</td>
<td>.226</td>
<td>.002**</td>
<td>[.107, .344]</td>
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<tr>
<td>VP → FOPP</td>
<td>-.164</td>
<td>.03*</td>
<td>[-.289, -.039]</td>
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<tr>
<td>ASB → FA</td>
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<td>.05*</td>
<td>[.025, .194]</td>
</tr>
<tr>
<td>ASB → ITAB</td>
<td>.148</td>
<td>.000***</td>
<td>[.051, .244]</td>
</tr>
<tr>
<td>ASB → EID</td>
<td>.184</td>
<td>.01*</td>
<td>[.100, .268]</td>
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<tr>
<td>ASB → REB</td>
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<td>.001**</td>
<td>[.032, .182]</td>
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<tr>
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<td>.180</td>
<td>.000***</td>
<td>[.107, .251]</td>
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<tr>
<td>SUL → ITAB</td>
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<td>.02*</td>
<td>[.025, .213]</td>
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**Table 1.1:** Significant direct effects between family, school and individual variables and problem behavior outcomes proposed with the SEM.
Indirect Pathways

Only three indirect pathways existed within the model (see Table 2.1). Of these pathways, family opportunities and rewards for prosocial involvement were both indirectly related to violence perpetration. However, a significant positive effect was related to weak family management and violence perpetration mediated through family opportunities for prosocial involvement. Conversely, a significant inverse effect was associated with academic failure and violence perpetration working through family rewards for prosocial involvement. Further, a higher level of family attachment was indirectly related to weak family management and antisocial behavior. Thus, the negative effect of ineffective family management on antisocial behavior was mediated through insecure family attachment.
<table>
<thead>
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<th>$p$</th>
<th>95% CI [LB, UB]</th>
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<td>.04*</td>
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<td>.000</td>
<td>.92</td>
<td>[-.002, .002]</td>
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<tr>
<td>IASP $\rightarrow$ FA $\rightarrow$ ASB</td>
<td>.013</td>
<td>.40</td>
<td>[-.002, .028]</td>
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Table 2.1: Significant indirect effects between family, school and individual variables and problem behavior outcomes proposed with the SEM
Discussion

The findings of this study illuminate that family and individual determinants may play a critical role in predicting adolescent adverse behaviors. School violence predictors of the family and individual or peer-group were the most prominent relative to the school context. As such, we speculate that the concurrent interaction of family and individual influences may have influenced behaviors within the school environment. However, we believe that school contextual effects were not entirely obscure.

The results also revealed that students who received family rewards for prosocial behavior were no less violent than those who did not receive recognition. This finding suggests that perhaps, the intrinsic motivation toward violence was more contributory than extrinsic rewards for prosocial behavior. This explanation is plausible since research has shown that the provision of extrinsic rewards for prosocial behavior may undermine a child’s inhibitions for behaving antisocially, thereby impeding potential prosocial behavior (Eisenberg et al., 2015).

Notably, depending on the degree of bonding to prosocial others, the respondents seemed to report greater or less mutual involvement in prosocial activities. If they also held antisocial beliefs and attitudes, they supposedly had a more significant commitment to similar behavior. Therefore, students who acted violently may have bonded securely to antisocial peers, despite parental acclamations for prosocial behavior. This juxtaposition of coexisting antisocial-prosocial norms informed our derived conclusion that parents might not have been knowledgeable concerning the extent of their children’s misbehavior—a clear indication of the decline in parental monitoring or weak parental control. This finding reiterates the urgent need for parental school-based training.
programs to provide behavioral supports for parents and children in improving parent-child relations.

Another critical finding was that more family opportunities for prosocial involvement resulted in less violence. This expected outcome has found support within the literature, in which Lam (2012) reported that the participation of adolescents in legitimate activities reduced the majority of time spent in deviant practices. Consequently, he found that prosocial teens were less likely to engage in harmful substance use, commit violence, and or behave delinquently. With caution, we propose that rewards for prosocial involvement had a positive or reinforcing effect on violent behavior due to confounding extrinsic and intrinsic motivations. However, we did not find any research to support this premise and could not arrive at a definitive conclusion without further interrogation.

We were somewhat astonished that family attachment was the single protective factor that had a positive direct pathway to antisocial behavior. This result led us to infer that perhaps the parent-child relationship quality did not support the protective attributes of parental attachment. In other words, there might have been higher levels of negative parental affection that could have resulted in more significant forms of antisocial behavior. This assumption is feasible, though parent-child relationship quality is usually related to prosocial conduct (Eisenberg et al., 2015).

Notwithstanding, the social development model (SDM) states that children establish close bonds with those with whom they have an invested interest. Once they are firmly grounded, these bonds have the power to meaningfully affect behaviors (Kim et al., 2016). Consequently, the child’s actions will be prosocial or antisocial, depending on
the degree of bonding to prosocial or antisocial individuals and the adoption of the primary practices, norms, and values of those with whom bonding takes place (i.e., belief in moral or antisocial values).

Thus, respondents who behaved antisocially may have established secure attachments with persons within their antisocial networks. Therefore, we believe that a possible socialization or modeling effect occurred. This discovery sheds light on appropriate programs that may provide relevant behavioral interventions for modeling prosocial behaviors within and beyond the school setting. Indeed, we anticipated the relationship found between early onset of drug use and antisocial behavior that is consistent with previous research (Hemphill et al., 2013). We also expected the observed finding concerning friends’ drug use, which predicted prolonged substance use and is compatible with existing research (Henry, Knight & Thornberry, 2012; Hemphill et al., 2013).

In terms of indirect effects, we found three significant pathways. Our first unexpected result was that family opportunities for prosocial involvement had a significant positive impact on the relationship between weak family management and violence perpetration. We considered whether this occurred because ineffective family management practices was a significant negative predictor of opportunities for prosocial involvement (see Figure 1.1). In that, ineffective parenting may have reduced the prosocial traditions of the family, which resulted in inadequate parenting having a more predominant influence on adolescents’ externalized and or witnessed aggression. This argument is feasible since we have established the connection between low parental monitoring and adolescents’ peer-group access to delinquent peers. The notable
implications for mitigating school-based violence are crucial, as we have established the critical need for family involvement in promoting prosocial behavior opportunities.

Moreover, research supports providing adolescents with sufficient opportunities to channel their intrinsic motivations for sensation-seeking positively while limiting opportunities for adverse risk-taking. In this regard, studies have shown that access to prosocial peer-groups is crucial to teens in promoting conformity to prosocial peer norms (Duell & Steinberg, 2018; Laninga-Wijnen et al., 2016). Notably, the school can also play an integral role in implementing school-based interventions that enhance prosocial and emotional skills through emotional regulation and prosocial action (Caprara et al., 2015).

A second indirect path existed between academic failure and violence perpetration working through family rewards for prosocial involvement. Research has shown that rewards for prosocial involvement and bonding to prosocial others may inhibit violent behavior (Kim et al., 2016). This previous finding is consistent with the inverse effect associated with family rewards for prosocial behavior found within this present study.

Moreover, we also know from the literature that higher academic performance and positive school climates may reduce school violence (Benbenishty et al., 2016). Consequently, recognition for prosocial behavior could benefit improvements in student misbehavior and academic performance and promote less school violence (Shaykhi, Ghayour-Minaie & Toymbourou, 2018). Family school-based interventions are imperative in making these linkages, by increasing adolescent protective factors that promote social and academic competence (Shayki, Ghayour-Minaie & Toymbourou, 2018).
Our final indirect pathway from weak family management to antisocial behavior mediated through family attachment was not particularly unexpected. Quite interestingly, unlike the former direct path, for which unhealthy family attachment increased antisocial behavior, family attachment decreased the impact of weak family management on antisocial behavior. Put differently, the students who formed insecure family attachments compounded by ineffective parenting were more likely to engage in antisocial behavior.

This finding is consistent with existing research that evidenced the role of adolescent parental attachment in how children respond to parental monitoring. Further, adolescents attached to parents responded better to parental control (Fallu et al., 2010). At the same time, adolescents with whom less parental bonding had taken place, reacted negatively to adult supervision. These communication patterns, in turn, either augmented or reduced child conduct problems. Again, the findings emphasize the critical importance of implementing positive family school-based interventions to assist in mitigating school misconduct.

Conclusions/Limitations

We surmized from our findings that there were instances of simultaneous student involvement in both prosocial and antisocial behaviors. For this reason, there were a few instances where a protective factor did not mitigate an outcome behavior. However, we must reiterate that our mediation model seemed to follow an SDM approach. In that, though we did not intend on finding moderation effects in particular to protective factors promoting higher prosocial behaviors and reducing antisocial practices, we observed
variations in the results, of which both protective and risk factors accounted for multiple direct and indirect pathways.

Additionally, it appears to us that more risk exposure increased the likelihood of student involvement in problem behaviors. Also, students from antisocial backgrounds were more likely to exhibit multiple conduct problems. Consequently, we must emphasize the critical importance of a cohesive family structure and kinship bonds in promoting youth adjustment. Other interesting findings were the apparent undermining effect of rewarding prosocial behaviors on a direct increase in violence and the negative role of detrimental familial attachments on antisocial involvement. Of course, we cannot state with certainty that the study design and sampling approach (i.e., self-reported cross-sectional with the use of convenient sampling) did not limit the reliability of our findings. In that, with self-reported data, students are likely to overreport or underreport status behaviors.

However, we are sufficiently confident that we managed our data in such a way to account for design limitations. However, we are knowledgeable concerning the extent to which our findings may be generalizable to students from less high-risk settings. In this regard, the application of our results may be limited as high-risk youth may exhibit behavioral complexities that may be compounded by the social condition. Notwithstanding, the recommended approach of combined students and parents’ cross-sectional research that usually corrects possible data inconsistencies from a standalone self-reported study. This notable limitation advances the urgent need for future research. The best direction might be to conduct studies on how to teach or nurture prosocial values within the school system.
Moreover, the literature on prosocial behavior is still in its nesting stages, and require more substantial research to make thoroughly informed decisions concerning appropriate interventions. We believe that the school system is a prime establishment for prosocial education. Further, programs that enhance prosocial behavior through emotional regulation and interpersonal communication training are excellent examples of promising approaches in school-based interventions (Caprara et al., 2015). Also, programs that teach behavioral expectations, and consequences, while monitoring student progress (Vincent, & Tobin, 2011) are equally beneficial. These programs may promote self-awareness, self-management, social awareness, relationship skills, and responsible decision making (Osher et al., 2010).

Furthermore, initiatives that acknowledge the benefits of positive risk-taking in shaping the adolescent experience are notable (Duel & Steinberg, 2018). Undoubtedly, risk-seeking adolescents urge the need for interventions that will help them to strike a balance in handling risk-seeking adventures and the potential costs of harm. Moreover, given that adolescence is a period of experimentation, such initiatives must create opportunities for positive risk-taking for youth who engage in both prosocial and antisocial practices (Duel & Steinberg, 2018). Ongoing research offers a useful premise on which to demystify the concept of positive risk-taking and how prosocial behavior aligns with it. In our estimation, this is an excellent way of advancing the field of research on prosocial behaviors to inform plausible solutions targeting disruptive youth behaviors.

Future directions may consist of investigations into how school climate impacts student behaviors within the Caribbean region. Previous studies have informed the
integration of homeroom and school-wide services formally developed and implemented extensively within the U.S. system (Fashsl & Luce, 2012; Kőiv, 2014; Pauwels & Svensson, 2015). Yet, in less developed nations such as the Caribbean (Maguire & Fishbein, 2016) and the wider Caribbean region (e.g., Latin America) (Ruprah, Sierra & Sutton, 2016), similar measures have been inadequately implemented.

Consequently, there is a further need for the design and suitable application of risk assessment and management tools to improve behavioral strategies in diverse territories. In this regard, the delivery of culturally-relevant services could better enhance behavioral interventions locally and abroad. In light of the implications of youth behavior problems (Katz & Fox, 2010), the evaluation/testing of the existing measures of risk and protective factors may benefit youth practitioners. This nuanced approach may, in turn, also equip schools to address appropriately student misconduct on a global scale.
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CHAPTER 7
SUMMARY AND IMPLICATIONS

Summary of Findings

This study aimed to examine how risk and protective factors of the school and family domains predicted student behavioral problems. From the analyses, the researcher formulated two academic papers. The first article focused on the predictive relationship between the school, family, and individual domains, and lifetime substance use, violence perpetration, and antisocial behavior. At the same time, the other article investigated the direct and indirect pathways leading to the same three endogenous variables.

Concerning direct relationships, the school domain did not seem to predict the outcome behaviors relative to the individual and family predictors. The results indicated a positive effect of prosocial engagement on violence perpetration and that antisocial family history predicted the inter-generational transmission of violent tendencies. Also, students who received family rewards for prosocial behavior were no less violent than those who did not receive recognition. Conversely, the provision of more family opportunities for prosocial involvement reduced adolescents' engagement in violent behavior.

Regarding antisocial behavior, there was a positive direct effect between family attachment and antisocial behavior. Negative parental affection seemed to result in higher involvement in antisociality. The social development model (SDM), supported this view and purported the influence of social bonds in predicting antisocial and prosocial norms.

Antisocial behavior also resulted from a gendered effect. Males reported higher involvement in antisociality, compared to females as consistent with earlier research.
Further, rebelliousness was a significant predictor of rule-breaking or antisocial habits. At the same time, the premature onset of drug use contributed to antisocial involvement similar to higher levels of friend’s drug use.

Within the family domain, opportunities and rewards for prosocial involvement predicted lifetime substance. However, higher chances of substance use had an inverse or mitigating effect, while parental recognition for prosocial behavior increased harmful substance use. The primary explanation for this finding was that the intrinsic motivation for substance use might have outweighed students’ extrinsic rewards for prosocial involvement.

Three indirect pathways predicted the endogenous variables. Although unexpected, family opportunities for prosocial involvement had a positive mediating effect on family attachment and violence perpetration. Also, working through family rewards for prosocial involvement, academic failure, and violence perpetration were negatively associated. This inverse effect was consistent with previous research that had shown that prosocial bonding might inhibit adolescents’ involvement in disruptive or aggressive behaviors. Likewise, family attachment inversely mediated the relationship between weak family management and antisocial norms, consistent with previous research.

**Modifications Made from Original Proposal**

The initially proposed data analysis procedure was linear regression modeling with a projected sample size of 1,320 high-risk students between the ages of 13 and 17 from eleven (11) public secondary schools across Trinidad and Tobago. Randomized
sampling was the previously suggested sampling method. However, upon further inspection of the data, the researcher made several revisions. These involved the inclusion of individual variables and path analysis, which allowed for more in-depth cross-examinations and inferences.

Instead of linear regression modeling, logistic regression was chosen as a more appropriate method of analysis, given its unique advantages (e.g., it does require normality and easily allows for the study of several confounding variables). A change was made in the sampling method from a randomized to a convenient approach due to high student absenteeism and disproportionate class sizes. Likewise, an age amendment from 13-17 years to include students between the ages of 12 and 19 facilitated the whole-of-class sampling method due to the mixed form classes (e.g., form one had an age range of 12-14 years).

**Implications**

Given the implications for adverse outcomes related to youth conduct problems, the risk and protective factors of the Social Development Model (SDM), undergirding this study was imperative. Moreover, this present research provided a deeper understanding of the ecological impact of family, school and peer, and individual characteristics on adolescents’ problem behaviors. It also highlights the urgent need for parent-school partnerships to foster change regarding children’s social and academic competence (Shayki et al., 2018).

A useful practice in which schools can succeed in promoting prosocial behaviors is parental involvement through school and family collaboration. Alternatively, it is
helpful for school professionals to adopt evidence-based programs and policies that support positive youth development for children and adolescents. In so doing, schools should draw closer attention to environmental forces that may impede students’ progress.

The ecological and life-course perspectives are essential considerations in framing interventions for children and youth in this regard (Frey & Walker, 2011). This integrated framework may provide a more nuanced approach to building resilience in childhood and adolescence through prosocial and emotional skill enhancement. More importantly, the appropriate use of a multi-dimensional approach is crucial in addressing teenage maladjustment issues (UNDP, 2012).

Program implementation should, therefore, consist of evidence-based planning and execution in which young people themselves play an active role (UNDP, 2012). Additionally, youth experts must make EBP a priority by taking unique advantage of the full array of existing resources, including human and physical capital. Such a comprehensive approach demands collaboration among families, schools, governmental and non-governmental organizations, the private sector, and communities (Gentle-Genitty et al., 2017).

Concerning the Caribbean territory, multidisciplinary and collective efficacy may assist service providers in developing appropriate interventions for at-risk children and youth currently lacking within the region (UNDP, 2012). It is noteworthy, however, that Caribbean economic instability and the lack of resources may have contributed to severe program deficits (Gentle-Genitty et al., 2017). Nevertheless, in assisting vulnerable students, school-based, and broader educational supports that promote prosocial behavior are paramount.
These measures could better succeed at mitigating adolescent misconduct if tailored to fit the needs of varied young people, including those in the in-school and out-of-school and out-of-work categories (UNDP, 2012). Thus, risk prevention programs are often better articulated through a range of strategies that enlist voluntary community organizations’ support in delivering educational training opportunities to youth participants (UNDP, 2012). Family specialists may also provide training assistance to parents (i.e., counseling, work-relief, child-care, etc.) (UNDP, 2012). Crucially important, too, is the provision of youth-friendly spaces, which could enable youth service providers to occupy youth who are typically disengaged (UNDP, 2012).

In light of the implications outlined above, it might be useful for CARICOM to develop a regional tracking system that could better equip member states to implement suitable programs and services targeting at-risk youth (UNDP, 2012). A proper channel through which CARICOM could achieve this objective is through a sustained youth development index informed by the CARICOM Youth Development Action Plan 2012-2017 (See CARICOM, n.d.). Notably, evidence-based prevention strategies are crucial in meeting the above guidelines and in addressing the behavioral problems of Caribbean youth targets.

**Limitations**

Based on the data analysis, the researcher had concerns regarding issues of reliability and validity due to the application of the CTC instrument in schools within the research context. Previous research supports the view that even with modifications, the CTC measures were low on construct validity relating to prosocial factors when
administered within schools in Trinidad and Tobago. This earlier study used family measures to predict drug use, unlawful gun possession, and gang membership (Maguire & Fishbein, 2016; Maguire, Wells & Kats, 2011). On all three behavioral outcomes, family protective factors conveyed weak effects though inconsistent family management and adult history of antisocial behavior were ultimately strong predictors (Maguire & Fishbein, 2016; Maguire, Wells & Kats, 2011). In this regard, the CTC instrument did not fully engender the protective attributes of young people’s families in Trinidad and Tobago (Maguire & Fishbein, 2016). This limitation is a viable concern for which the researcher took note.

Due to this uncertainty regarding construct validity, the researcher was cognizant of the contextual diversity of youth from Trinidad and Tobago and how youth behaviors may differ from those in less extenuating local conditions overruled by crime, violence, poverty and social disorganization (Maguire & Fishbein, 2016). Therefore, the instrument may require further amendments to fit the research context in consultation with local government and school officials and members of the NGO and private sector. Additionally, the methodology was not without its share of challenges, particularly with regards to the impact of community influences that may have been obscured by explicitly focusing on school, individual, and family risk and protective factors. Such a limitation may create concerns for validity due to the failure to capture the most significant behavioral predictors that are malleable to change.

Thus, the researcher took these limitations into account and possible errors that may have arisen from the data analysis procedures. Also, since the Ministry of Education identified the ten surveyed schools as the most high-risk, the results may not be
generalizable to all schools within the education system and or national community. Moreover, due to high levels of absenteeism, only the responses of students that were present on the day of the survey were captured within the findings. Again, this prevented the researcher from making broader claims concerning the target population. Additionally, because self-reporting was the primary method of obtaining data, in the absence of external resources, the researcher was limited in her capacity to validate the information, thereby requiring further steps to minimize potential errors due to methodological limitations and or response bias.

Finally, the investigator took measures to handle missing data. These measures enabled her to retain the original sample size, which could have resulted in biased estimates (Allison, 2002). Moreover, missing data can impact research validity through diminished sample size, and the reduced capacity of detecting relationships among tested variables (Allison, 2002). Hence, the severe loss of data, which accounted for more than 30% of missingness on the family variables, presented a significant challenge of employing the best approach for dealing with missing not at random or MNAR, to which multiple imputations (MI) provided the most suitable method.

**Chapter Summary**

The preceding discussion reverberates the urgent need for parent-school partnerships in bolstering schools’ efforts to promote prosocial student behavior. School professionals must adopt evidence-based programs and policies to facilitate positive youth development for children and adolescents. The prioritization of EBP will maximize
the use of limited resources, including human and physical capital in better program planning and execution.

More importantly, to suitably address the social implications of problem behaviors on at-risk students, EBP demands multi-stakeholder collaboration (i.e., family, school, private sectors, and communities). At best, practitioners must tailor appropriate services to fit the needs of diverse youth. In conjunction with parental training programs, the provision of youth-friendly spaces, and active youth engagement may help to mitigate negative behaviors in Caribbean school-age youth.
References


Bristo, M. (2013). An Exploration of the use of PATH: (a person-centred planning tool) by Educational Psychologist with vulnerable and challenging pupils. Retrieved fromhttps://pdfs.semanticscholar.org/90f0/0fcd2577ffbdab36820a40f11335d1e5f017.pdf?_ga=2.192584738.941747188.1591691834-237971934.1583170455


Guerra Nancy G., & Bradshaw Catherine P. (2008). Linking the prevention of problem behaviors and positive youth development: Core competencies for positive youth


https://doi.org/10.1007/s11292-009-9072-x


Sklad, M., Diekstra, R., DeRitter, M., & Ben, J. (2012). Effectiveness of school-based universal social, emotional and behavioral programs: Do they enhance students’ development in the area of skill, behavior, and adjustment?


https://doi.org/10.1111/j.1532-7795.2011.00763.x
Thank you for agreeing to participate in this survey. The purpose of this survey is to learn about how students like yourselves feel about your community, family, peers, and school. The survey also asks about health risk behaviors.

The survey is completely voluntary and anonymous. DO NOT put your name on the questionnaire. This is not a test, so there are no right or wrong answers. We would like you to work quickly so you can finish. All of the questions should be answered by completely filling in one of the answer spaces. If you do not find an answer that fits exactly, use the one that comes closest. If any question does not apply to you, or you are not sure what it means, just leave it blank. You can skip any question that you do not wish to answer.

Please answer each question by completely filling in the oval.

1. Are you:  ○ MALE  ○ FEMALE

2. How old are you?
   ○ 13  ○ 15  ○ 17 or older
   ○ 14  ○ 16

3. What is your race? (Mark all that apply.)
   ○ East Indian  ○ Other
   ○ Black  ○ White
   ○ Mixed

4. What form are you in?
   ○ 2nd  ○ 3rd  ○ 4th  ○ 5th  ○ 6th

5. Think of where you live most of the time. Which of the following people live there with you? (Mark all that apply.)
   ○ Mother
   ○ Father
   ○ Stepfather
   ○ Foster parent(s)
   ○ Grandparent(s)
   ○ Aunt
   ○ Uncle
   ○ Other Adult(s)
   ○ Brother(s) / Sister(s)
   ○ Stepbrother(s) / Stepsister(s)
   ○ Other relative

6. Are your parents separated or divorced?
   ○ Yes
   ○ No
   ○ Parents married
   ○ Parents not married
   ○ Don't know / Not sure

7. How likely is it that you will finish high school?
   ○ Very Likely
   ○ Likely
   ○ Not very likely
   ○ Impossible
   ○ Don't know

8. What is the highest level of education completed by your mother?
   ○ None
   ○ Primary
   ○ Secondary
   ○ Tertiary / College
   ○ University
   ○ Don't know

9. What is the highest level of education completed by your father?
   ○ None
   ○ Primary
   ○ Secondary
   ○ Tertiary / College
   ○ University
   ○ Don't know

10. Which of the following people do you feel comfortable going to for help when things go wrong or when you need someone to talk about your problems? (Mark all that apply.)
   ○ Parents / Step-parents
   ○ Grandparents
   ○ Cousins
   ○ Siblings
   ○ Other relatives
   ○ Friends
   ○ Teachers
   ○ Coaches / Instructors
   ○ Mentors / Tutors
   ○ Counselors
   ○ Other adults
   ○ I have no one I can talk to or go to for help
The next section asks about your experiences at school:

11. In my school, students have lots of chances to help decide things like class activities and rules.
   - Strongly agree
   - Agree
   - Neutral
   - Disagree
   - Strongly disagree

12. I have lots of chances to be part of class discussions or activities.

13. Teachers ask me to work on special classroom projects.

14. My teachers notice when I am doing a good job and let me know about it.

15. There are lots of chances for students in my school to get involved in sports, clubs, and other school activities outside of class.

16. There are lots of chances for students in my school to talk with a teacher one-on-one.

17. I feel safe at my school.

18. The school lets my parents know when I have done something well.

19. My teachers praise me when I work hard in school.

20. I have lots of chances to be part of class discussions or activities.

21. Now thinking back over the past year in school, how often did you:
   a. enjoy being in school?
   b. hate being in school?
   c. try to do your best work?
   d. feel that the school work you were assigned was meaningful and important?

22. Putting them all together, what were your grades like last year?
   - Mostly A's
   - Mostly B's
   - Mostly C's
   - Mostly D's

23. How important do you think the things you are learning in school are going to be for you later in life?
   - Very important
   - Quite important
   - Fairly important
   - Not at all important

24. How interesting are most of your classes to you?
   - Very interesting
   - Quite interesting
   - Fairly interesting
   - Not at all interesting

25. During the past 30 days, how many days of school were you absent because you skipped or were cut?
   - None
   - 1 day
   - 2 days
   - 3 days
   - 4-5 days
   - 6-10 days
   - 11 or more days

26. During the past 12 months, how many times have someone threatened or injured you with a weapon such as a gun, knife, bottle etc., on school property?

27. During the past 12 months, how many times were you in a physical fight on school property?

28. During the past 12 months, how often have you been picked on or bullied by a student on school property?

29. During the past 12 months, how many times have you been harassed, threatened, or made fun of by a person in person or online or through a cell phone or other electronic device?

30. During the past 12 months, how often have you been picked on or bullied another student on school property?

31. During the past 12 months, how many times have you or anyone you know been physically bullied on school property?

32. During the past 30 days, how many days did you NOT go to school because you felt you would be unsafe at school or on the way to or from school?
   - 0 days
   - 1 day
   - 2 or 3 days
   - 4 or 5 days
   - 6 or more days

33. During the past 30 days, how many days did you carry a weapon such as a gun, knife, or club on school property?
   - 0 days
   - 1 day
   - 2 or 3 days
   - 4 or 5 days
   - 6 or more days

34. What are the chances you would be seen as cool if you:
   a. smoked cigarettes?
   b. watched sexually explicit pictures/videos?
   c. began drinking alcoholic beverages regularly, that is, at least once or twice a month?
   d. performed sexually explicit acts on school property?
   e. smoked marijuana?
   f. carried a handgun?
   g. skipped school?
35. How old were you when you first:

- smoked marijuana?
- smoked a cigarette, even just a puff?
- had more than a sip or two of beer, wine or hard liquor (for example, vodka, whiskey, or gin)?
- began drinking alcoholic beverages regularly, that is, at least once or twice a month?
- attacked someone with the intention of seriously hurting them?
- belonged to a gang?
- gambled or bet on anything cards, lottery, sports, bingo, dice, raffles, casino, internet or video games, etc.?
- got suspended from school?
- got arrested?

36. How wrong do you think it is for someone your age to:

a. take a handgun to school?
b. steal anything worth more than $5?
c. pick a fight with someone?
d. attack someone with the idea of seriously hurting them?
e. stay away from school all day when their parents think they are at school?
f. have one or two drinks of beer, wine, or hard liquor nearly every day?
g. smoke cigarettes?
h. smoke marijuana?

37. How many times in the past year (12 months) have you:

- been suspended from school?
- carried a handgun?
- sold illegal drugs?
- stolen or tried to steal a motor vehicle such as a car or motorcycle?
- participated in clubs, organizations, or activities at school?
- been arrested?
- done extra work on your own for school?
- attacked someone with the intention of seriously hurting them?
- attacked someone with a weapon?
- seen someone attacked with a weapon, other than a gun, such as a knife, bat, bottle, or chair?
- been drunk or high at school?
- taken a handgun to school?
- stolen or tried to steal something worth less than $100?
- stolen or tried to steal something worth more than $100?
- gone into or tried to go into a building to steal something?
- used a weapon or force to get money or other material items from someone?
- seen someone shot or shot at?

38. How often have you done the following for money, possessions, or anything of value:

- Almost every day
- Once or twice a week
- At least once in the past 12 months
- Before, but not in the past 12 months
- Never

- buy lottery or scratch off tickets?
- bet on a game of skill such as pool or a video game?
- bet on card games (poker)?
- bet on sport events?
- bet on dice games, bingo, etc.?
- bet on horse racing?
- bet at a casino?
- bet using Internet gambling sites?

160
39. Think of your four best friends. In the past year (12 months), how many of your best friends have:

<table>
<thead>
<tr>
<th></th>
<th>a. participated in clubs, organizations or activities at school?</th>
<th>Number of friends</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>b. smoked cigarettes?</td>
<td>0 1 2 3 4</td>
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<tr>
<td></td>
<td>c. tried beer, wine or hard liquor (for example, vodka, whiskey, or gin) when their parents didn't know about it?</td>
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<td></td>
<td>d. made a commitment to stay drug-free?</td>
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<td></td>
<td>e. used marijuana?</td>
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<td></td>
<td>f. tried to do well in school?</td>
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<td></td>
<td>g. used cocaine or crack or other illegal drugs?</td>
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<td></td>
<td>h. been suspended from school?</td>
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<td></td>
<td>i. liked school?</td>
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<td>j. carried a handgun?</td>
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<td>k. sold illegal drugs?</td>
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<td>l. stolen or tried to steal a motor vehicle such as a car or motorcycle?</td>
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<td>m. been arrested?</td>
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<td>n. dropped out of school?</td>
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<td>o. been members of a gang?</td>
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<td>p. been in a physical fight?</td>
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40. How well do the following statements describe you?.

|   | a. I do the opposite of what people tell me, just to get them mad. | Very False | Somewhat False | Very True |
|   | b. I like to see how much I can get away with.                   | Very False | Somewhat False | Very True |
|   | c. I ignore rules that get in my way                              | Strongly disagree | Agree | Strongly agree |

41. About how many adults (over 21) have you known personally who in the past year:

|   | a. sold or dealt drugs                                           | 0 1 2 2 or 3 5 or more |
|   | b. done other things that could get them in trouble with the police like stealing, selling stolen goods, mugging, or assaulting others etc.? | 0 1 2 2 or 3 5 or more |
|   | c. gotten drunk or high?                                         | 0 1 2 2 or 3 5 or more |

42. In the last 30 days, about how many times were you offered:

|   | a. alcohol?                                                      |                               |
|   | b. cigarettes?                                                   |                               |
|   | c. marijuana?                                                    |                               |
|   | d. other drugs?                                                  |                               |
43. On how many occasions (if any) have you:

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<tr>
<th>OCCASIONS:</th>
<th>0</th>
<th>1-1</th>
<th>2-4</th>
<th>5-6</th>
<th>7-10</th>
<th>11-15</th>
<th>16-20</th>
<th>21-25</th>
<th>26-30</th>
<th>31-34</th>
<th>35+</th>
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<td>a. had alcoholic beverages (beer, wine or hard liquor) to drink in your lifetime - more than just a few times?</td>
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<td>b. used marijuana in your lifetime?</td>
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<td>c. used marijuana during the past 30 days?</td>
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<td>d. used cocaine or crack during the past 30 days?</td>
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<td>e. used inhalants, glue, or paint thinner in your lifetime?</td>
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<td>f. used hallucinogens, such as LSD, in your lifetime?</td>
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44. If during the past 30 days you used marijuana, how did you get it? (Mark all that apply):
- I did not use marijuana during the past 30 days
- Street vendor/pusher
- Friends/Relatives/Parties/School
- Family/Relatives/Home
- Other

45. In the last 30 days, how often have you avoided people or places because you might be offered alcohol, cigarettes, marijuana or other drugs including prescription drugs?
- None
- 1-2 times
- 3-5 times
- 6-10 times
- More than 10 times

46. In the last 30 days, how often did you respond in the following ways when you were offered alcohol, cigarettes, marijuana or other drugs including prescription drugs were offered to you? (Mark all that apply):
- I never got offered
- I rejected the offer
- I accepted the offer
- I gave them the situation without rejecting the offer
- I used some other way to not accept the drug or drugs

47. If during the past 30 days you drank alcohol, how did you get it? (Mark all that apply):
- I did not drink alcohol in the past 30 days
- I bought it in a store such as a liquor store, corner store, supermarket, discount store or gas station
- I bought it at a restaurant, bar, or club
- I bought it at a public event such as a concert or sporting event
- I gave someone else money to buy it for me
- My parent or guardian gave it to me
- Another family member who is 21 or older gave it to me
- Someone not related to me who is 21 or older gave it to me
- Someone under the age of 21 gave it to me
- I got it at a party
- I look it from home
- I look it from a store or someone else's home
- I got it some other way

48. If you did not use alcohol, tobacco, or other drugs in the past 30 days, please tell about some of the reasons for not using (Mark all that apply):
- I'm not interested in using drugs
- It can harm my body
- My parents would be disappointed in me
- My parents would take away my privileges if I tried
- 162
51. Have you ever belonged to a gang?

- No
- No, but would like to
- Yes, but would like to get out
- Yes, in the past

52. If you have ever belonged to a gang, what was the one major reason you joined?

- Protection/safety
- Make money
- Friendship
- Fell pressured
- Parent(s) are in a gang
- To get respect
- Sibling(s) are in a gang
- Other

53. How wrong would most adults (over 21) in your neighborhood think it is for kids your age:

- Not wrong at all
- Little bit wrong
- Wrong
- Very wrong

a. To use marijuana?
b. To drink alcohol?
c. To smoke cigarettes?
d. To smoke marijuana?
e. To use prescription drugs not prescribed to you?

54. How wrong do your friends feel it would be for you to:

- Not wrong at all
- Little bit wrong
- Wrong
- Very wrong

a. Have one or two drinks of an alcoholic beverage nearly every day?
b. Smoke tobacco?
c. Smoke marijuana?
d. Use prescription drugs not prescribed to you?

For questions that have the following answers: Not no yes YES!
Mark (the BIG) YES if you think the statement is DEFINITELY TRUE for you.
Mark (the little) yes if you think the statement is MOSTLY TRUE for you.
Mark (the little) no if you think the statement is MOSTLY NOT TRUE for you.
Mark (the BIG) NO if you think the statement is DEFINITELY NOT TRUE for you.

Example: Chocolate is the best ice cream flavor.

_____ NO _____ not yes _____ YES!

55. How much does each of the following statements describe your neighborhood?

No/No/Yes/YES!

a. Crime and/or drug selling:

b. Drugs:

c. Lots of empty or abandoned buildings:

d. Lots of graffiti:

e. There is pressure to join a gang:

f. There is pressure because of gangs:

56. If you had to move, I would miss the neighborhood I now live in:

57. My neighbors notice when I do something important:

58. I feel safe in my neighborhood:

59. A kid smoked marijuana in my neighborhood and I would be caught by the police:

60. A kid carried a handgun in my neighborhood and I would be caught by the police:

56. These questions ask about your feelings

Not no yes YES!

a. It is important to think before I act:

b. Sometimes I think that life is not worth living:

c. At times I think that I am not good at all:

d. All in all, I am inclined to think that I am a failure:

e. I have goals in my life:

f. In the past year, have you felt depressed or sad MOST days, even if you felt okay sometimes:

g. It is alright to bust up people if they start the fight:

h. I think it is okay to take something without asking if I can get away with it:
57. During the past 12 months, do you recall hearing, reading, or watching an advertisement about the prevention of substance use?

- No
- Yes

These questions ask about your family.

58. During a typical week, how many days do all or most of your family eat at least one meal together?

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7

59. During the past 12 months, have you talked with at least one of your parents about the dangers of tobacco, alcohol, prescription drugs, or illegal drugs? By parents, we mean your biological parents, adoptive parents, step-parents, or adult guardians — whether or not they live with you. (Mark all that apply.)

- No
- Yes, I talked with my parents about the dangers of tobacco use.
- Yes, I talked with my parents about the dangers of alcohol use.
- Yes, I talked with my parents about the dangers of prescription drug use.
- Yes, I talked with my parents about the dangers of marijuana use.
- Yes, I talked with my parents about the dangers of illegal drug use.

60. Have any of your brothers or sisters ever:

- I don’t have any brothers or sisters

- Yes

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a. drunk beer, wine or hard liquor (for example, vodka, whiskey or gin)?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. smoked marijuana?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. smoked cigarettes?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. taken a hangover to school?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

61. Has anyone in your family ever had severe alcohol or drug problems?

- No
- Yes

62. Have any of your relatives been in prison or jail any time during the past year (12 months)? (Mark all that apply.)

- No
- Mother
- Father
- Step-parent
- Grandparent(s)
- Other adult(s)
- Sibling (i.e., brother, sister, step-sibling etc.)

63. How wrong do your parents feel it would be for YOU:

- Not wrong at all
- A little bit wrong
- Very wrong

- a. to drink two or more drinks of beer, wine, or hard liquor (for example, vodka, whiskey or gin) nearly every day?
- b. to smoke cigarettes?
- c. to smoke marijuana?
- d. to steal something worth more than $50?
- e. to drive without a valid driver’s license or to drive a car or motorcycle if you are under the legal age?
- f. to pick a fight with someone?
- g. to use prescription drugs without a doctor ordering you to take them?

64. Stomach ache

- Agree
- Disagree

- Strongly disagree

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a. The rules in my family are unfair.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. People in my family often insult or yell at each other.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. When I am not at home, one of my parents knows where I am and who I am with.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. We argue about the same things in my family over and over.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. If I break a rule, I am punished without my parents’ permission. My parents would catch me.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. My family makes clear rules about alcohol and drug use.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. If I carried a weapon without my parents’ permission, my parents would catch me.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>h. If I skipped school, my parents would know me.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. My parents ask me what I think before making family decisions that affect me.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>j. I feel very close to my mother.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>k. I share my thoughts and feelings with my mother.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>l. I share my thoughts and feelings with my father.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>m. I enjoy spending time with my mother.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>n. I enjoy spending time with my father.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>o. If I had a personal problem, I could ask my mom or dad for help.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

65. My parents notice when I am doing a good job and let me know about it.

- Never or Almost Never
- Sometimes
- Often
- All the Time
66. How often do your parents tell you they’re proud of you for something you’ve done?
- Never or Almost Never
- Sometimes
- Often
- All the Time

67. In a normal school week, how many days are you home after school for at least one hour without an adult there?
- Never or Almost Never
- 1 day
- 2 days
- 3 days
- 4 days
- 5 days

68. In the last month, how often have you felt: (Please check one)
- That things were going your way?
- That things were going against your way?
- That you were unable to control important things in your life?
- That you were confident about your abilities to handle your personal problems?
- That difficulties were piling up so high that you could not overcome them?

69. All questions refer to the time period from when you were born until now. Briefly, looking back —
(a) Did you live with anyone who was a problem drinker or alcoholic?
- Yes
- No
- Don’t know / Not sure

(b) Did you live with anyone who used illegal street drugs or who abused prescription medications?
- Yes
- No
- Don’t know / Not sure

(c) Did you live with anyone who served time in prison, jail, or other correctional facility?
- Yes
- No
- Don’t know / Not sure

(d) Were your parents separated or divorced?
- Yes
- No
- Parents not married
- Don’t know / Not sure

(e) How often did adults in your home ever slap, hit, kick, punch, or beat each other up?
- Never
- Once
- More than once

(f) How often did an adult in your home ever slam at you, insult you, or put you down?
- Never
- Once
- More than once

70. People have many different types of interactions with their peers at school. Please answer the following questions about your peer experiences in school during the last month.

5 = Always / Almost always
4 = Almost always
3 = Mostly true
2 = Somewhat true
1 = Rarely / Almost never
- a. How often do other students exclude you from activities?
- b. How often do other students tease you?
- c. How often do other students push or hit you?
- d. How often do other students make fun of you?
- e. How often do other students show you kindness?

71. Please indicate how much these statements describe you.
- Strongly like me
- A lot like me
- Somewhat like me
- A little like me
- Not at all like me

- a. I expect good things to happen to me.
- b. I am excited about my future.
- c. I set goals for myself and I work to reach them.
- d. I have goals in my life.
- e. I get things done. I take action to reach them.
- f. It is important to me that I reach my goals.
- g. I know how to make my goals happen.

72. How honest were you in filling out this survey?
- I was very honest.
- I was honest most of the time.
- I was honest some of the time.
- I was honest about half of the time.
- I was honest much of the time.
- I was not honest at all.

THANK YOU!!
APPENDIX B

ITEM DICTIONARY
<table>
<thead>
<tr>
<th>Family Domain Risk Factors</th>
<th>Risk Factor</th>
<th>Associated Scales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Management Problems</td>
<td>Poor Family Management</td>
<td></td>
</tr>
<tr>
<td>Family Conflict</td>
<td>Family Conflict</td>
<td></td>
</tr>
<tr>
<td>Family Involvement in the Problem Behavior</td>
<td>Family History of Antisocial Behavior</td>
<td></td>
</tr>
<tr>
<td>Favorable Parental Attitudes Toward Problem Behavior</td>
<td>Parental Attitudes Favorable to Antisocial Behavior</td>
<td>Parental Attitudes Favorable to Drug Use</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>School Domain Protective Factors</th>
<th>Protective Factors</th>
<th>Associated Scales</th>
</tr>
</thead>
<tbody>
<tr>
<td>School Opportunities for Prosocial Involvement</td>
<td>School Opportunities for Prosocial Involvement</td>
<td></td>
</tr>
<tr>
<td>School Rewards for Prosocial Involvement</td>
<td>School Rewards for Prosocial Involvement</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>School Domain Risk Factors</th>
<th>Risk Factor</th>
<th>Associated Scales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Failure Beginning in Late Elementary School</td>
<td>Academic Failure</td>
<td></td>
</tr>
<tr>
<td>Lack of Commitment to School</td>
<td>Low School Commitment</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Individual/Peer Protective Factors</th>
<th>Protective Factor</th>
<th>Associated Scales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religiosity</td>
<td>Religiosity</td>
<td></td>
</tr>
<tr>
<td>Social Skills</td>
<td>Social Skills</td>
<td></td>
</tr>
<tr>
<td>belief in the Moral Order</td>
<td>Belief in the Moral Order</td>
<td></td>
</tr>
<tr>
<td>Individual/Peer Risk Factors</td>
<td>Risk Factor</td>
<td>Associated Scales</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Prosocial Involvement</td>
<td>Prosocial Involvement</td>
</tr>
<tr>
<td></td>
<td>Rewards for Prosocial Involvement</td>
<td>Rewards for Prosocial Involvement</td>
</tr>
<tr>
<td></td>
<td>Interaction with Prosocial Peers</td>
<td>Interaction with Prosocial Peers</td>
</tr>
<tr>
<td></td>
<td>Risk Factor</td>
<td>Associated Scales</td>
</tr>
<tr>
<td></td>
<td>Rebelliousness</td>
<td>Rebelliousness</td>
</tr>
<tr>
<td>Early and Persistent Antisocial Behavior</td>
<td>Early Initiation of Drug Use</td>
<td>Early Initiation of Drug Use</td>
</tr>
<tr>
<td></td>
<td>Favorable Attitudes Toward the Problem Behavior</td>
<td>Attitudes Favorable Toward Antisocial Behavior</td>
</tr>
<tr>
<td></td>
<td>Gang Involvement</td>
<td>Gang Involvement</td>
</tr>
<tr>
<td></td>
<td>Constitutional Factors</td>
<td>Depressive Symptoms</td>
</tr>
</tbody>
</table>
### APPENDIX C
QUESTIONS AND SCALES

<table>
<thead>
<tr>
<th>SCALeS AND QUeSTIONS</th>
<th>RESPONSE CATEGORIES</th>
<th>Qn #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are you:</td>
<td>Male/Female</td>
<td>q1</td>
</tr>
<tr>
<td>How old are you?</td>
<td>1:14 / 1:15 / 1:16 / 1:17 or older</td>
<td>q2</td>
</tr>
<tr>
<td>what is your race?</td>
<td>East, African, Asian, Black, Native American</td>
<td>q3</td>
</tr>
<tr>
<td>What form are you in?</td>
<td>2H; 3H; 4H; 5H; 6H</td>
<td>q4</td>
</tr>
<tr>
<td>Think of where you live most of the time. Which of the following people live there with you?</td>
<td>Mother, stepmother, father, stepfather, foster, Parent (grandparent, aunt, uncle, other adult (s), brother (sister (s), stepbrother(s), stepsister(s), Other relative)</td>
<td>q5</td>
</tr>
<tr>
<td>Are your parents separated or divorced?</td>
<td>Yes; No; Parents not married; Don't know; Not sure</td>
<td>q6</td>
</tr>
<tr>
<td>How likely are you to finish school?</td>
<td>Very likely; Not very likely; Likely; Impossible; Don't know</td>
<td>q7</td>
</tr>
<tr>
<td>What is the highest level of schooling completed by your mother?</td>
<td>None; Primary; Secondary; Tertiary or college; Don't know; University</td>
<td>q8</td>
</tr>
<tr>
<td>What is the highest level of schooling completed by your father?</td>
<td>None; Primary; Secondary; Tertiary or college; Don't know; University</td>
<td>q9</td>
</tr>
<tr>
<td>Which of the following people do you feel most comfortable to go to for help when things go wrong and when you need someone to talk to about your problems?</td>
<td>Parents; Relatives; Grandparents; Siblings; Other relatives; Friends; Teachers; Counselors; Other adults; There is no one I can talk to or go to for help</td>
<td>q10</td>
</tr>
</tbody>
</table>

### Community: Low Neighborhood Attraction

#### How much do each of the following statements describe your neighborhood?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Response</th>
<th>Qn #</th>
</tr>
</thead>
<tbody>
<tr>
<td>I'd like to get out of my neighborhood</td>
<td>Never; Yes; Yes</td>
<td>q35k</td>
</tr>
<tr>
<td>I feel my neighborhood</td>
<td>Same above</td>
<td>q35l</td>
</tr>
<tr>
<td>If I had to move, I would miss the neighborhood I now live in</td>
<td>Same above</td>
<td>q35m</td>
</tr>
</tbody>
</table>

### Community: Community Disorganization

#### How much does each of the following statements describe your neighborhood?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Response</th>
<th>Qn #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crime and drug selling</td>
<td>Never; Yes; Yes</td>
<td>q35a</td>
</tr>
<tr>
<td>Tights</td>
<td>Same as above</td>
<td>q35b</td>
</tr>
<tr>
<td>Lots of empty or abandoned buildings</td>
<td>Same as above</td>
<td>q35c</td>
</tr>
<tr>
<td>Lots of graffiti</td>
<td>Same as above</td>
<td>q35d</td>
</tr>
<tr>
<td>There is pressure to join gangs</td>
<td>Same as above</td>
<td>q35e</td>
</tr>
<tr>
<td>There is a problem because of gangs</td>
<td>Same as above</td>
<td>q35f</td>
</tr>
<tr>
<td>If a kid smokes marijuana in your neighborhood would he or she be caught by the police?</td>
<td>Same as above</td>
<td>q35g</td>
</tr>
<tr>
<td>If a young person drank some beer, wine, or hard liquor (for example, vodka, whisky, or gin) in your neighborhood would he or she be caught by the police?</td>
<td>Same as above</td>
<td>q35h</td>
</tr>
<tr>
<td>If a kid carried a handgun in your neighborhood would he or she be caught by the police?</td>
<td>Same as above</td>
<td>q35i</td>
</tr>
<tr>
<td>I feel safe in my neighborhood</td>
<td>Same as above</td>
<td>q35j</td>
</tr>
</tbody>
</table>
## ADDITIONAL QUESTIONS

### During the past 12 months

<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has someone threatened or injured you with a weapon such as a gun, knife, or small stick on school property?</td>
<td>0: 1; 2-3; 4-6; 7-11; 12 or more</td>
</tr>
<tr>
<td>If you were in a physical fight on school property?</td>
<td>same as above</td>
</tr>
<tr>
<td>During the past 30 days, on how many days did you...</td>
<td>same as above</td>
</tr>
<tr>
<td>Not go to school because you feel you would be unsafe at school or on the way to or from school?</td>
<td>same as above</td>
</tr>
<tr>
<td>Carry a weapon such as a gun, knife, or small stick on school property?</td>
<td>same as above</td>
</tr>
</tbody>
</table>

### How many times in the PAST YEAR (12 months) have you:

<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attacked someone with a weapon?</td>
<td>Never, 1-2; 3-6; 7-11; 12 or more</td>
</tr>
<tr>
<td>Stolen or tried to steal something worth less than $3000</td>
<td>same as above</td>
</tr>
<tr>
<td>Stolen or tried to steal something worth more than $3000</td>
<td>same as above</td>
</tr>
<tr>
<td>Gone into a building to steal something?</td>
<td>same as above</td>
</tr>
<tr>
<td>Used a weapon or force to get money or other material items from someone?</td>
<td>same as above</td>
</tr>
<tr>
<td>It is important to think before you act</td>
<td>NO; no; yes; YES!</td>
</tr>
</tbody>
</table>

---

**Loma Linda University Health Institutional Review Board**

**Approved**

**IRB# 510 2235**
## Gambling

<table>
<thead>
<tr>
<th>Question</th>
<th>Same as above</th>
<th>Yes</th>
<th>No; No, but would like to</th>
<th>Yes, in the past; Yes, belong now; Yes, but would like to get out</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buy lottery, scratch-offs/slots?</td>
<td>Same as above</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bet on a game of skill such as pool or a video game?</td>
<td>Same as above</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bet on card games (poker)?</td>
<td>Same as above</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bet on sporting events?</td>
<td>Same as above</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bet on dice games, bingo, domino, etc.?</td>
<td>Same as above</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bet on horse racing?</td>
<td>Same as above</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bet at a casino?</td>
<td>Same as above</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bet using Internet gambling sites?</td>
<td>Same as above</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Additional Gang Questions

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes; No; but would like to; Yes, in the past; Yes, belong now; Yes, but would like to get out</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have you ever belonged to a gang?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If you have ever belonged to a gang, what was the major reason you joined?</td>
<td>I have never belonged to a gang; Protection/safety; Friendship; Parent(s) are in a gang; $big(s) are in a gang; Make money.</td>
<td></td>
</tr>
</tbody>
</table>
**Drug Use Outcomes**

On how many occasions, if any, have you:

<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Had alcoholic beverages (beer, wine, or hard liquor) to drink in your lifetime—more than just a few sips?</td>
<td>Never; 1-2; 3-5; 5-9; 10-19; 20-29; 30-59; 60+</td>
<td>q43a</td>
</tr>
<tr>
<td>Had beer, wine or hard liquor in the past 30 days?</td>
<td>same as above</td>
<td>q43b</td>
</tr>
<tr>
<td>Used marijuana in your lifetime?</td>
<td>same as above</td>
<td>q43c</td>
</tr>
<tr>
<td>Used marijuana during the past 30 days?</td>
<td>same as above</td>
<td>q43d</td>
</tr>
<tr>
<td>Used cocaine or crack in your lifetime?</td>
<td>same as above</td>
<td>q43e</td>
</tr>
<tr>
<td>Used cocaine or crack in the past 30 days?</td>
<td>same as above</td>
<td>q43f</td>
</tr>
<tr>
<td>Used phencyclidine (PCP, Tan, or Breeze in your lifetime?</td>
<td>same as above</td>
<td>q43g</td>
</tr>
<tr>
<td>Used phencyclidine (PCP, Tan, or Breeze in the past 30 days?</td>
<td>same as above</td>
<td>q43h</td>
</tr>
</tbody>
</table>

**Outcome: Antisocial Behavior**

How many times in the PAST YEAR (12 months) have you:

<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Been suspended from school?</td>
<td>Never; 1-2; 3-5; 5-9; 10-19; 20-29; 30-59; 60+</td>
<td>q37a</td>
</tr>
<tr>
<td>Carried a handgun?</td>
<td>same as above</td>
<td>q37b</td>
</tr>
<tr>
<td>Sold illegal drugs?</td>
<td>same as above</td>
<td>q37c</td>
</tr>
<tr>
<td>Stolen or tried to steal a motor vehicle such as a car or motorcycle?</td>
<td>same as above</td>
<td>q37d</td>
</tr>
<tr>
<td>Been arrested?</td>
<td>same as above</td>
<td>q37e</td>
</tr>
<tr>
<td>Attacked someone with the intention of seriously hurting them?</td>
<td>same as above</td>
<td>q37f</td>
</tr>
<tr>
<td>Been drunk or high all the time?</td>
<td>same as above</td>
<td>q37g</td>
</tr>
<tr>
<td>Taken a handgun to school?</td>
<td>same as above</td>
<td>q37h</td>
</tr>
</tbody>
</table>

**Final Question**

How honest were you in filling out this survey?

<table>
<thead>
<tr>
<th>Response</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>I was very honest; I was honest most of the time; I was honest some of the time; I was honest once in a while; I was not honest at all</td>
<td>q54</td>
</tr>
</tbody>
</table>
### PEER INDIVIDUAL: Belief in Moral Order

<table>
<thead>
<tr>
<th>Question</th>
<th>Response Options</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>I think it is okay to take something without asking if you can get away with it.</td>
<td>NO; NC; YES; YES!</td>
<td>65g</td>
</tr>
<tr>
<td>It is all right to beat up people if they start the fight.</td>
<td>same as above</td>
<td>91f</td>
</tr>
<tr>
<td>It is important to be honest with your parents, even if they become upset or you get punished.</td>
<td>same as above</td>
<td>61l</td>
</tr>
</tbody>
</table>

### PEER INDIVIDUAL: Prosocial Involvement

**How many times in the PAST YEAR (12 months) have you:**

<table>
<thead>
<tr>
<th>Question</th>
<th>Response Options</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participated in clubs, organizations and activities at school?</td>
<td>Never; 1-2; 3-9; 10-19; 20-39; 40+</td>
<td>38a</td>
</tr>
<tr>
<td>Done extra work on your own for school?</td>
<td>same as above</td>
<td>38g</td>
</tr>
<tr>
<td>Volunteered to do community service?</td>
<td>same as above</td>
<td>25k</td>
</tr>
</tbody>
</table>

### PEER INDIVIDUAL: Interaction with Prosocial Peers

**Think of your four best friends (the friends you feel closest to). In the past year (12 months), how many of your best friends have:**

<table>
<thead>
<tr>
<th>Question</th>
<th>Response Options</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participated in clubs, organizations and activities at school?</td>
<td>0; 1-2; 3; 4</td>
<td>38a</td>
</tr>
<tr>
<td>Made the commitment to stay drug-free?</td>
<td>same as above</td>
<td>38g</td>
</tr>
<tr>
<td>Tried to do well in school?</td>
<td>same as above</td>
<td>38f</td>
</tr>
<tr>
<td>Liked school?</td>
<td>same as above</td>
<td>38c</td>
</tr>
<tr>
<td>Carried a handgun?</td>
<td>same as above</td>
<td>38g</td>
</tr>
</tbody>
</table>
### PEER-INDIVIDUAL: Rewards for Antisocial Involvement

What are the chances you would be seen as cool if you:

<table>
<thead>
<tr>
<th>Question</th>
<th>Likelihood</th>
<th>q34a</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoked cigarettes?</td>
<td>No or very little chance; Little chance; Same chance; Pretty good chance; Very good chance</td>
<td>q34a</td>
</tr>
<tr>
<td>Shared sexually explicit pictures/videos</td>
<td>same as above</td>
<td>q34b</td>
</tr>
<tr>
<td>Began drinking alcoholic beverages regularly what is at least once or twice a month?</td>
<td>same as above</td>
<td>q34c</td>
</tr>
<tr>
<td>Performed sexually explicit acts On SCHOOL PROPERTY?</td>
<td>same as above</td>
<td>q34d</td>
</tr>
<tr>
<td>Smoked marijuana?</td>
<td>same as above</td>
<td>q34e</td>
</tr>
<tr>
<td>Carried a handgun?</td>
<td>same as above</td>
<td>q34f</td>
</tr>
<tr>
<td>Skipped school?</td>
<td>same as above</td>
<td>q34g</td>
</tr>
<tr>
<td>Were a member of a gang?</td>
<td>same as above</td>
<td>q34h</td>
</tr>
</tbody>
</table>

### PEER-INDIVIDUAL: Gang Involvement

Think of your four best friends (the friends you feel closest to): In the past year (12 months), how many of your best friends have:

<table>
<thead>
<tr>
<th>Question</th>
<th>Likelihood</th>
<th>q38c</th>
</tr>
</thead>
<tbody>
<tr>
<td>Been members of a gang?</td>
<td>0; 1; 2; 3; 4</td>
<td>q38c</td>
</tr>
</tbody>
</table>

### PEER-INDIVIDUAL: Depressive Symptoms

Sometimes I think that life is not worth living

At times I think I am not good at all.

All in all, I am unhappy, I think that I am a failure.

In the past year, have you felt depressed or sad MOST days, even if you felt okay sometimes?

<table>
<thead>
<tr>
<th>Question</th>
<th>Likelihood</th>
<th>q58a</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sometimes I think that life is not worth living</td>
<td>No; no; yes; YES!</td>
<td>q58a</td>
</tr>
<tr>
<td>At times I think I am not good at all.</td>
<td>same as above</td>
<td>q58b</td>
</tr>
<tr>
<td>All in all, I am unhappy, I think that I am a failure.</td>
<td>same as above</td>
<td>q58b</td>
</tr>
<tr>
<td>In the past year, have you felt depressed or sad MOST days, even if you felt okay sometimes?</td>
<td>same as above</td>
<td>q58b</td>
</tr>
</tbody>
</table>
### PEER INDIVIDUAL: Perceived Risks of Drug Use

<table>
<thead>
<tr>
<th>Activity</th>
<th>Risk Perception</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Try marijuana once or twice</td>
<td>No risk</td>
<td>q78b</td>
</tr>
<tr>
<td>Smoke marijuana: once or twice a week</td>
<td>Same as above</td>
<td>q41c</td>
</tr>
<tr>
<td>Take one or two drinks of an alcoholic beverage nearly every day</td>
<td>Same as above</td>
<td>q45k</td>
</tr>
</tbody>
</table>

### PEER INDIVIDUAL: Interaction with Antisocial Peers

Think of your four best friends (the friends you feel closest to). In the past year (12 months), how many of your best friends have:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Risk Perception</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Been suspended from school?</td>
<td>0, 1, 2, 3, 4</td>
<td>q29h</td>
</tr>
<tr>
<td>Carried a handgun?</td>
<td>Same as above</td>
<td>q59i</td>
</tr>
<tr>
<td>Sold illegal drugs?</td>
<td>Same as above</td>
<td>q35k</td>
</tr>
<tr>
<td>Shot or tried to steal a motor vehicle such as a car or motorcycle?</td>
<td>Same as above</td>
<td>q55l</td>
</tr>
<tr>
<td>Been arrested?</td>
<td>Same as above</td>
<td>q77m</td>
</tr>
<tr>
<td>Dropped out of school?</td>
<td>Same as above</td>
<td>q38n</td>
</tr>
<tr>
<td>Been in a physical fight?</td>
<td>Same as above</td>
<td>q55p</td>
</tr>
<tr>
<td>Smoked cigarettes?</td>
<td>Same as above</td>
<td>q55p</td>
</tr>
</tbody>
</table>

### PEER INDIVIDUAL: Friends' Use of Drugs

Think of your four best friends (the friends you feel closest to). In the past year (12 months), how many of your best friends have:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Risk Perception</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tried beer, wine, or hard liquor when their parents didn't know about it</td>
<td>0, 1, 2, 3, 4</td>
<td>q39c</td>
</tr>
<tr>
<td>Used marijuana?</td>
<td>Same as above</td>
<td>q39c</td>
</tr>
<tr>
<td>Used cocaine or crack, or other illegal drugs?</td>
<td>Same as above</td>
<td>q39g</td>
</tr>
<tr>
<td>Question</td>
<td>Answer Options</td>
<td>Code</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>-----------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>I do the opposite of what people tell me, just to get them mad.</td>
<td>Very False, Somewhat False, Somewhat True, Very True</td>
<td>q40a</td>
</tr>
<tr>
<td>I ignore the rules that get in my way.</td>
<td>same as above</td>
<td>q40c</td>
</tr>
<tr>
<td>I like to see how much I can get away with.</td>
<td>same as above</td>
<td>q40b</td>
</tr>
<tr>
<td><strong>PEER-INDIVIDUAL: Early Initiation of Drug Use</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How old were you when you first smoked marijuana?</td>
<td>Never; 16 or younger; 11; 12; 13; 14; 15; 16; 17 or older</td>
<td>q35a</td>
</tr>
<tr>
<td>Smoked a cigarette even just a puff?</td>
<td>same as above</td>
<td>q35b</td>
</tr>
<tr>
<td>Had more than a sip or two of beer, wine, or hard liquor?</td>
<td>same as above</td>
<td>q35c</td>
</tr>
<tr>
<td>Began drinking alcoholic beverages once or twice a month?</td>
<td>same as above</td>
<td>q35d</td>
</tr>
<tr>
<td><strong>PEER-INDIVIDUAL: Early Initiation of Antisocial Behavior</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How old were you when you first got suspended from school?</td>
<td>same as above</td>
<td>q35h</td>
</tr>
<tr>
<td>Belonged to a gang?</td>
<td>same as above</td>
<td>q35i</td>
</tr>
<tr>
<td>Played or bet on anything?</td>
<td>same as above</td>
<td>q35g</td>
</tr>
<tr>
<td>Attacked someone with the intention of seriously hurting them?</td>
<td>same as above</td>
<td>q35a</td>
</tr>
<tr>
<td>Got arrested</td>
<td></td>
<td>q34h</td>
</tr>
<tr>
<td><strong>PEER-INDIVIDUAL: Favorable Attitudes Toward Antisocial Behavior</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How wrong do you think it is for someone your age to:</td>
<td>Very wrong; Wrong; A little bit wrong; Not wrong at all</td>
<td>q36a</td>
</tr>
<tr>
<td>Take a handgun to school?</td>
<td>same as above</td>
<td>q36b</td>
</tr>
<tr>
<td>Deal anything worth more than $50?</td>
<td>same as above</td>
<td>q36c</td>
</tr>
<tr>
<td>Pick a fight with someone?</td>
<td>same as above</td>
<td>q36d</td>
</tr>
<tr>
<td>Attack someone with the intention of seriously hurting them?</td>
<td>same as above</td>
<td>q36e</td>
</tr>
<tr>
<td>Stay away from school all day when their parents think they are at school?</td>
<td>same as above</td>
<td>q36f</td>
</tr>
<tr>
<td><strong>PEER-INDIVIDUAL: Favorable Attitudes Toward Drug Use</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How wrong do you think it is for someone your age to:</td>
<td>Very wrong; Wrong; A little bit wrong; Not wrong at all</td>
<td>q36f</td>
</tr>
<tr>
<td>Have one or two drinks of beer, wine or hard liquor nearly every day?</td>
<td>same as above</td>
<td>q36g</td>
</tr>
<tr>
<td>Smoke cigarettes?</td>
<td>same as above</td>
<td>q36h</td>
</tr>
<tr>
<td>Smoke marijuana?</td>
<td>same as above</td>
<td>q36g</td>
</tr>
</tbody>
</table>
### SCHOOL: Academic Failure

<table>
<thead>
<tr>
<th>Question</th>
<th>Response Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Putting them all together, what were your grades like last year?</td>
<td>Mostly 20 &amp; below; Mostly 30–39; Mostly 40–59; Mostly 60–79</td>
</tr>
<tr>
<td>Gear up for the next year!</td>
<td></td>
</tr>
</tbody>
</table>

### SCHOOL: Low Commitment to School

<table>
<thead>
<tr>
<th>Question</th>
<th>Response Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>How interesting are most of your classes to you?</td>
<td>Very interesting and stimulating; Quite interesting; Fairly interesting; Slightly dull; Very dull</td>
</tr>
<tr>
<td>How important do you think the things you are learning in school are going to be for your future?</td>
<td>Very important; Quite important; Fairly important; Slightly important; Not at all important</td>
</tr>
<tr>
<td>During the past 30 days, how many days of school have you missed because you skipped or cut classes?</td>
<td>Never; 1-2; 3-4; 5-10; 11+</td>
</tr>
</tbody>
</table>

### SCHOOL: Opportunities for Prosocial Involvement

<table>
<thead>
<tr>
<th>Question</th>
<th>Response Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>In my school, students have lots of chances to help decide things like class activities and rules.</td>
<td>NEVER, YES, YES!</td>
</tr>
<tr>
<td>These are lots of chances for students in my school to talk with a teacher one on one.</td>
<td>same as above</td>
</tr>
<tr>
<td>Teachers ask me to work on special classroom projects.</td>
<td>same as above</td>
</tr>
<tr>
<td>These are lots of chances for students in my school to get involved in sports, clubs, and other school activities outside of class.</td>
<td>same as above</td>
</tr>
<tr>
<td>I have lots of chances to be part of class discussions or activities.</td>
<td>same as above</td>
</tr>
</tbody>
</table>

### SCHOOL: Rewards for Prosocial Involvement

<table>
<thead>
<tr>
<th>Question</th>
<th>Response Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>My teacher tells me when I am doing a good job and lets me know about it.</td>
<td>NEVER, YES, YES!</td>
</tr>
<tr>
<td>The school lets my parents know when I have done something well.</td>
<td>same as above</td>
</tr>
<tr>
<td>I feel safe at my school.</td>
<td>same as above</td>
</tr>
<tr>
<td>My teachers praise me when I work hard in school.</td>
<td>same as above</td>
</tr>
</tbody>
</table>
### FAMILY: Attachment

<table>
<thead>
<tr>
<th>Question</th>
<th>Response Options</th>
<th>QRef</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you feel very close to your mother?</td>
<td>NO, no, YES!</td>
<td>381i</td>
</tr>
<tr>
<td>Do you feel very close to your father?</td>
<td>same as above</td>
<td>381j</td>
</tr>
<tr>
<td>Do you share your thoughts and feelings with your mother?</td>
<td>same as above</td>
<td>381k</td>
</tr>
<tr>
<td>Do you share your thoughts and feelings with your father?</td>
<td>same as above</td>
<td>381l</td>
</tr>
</tbody>
</table>

### FAMILY: Opportunities for Prosocial Involvement

<table>
<thead>
<tr>
<th>Question</th>
<th>Response Options</th>
<th>QRef</th>
</tr>
</thead>
<tbody>
<tr>
<td>My parents give me lots of chances to do fun things with them.</td>
<td>NO, no, YES!</td>
<td>384q</td>
</tr>
<tr>
<td>My parents ask me what I think before most family decisions affecting me are made.</td>
<td>same as above</td>
<td>387k</td>
</tr>
<tr>
<td>If I had a personal problem I could ask my mother or father for help</td>
<td>same as above</td>
<td>387l</td>
</tr>
</tbody>
</table>

### FAMILY: Rewards for Prosocial Involvement

<table>
<thead>
<tr>
<th>Question</th>
<th>Response Options</th>
<th>QRef</th>
</tr>
</thead>
<tbody>
<tr>
<td>My parents (or those who you consider to be your parents) notice when I am doing a good job and let me know about it.</td>
<td>Never or almost never; Sometimes; Often; All of the time</td>
<td>385</td>
</tr>
<tr>
<td>How often do your parents tell you they’re proud of you for something you’ve done?</td>
<td>same as above</td>
<td>382</td>
</tr>
<tr>
<td>Do you enjoy spending time with your father?</td>
<td>Strongly Disagree; Disagree; Agree; Strongly Agree</td>
<td>387m</td>
</tr>
<tr>
<td>Do you enjoy spending time with your mother?</td>
<td>same as above</td>
<td>387n</td>
</tr>
<tr>
<td>FAMILY: Parental Attitudes Favorable Toward Drug Use</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>How wrong do your parents feel it would be for YOU to:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>have 1 to 2 drinks of beer, wine, or hard liquor (for example vodka, whiskey, or gin) everyday?</td>
<td>Very wrong; Wrong; A little bit wrong; Not wrong at all</td>
<td></td>
</tr>
<tr>
<td>Smoke cigarettes?</td>
<td>same as above</td>
<td></td>
</tr>
<tr>
<td>Smoke marijuana?</td>
<td>same as above</td>
<td></td>
</tr>
<tr>
<td>FAMILY: Poor Family Management</td>
<td></td>
<td></td>
</tr>
<tr>
<td>My parents ask if I’ve done my homework</td>
<td>Strongly Agree; Agree; Disagree; Strongly Disagree</td>
<td></td>
</tr>
<tr>
<td>Would your parents know if you did not come home on time?</td>
<td>same as above</td>
<td></td>
</tr>
<tr>
<td>When I am not at home, one of my parents knows where I am and who I am with.</td>
<td>same as above</td>
<td></td>
</tr>
<tr>
<td>The rules in my family are clear</td>
<td>same as above</td>
<td></td>
</tr>
<tr>
<td>Your family has clear rules about alcohol and drug use?</td>
<td>same as above</td>
<td></td>
</tr>
<tr>
<td>If you drank some beer, wine, or hard liquor (for example vodka, whiskey, or gin) without your parents’ permission, would you be caught by your parents?</td>
<td>same as above</td>
<td></td>
</tr>
<tr>
<td>If you skipped school would you be caught by your parents?</td>
<td>same as above</td>
<td></td>
</tr>
<tr>
<td>If you carried a handgun without your parents’ permission, would you be caught by your parents?</td>
<td>same as above</td>
<td></td>
</tr>
<tr>
<td>FAMILY: Conflict</td>
<td></td>
<td></td>
</tr>
<tr>
<td>People in my family often insult or yell at each other.</td>
<td>NOT: no; yes: YES!</td>
<td></td>
</tr>
<tr>
<td>People in my family have serious arguments.</td>
<td>same as above</td>
<td></td>
</tr>
<tr>
<td>We argue about the same things in my family over and over.</td>
<td>same as above</td>
<td></td>
</tr>
<tr>
<td>FAMILY: Parental Attitudes Favorable to Antisocial Behavior</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stole something worth more than $5?</td>
<td>same as above</td>
<td></td>
</tr>
<tr>
<td>Draw graffiti, write things, or draw pictures on buildings or other property (without the owner’s permission)?</td>
<td>same as above</td>
<td></td>
</tr>
<tr>
<td>Pick a fight with someone?</td>
<td>same as above</td>
<td></td>
</tr>
<tr>
<td>COMMUNITY: Opportunities for Prosocial Involvement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>There are lots of adults in my neighborhood I could talk to about something important.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NOT: no; YES: YES</td>
<td>e55</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COMMUNITY: Perceived for Prosocial Involvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>There are people in my neighborhood who are proud of me when I do something well.</td>
</tr>
<tr>
<td>same as above</td>
</tr>
<tr>
<td>There are people in my neighborhood who encourage me to do my best.</td>
</tr>
<tr>
<td>same as above</td>
</tr>
<tr>
<td>My neighbors notice when I am doing a good job and let me know about it.</td>
</tr>
<tr>
<td>same as above</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COMMUNITY: Laws and Norms Favorable to Drug Use and Gun Carrying</th>
</tr>
</thead>
<tbody>
<tr>
<td>How wrong would most adults (over 21) in your neighborhood think it is for young people your age to:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Activity</th>
<th>Wrong: Very wrong; Wrong; A little bit wrong; Not wrong at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>To use marijuana</td>
<td></td>
</tr>
<tr>
<td>To drink alcohol</td>
<td>same as above</td>
</tr>
<tr>
<td>To smoke cigarettes?</td>
<td>same as above</td>
</tr>
<tr>
<td>How wrong do your friends feel it would be for you to:</td>
<td></td>
</tr>
<tr>
<td>a. have one or two drinks of alcoholic beverage nearly every day?</td>
<td>same as above</td>
</tr>
<tr>
<td>b. smoke tobacco?</td>
<td>same as above</td>
</tr>
<tr>
<td>c. smoke marijuana?</td>
<td>same as above</td>
</tr>
<tr>
<td>d. use prescription drugs not prescribed to you?</td>
<td>same as above</td>
</tr>
</tbody>
</table>
MINISTRY OF EDUCATION
Educational Planning Division
Education Towers, No.5 St. Vincent Street, Port of Spain, Trinidad
1.868.622.2181 Ex. 2339

14th June 2018

Mr. Harriilal Seecharan
Chief Education Officer
Ministry of Education

Request to Conduct Research at Schools

In accordance with the Policy on the Provision of Supplemented Education Programmes/Activities and the Conducting of Research by External Providers, Ms. Se-Anne Alicia Chance has submitted her research proposal for review and approval. The research outline submitted has met the basic application format for proposals as laid out in the above policy.

The Applicant is a student at Loma Linda University, School of Behavioural Health California, pursuing a PhD in Family Studies. Her research is entitled “Youth At-Risk Behaviours Within the School System in Trinidad and Tobago”.

The Applicant’s underlying reason for developing her study is “to facilitate a deeper understanding of the cultural impact of the school and broader education system on At-Risk youth”.

Ms. Chance has identified eleven (11) Government Secondary Schools (see list attached) across Trinidad to conduct her study and I am submitting her application for consideration to be approved, please be guided accordingly.

Yours Respectfully,

Mrs. Lisa Henry-David
Director
Educational Planning Division
Ministry of Education
4th July 2018

Ms. Se-Anne Alicia Chance
11186 San Mateo Drive
Loma Linda
California, 92354

Dear Ms. Chance,

Your request to conduct research entitled "Youth At-Risk Behaviours Within the School System in Trinidad and Tobago" has been approved by the Chief Education Officer of the Ministry of Education.

This approval is granted for 2018, continuing into 2019 and permits the researcher to administrate questionnaires to students for the attached 'List of Schools' which has been approved by the Ministry of Education.

Attached is a letter of confidentiality, which is to be completed and returned to the Educational Planning Division of the Ministry of Education by the person conducting their research. Should you require additional information please contact Mrs. Huldah Balchan-Bissoo, Research Officer I, Educational Planning Division at 622-2181 ext. 2339 or email Huldah.Balchan-Bissoo@moe.gov.tt

Yours Respectfully,

Mrs. Lisa Henry-David
Director
Educational Planning Division
Ministry of Education

[Stamp: Certified Correct 09 Jul 2018]
## LIST OF THE MOST AT-RISK URBAN SECONDARY PUBLIC SCHOOLS

Se-Anne Alicia Chance

<table>
<thead>
<tr>
<th>DISTRICT</th>
<th>SCHOOL</th>
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<tbody>
<tr>
<td>Caroni.</td>
<td>Chaguanas North Secondary.</td>
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<tr>
<td>St. George East.</td>
<td>Five Rivers Secondary</td>
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<tr>
<td></td>
<td>St. Joseph Secondary</td>
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<tr>
<td></td>
<td>El Dorado West Secondary</td>
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<tr>
<td>North Eastern.</td>
<td>Arima North Secondary</td>
</tr>
<tr>
<td>Port of Spain &amp; Environs</td>
<td>Belmont Secondary</td>
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<tr>
<td></td>
<td>Mucurapo East Secondary</td>
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<tr>
<td></td>
<td>Russell Latapy Secondary</td>
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<tr>
<td></td>
<td>Success Laventille Secondary</td>
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<tr>
<td></td>
<td>Mucurapo West Secondary</td>
</tr>
<tr>
<td>Victoria</td>
<td>San Fernando West Secondary</td>
</tr>
</tbody>
</table>
1. Se-Anne Chance of Loma Linda University solemnly and sincerely affirm and declare that:

1. I will conduct research only in accordance with the approval granted by the Ministry of Education.

2. I will not, without due authority of the Ministry of Education in any manner whatsoever, publish or communicate any facts of information acquired during the course of my study/research or programs implemented by my organization/association.

3. I must treat with the strictest confidence all information that I obtain during the course of my research/study or programme implementation.

4. That a copy of all data so retrieved must be stored in full with the Ministry of Education whether published or not.

(Signed) Declarant

Declared before me this July day of 9th 2018

(Signed)
APPENDIX E IRB APPROVAL AND SUPPORTING DOCUMENTS

INSTITUTIONAL REVIEW BOARD
HUMAN RESEARCH PROTECTION PROGRAM
24887 Taylor Street • Suite 201 • Loma Linda, CA 92350
(909) 558-4531 (voice) • (909) 558-0131 (fax)

Initial Approval Notice - Expedited

To: Lister, Zephon
Department: Counseling and Family Sciences
Protocol: Youth at-risk behaviors within the school system in Trinidad and Tobago

This study was reviewed and approved administratively on behalf of the IRB. This decision includes the following determinations:
- Risk to research subjects: Minimal
- Stipulations of approval: Parental permission required.
- See attached list of items (if applicable).
- See Appendix A for Conditions of Approval.

Adverse events and unanticipated problems must be reported in accord with the attached Adverse Event Reporting Matrix A.

All investigators are responsible for assuring that studies are conducted according to the approved protocol. Principal investigators are responsible for the actions of sub-investigators and staff with regard to this approval.

Please note the PI’s name and the assigned IRB number, as indicated above, on any future communications with the IRB.

Direct all communications to the IRB c/o Research Protection Programs.

Thank you for your cooperation in LLU’s shared responsibility for the ethical use of human subject in research.

IRB Chair/Designee

Date

Loma Linda University Health holds FederalWide Assurance (FWA) No. 00006417 with the U.S. Office for Human Research Protections and the IRB registration no. #
456(C)000005205. This Assurance applies to the following: Loma Linda University, Loma Linda University Medical Center (including Loma Linda University Children’s Hospital), LLUMC East Campus Hospital, Loma Linda University Behavioral Medicine, and affiliated medical practices groups.

IRB Chair:
Trinika Looby, MD
Department of Neurology
(909) 558-4531 • looby@llu.edu • Pager #4550 for emergencies

Director
Amy L. Daley, MBA
Human Research Protection Program
Est 14661 • Fax #5577 • apsadmin@llu.edu

186
Dear Parent/Guardian,

My name is Se-Anne Chance and I am a Family Studies doctoral candidate in the School of Behavioral Health in the Department of Counseling and Family Science, at Loma Linda University, California. I would like to invite you to allow your child/children to participate in my doctoral study that will explore high risk behaviors from within the home and school systems. The questions will cover youth substance use, sexual behavior, criminal activity, gambling and mental health symptoms and risk and protective factors related to those behaviors. The purpose of this study is to examine how your child’s behaviors at school and at home may be related to school and family risk factors and how those behaviors impact his or her learning and social interactions with family members, classmates and teachers. The study will target students between the ages of 13 to 17 years from schools like the one your child currently attends. It is expected that about 1320 students will participate in this study.

The results of this study may not directly help your son or daughter today, but may benefit him or her in the long run by providing insights into the types of risk behaviors that commonly occur within the school to which your child attends so that the school can develop appropriate programs and services to assist you and your child accordingly. It will also benefit the Ministry of Education in collecting data that can be used to develop ways to help in reducing school violence and increasing student protective factors through the successful implementation of anti-bullying initiatives at the school your son or daughter attends. With your permission, I would like to ask your child to complete a survey. Your son or daughter will be asked to answer questions in a questionnaire. The questions should take approximately 50 minutes to complete and will take your child away from his or her regular class, however, classroom teachers will subsequently make up for loss of class and or teaching time. Your child will not have to answer any question he or she does not wish to answer and may stop answering questions at any time or choose not to submit his or her answers once he or she is finished.

Your child’s name will not be placed or written on the questionnaire. Instead, a code number will be used. The results from the surveys will be grouped together so that information from an individual survey cannot not be identified. The findings of the study will be used for academic publication and presented in an official report to the Ministry of Education to assist the Ministry in developing school-based programs and policies.
Participation is completely voluntary and non-participation in this study will not affect your child's grades or placement in any school programs. You and your child have the right to withdraw consent for your child's participation at any time without consequence. No compensation is offered for your child's participation. However, your child's participation will be much appreciated. A copy of the questionnaire will be made available at the principal's office for your inspection should you require additional information, and a summary of the findings will be made available at your request once the study is complete.

After reading this letter, please indicate whether you give your permission for your son or daughter to participate in the study. Kindly note, that because your son or daughter is being asked sensitive questions (e.g. if a family member has previously been imprisoned) that may pose greater than minimal risks to him or her, appropriate steps have been put in place for your son or daughter to receive appropriate support and or services should he or she experience emotional distress and or extreme discomfort that may require assistance. Thus, kindly note, that by granting your child permission, you are giving your child your consent for him or her to participate in the study, which will begin shortly in the upcoming weeks. Therefore, if you wish to grant your permission for your child to be involved in this study, please sign on the dotted line provided below.

If you have any questions, please do not hesitate to contact me by email at schance@llu.edu or by telephone at 4864412. Questions or concerns about your child's rights as a research participant may be directed to the Education Research and Evaluation Office, Ministry of Education, Level 14, St. Vincent Street, Port of Spain, or emailed to the Director of that unit at directorere@moe.edu.tt. Alternatively, you may also contact the LLUIRB office at (909) 558-4531 or 24987 Taylor St. Suite 202, Loma Linda, CA, 92350.

Thank you in advance for your kind consideration and support.

Sincerely,

[Signature]

Se-Anne Chance,  
Doctoral Candidate  
School of Behavioral Health  
Counseling and Family Science  
Loma Linda University

Loma Linda University Health  
Institutional Review Board  
Approved [Date]  
IRB No. [Number]

School of Behavioral Health  
Department of Counseling and Family Sciences | Loma Linda, California 92350  
(909) 558-4547 • fax (909) 558-0417 • www.llu.edu
Please read the above description, sign below and return if you **GIVE** your consent/permission for my child to participate in the study.

I have read the procedure described above. I give my consent/permission for my child, ______________________, to participate in this study. I have received a copy of this description.

*Please print clearly.*

Child's Name__________________________________________________________

Parent's/Guardian's Name______________________________________________

Parent's/Guardian's Signature___________________________________________

Date of Signature: ____________________________


School of Behavioral Health
Department of Counseling and Family Sciences | Loma Linda, California 92350
(909) 558-4547 • fax (909) 558-0417 • www.llu.edu
Re: Letter of Permission to Conduct Survey:

Dear Principal,

Please be informed that the Ministry of Education, has approved my dissertation research on Youth At-risk Behaviors within the School System in Trinidad and Tobago. As such, I graciously need your cooperation and permission to distribute my survey at your school to students between the ages of 13 to 17 years. Prior to administering the questionnaire, I will need to come to your school to speak to your students about the purpose of the study and to answer any questions they may have. At the end of the session a consent form will be sent home with students to return to me if they or their parents do not wish for them to take part in the survey.

On the day that the survey is administered, the researcher will meet with students in a designated private area to determine consent and assent. All students will be in the classroom during the survey administration, however, non-participating students will complete an alternate paper-based activity unrelated to the study. This is to help reduce any stigma that might arise based on those who participate and those who do not participate in the study. This is also done to maintain confidentiality while students are completing the survey. The survey should take about 50 minutes to complete. Upon completion of the surveys, I will collect them at the end of the class period. This should take about an hour of class time. I am willing to come to your school before, during, or after school hours, or anytime at your convenience to meet with you and answer any questions or concerns you may have concerning the study.

Alternatively, you may contact me at 868-486-4412 or through email at schance@llu.edu. Thank you for taking the time to read this letter and respond. In addition to this permission letter, I have attached an in-depth consent form for the eligible classes to take to their parents that will explain in greater detail the overall requirements of the study. I have also included the approval letter from the Ministry and a copy of the actual survey instrument.

Completion of the survey is strictly voluntary and all data gathered will be anonymous.
Sincerely,

[Signature]

Se-Anne Chance,
Doctoral Candidate
School of Behavioral Health
Counseling and Family Science
Loma Linda University
INITIAL CHILD ASSENT SCRIPT

Hello class. My name is Ms. Se-Anne Chance, and I am a Family Studies student in the School of Behavioral Health at Loma Linda University, California. I am trying to learn about how students like yourself feel about your own behaviors at school and at home and will ask you some sensitive questions about drug and alcohol use, how you feel about someone your age engaging in sexual behaviors, and your own and or your classmate's involvements in violent and or criminal behaviors. Because of the type of questions that will be asked on the questionnaire, you would be told not to write your names down, so that your identity will remain unknown to everyone, including anyone at school and even me the researcher.

Kindly note, that your participation is voluntary and you do not have to take part in my study if you do not want to. You may also withdraw at any time, if you see fit. However, if you do decide to participate in the study, and your parents' give their permission for you to participate in the study, you will complete a questionnaire that should take no more than 50 minutes to fill out. This study is not a part of your school work and will not be graded. There are no right or wrong answers. On survey day, even if your parent/guardian has given you permission, and you do not want to be in the study, the researcher will give you a different activity to work on for the duration of the class period that will be provided by your school. Everyone will be in the same class during the survey, so no one will know who is completing the survey or completing another student activity.

At the end of class today, you will be given a consent form for you and your parents to review which will provide information about this study. If you decide that you do not wish to participate in the study even if your parent has granted you permission, please return the signed parental consent form that will be sent home with you and indicate to me your unwillingness to be in the study and you will be excluded from completing the survey. Thank you kindly for taking the time out to listen to me. Best of luck to you and see you in a week's time!
Hello, My name is Ms. Se-Anne Chance, and I am a Family Studies student in the School of Behavioral Health at Loma Linda University, California. You may recall, I came to your class about a week ago to talk about my study in which I will be asking students like yourself questions about high-risk behaviors such as drug use, sex and violence. The survey should take about 50 minutes to complete. Also, this study is not a part of your school work and will not be graded. If you choose to participate in my study, you will complete a questionnaire that you will fill out and place in an envelope provided at the end of the class period by me the researcher. There are no right or wrong answers. You do not have to do this study if you don't want to and you can stop at any time. If you do not want to be in the study you will indicate this to me and I will give you a different activity to work on for the duration of the class period. First, I would like to collect the denial of permission slip to check to see if your parents declined to have you participate in the study. If your parents, did not send a denial, then you can also then disclose your decision concerning whether you either wish to fill out the questionnaire or complete the alternate activity.

Please note also, there is no direct benefit to you personally for participating in the study but your school will be able to improve its program and services for students in schools like yourself. You may however feel like some of the information you are being asked to provide may be of a personal or private nature. You do not have to answer any question you do not wish to answer and, no one will know your answers, not even me. Also, your name and identity will remain unknown so confidentiality should not be an issue. However, if at any time you feel emotionally distressed or uncomfortable and want to stop filling out the survey, kindly indicate this to me in private and I will see to it that a school counselor is made available to you at your request to provide you with appropriate support services.

In such instances, your privacy will continue to be protected from your classmates and teachers. If you have any questions or concerns, please indicate to me in private and I will do my best to have these questions or concerns addressed. Again, please be reminded that no one will get mad at you if you don't want to be in the study and whether you decide to participate or not, it will have no effect on your grades at school. Also, you will receive no compensation for your participation in this study, which will be voluntary. At this point, if you do not wish to participate in the study, you will indicate this to me at this time. After you receive separate assigned task based on your consent, and permission or lack thereof of your parents, you will be seated at pre-arranged desks to allow you more room-space for privacy in providing your responses. Once both separate activities are completed based on your selection, you will return to your regular class schedule and receive further instructions for the remainder of the school day from your classroom teachers. Best of luck to you and thank you so kindly for kind assistance and or cooperation!

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(909) 558-4547 • fax (909) 558-0417 • www.llu.edu

Loma Linda University Health
Institutional Review Board
Approved 10/25/18 Void After
IRB# 51702355

193
STUDENT REMINDERS (DEBRIEF)

Thank you for participating in either one of today’s exercises! Remember if for any reason any of you feel emotionally distressed and or experience overwhelming discomfort that may require counseling support, you may speak to a school/guidance counselor directly or if you prefer, you may contact your School’s Counseling Department at #___________ for appropriate support that is readily available. Alternatively, you may also visit your school’s social worker at his or her office to speak with him or her in person or may contact him or her at#___________ to discuss your immediate concerns/feelings so that appropriate assistance/services can be provided to you in a timely manner. Also, if you and or your parents may have any questions or concerns regarding the study, and will like to contact me directly you may email me at schance@llu.edu or alternatively you may contact me through telephone at 1868-488-4412 and I will do my utmost best to address those questions/concerns. Thank you so kindly for taking the time out to either engage in completing the survey or the alternative paper-based activity and all the best to you in your school life and I wish you success in your academic journey!