

Partnering with Parents to Promote High School Graduation:  
An Evidence-based Program Evaluation

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## Partnering with Parents to Promote High School Graduation: An Evidence-based Program Evaluation

### (Abstract)

**SIGNIFICANCE** Addressing the opportunity and achievement gaps in K-12 public education is a strategic focus-area to promote public health and improve health equity. Recent policy trends encourage the implementation of evidence-based practice (EBP) in schools to address the individual, family, school, and community risk factors associated with dropping out of school (Angelo et al., 2015; Massatt, 2015). Prevention programs, when implemented with fidelity and in a culturally responsive way, have the ability to improve academic outcomes for all students, and especially students who face significant barriers to learning. **PURPOSE** This program evaluation described the implementation and outcomes of Guiding Good Choices (GGC), an evidence-based parenting program. GGC was provided to Seattle parents as part of the Department of Education's (ED) 2010 High School Graduation Initiative (HSGI). **METHODS** From 2012-2015, seven facilitation teams provided GGC to 16 groups of parents across six racially and socially diverse urban middle schools. Pretest and posttest surveys measured parental knowledge, skills, and before and after the intervention. Implementation fidelity checklists monitored the degree to which GGC was implemented with fidelity. **ANALYSIS** Descriptive statistics described the characteristics of the study sample and the degree to which GGC was implemented with fidelity. Pretest and posttest surveys were analyzed with an *alpha of .05* to determine whether change occurred in the desired direction after exposure to GGC. **RESULTS** In total, 108 parents completed the both pretest and posttest surveys, resulting in a retention rate of 59%. Participant learning occurred in the desired direction for 19 of 21 survey item (91%) and was consistent across all three learning topics: Family Management, Substance Use Prevention, and Emotional Regulation. GGC was implemented with an average fidelity score of 7.6 on scale from 10. **IMPLICATIONS** This study described the successes and challenges of implementing a universal prevention programs targeted towards parents in a diverse urban school district. Two salient questions arise after the initial analysis of this study: (a) how do demographic features (such as race, gender, education level) influence outcomes of universal prevention programs? (b) what specific elements of implementation fidelity are linked to outcomes?

*“Today, education is a principal instrument in helping the child to adjust normally to their environment. It is doubtful that any child may reasonably be expected to succeed in life if they are denied the opportunity of an education. Such an opportunity, where the state has undertaken to provide it as a right which must be made available to all on equal terms.”*

*Brown v. Board of Education of Topeka (1954)*

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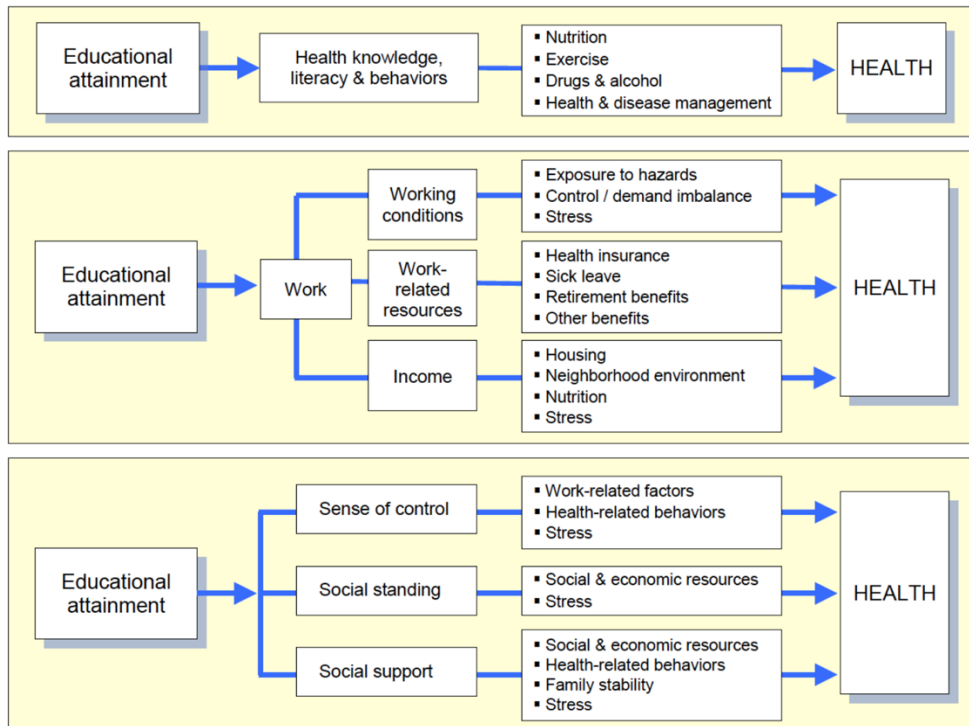
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# **INTRODUCTION**

## **Statement of the Problem**

High school graduation is an important educational attainment benchmark that is a pathway to improving the health of communities. The link between high school graduation and health has been extensively researched, and some suggest that educational attainment is one of the strongest predictors of health for the 323 million people living in the United States (Deaton, 2002; Cutler, 2006; Cutler & Lleras-Muney, 2006; Freudenberg, 2007). Not only does educational attainment increase the expectancy of someone's life, it increases their quality of life in tangible ways related to their employment, income, lifestyle, mental health, and sense of self (Egerter et al., 2008). Lansford and colleagues (2016) recently found that people who do not graduate high school, by the age of 27, are more than four times as likely to have been fired, incarcerated, on government assistance, diagnosed with a substance use disorder, and to report being in poorer health. The Robert Wood Johnson Foundation's Commission to Build a Healthier America outlines a framework for the link between education and health, through three interrelated pathways: "employment and income, health knowledge and behaviors, and social and psychological factors" (Egerter et al., 2008, p.5). These three pathways are illustrated Figure 1 and are briefly described in this introduction.

To start, literature suggests that education increases people's knowledge, skills, and behaviors that contribute to a healthy lifestyle and health literacy (Catalano and Hawkins, 1996). Health literacy is defined by the US Department of Health and Human Services as "the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions" (HHS, 2000, p.1). Health literacy gives individuals, families, and communities agency over making informed decisions about their health and is deeply influenced by the level of educational attainment. Kutner's study (2003) found that 49% of adults who did not have a high school diploma were below basic health literacy, compared to 15% of people with a high school



**Figure 1:** *Interrelated pathways through which educational attainment affects health.* Source: Egerter et al., 2008

diploma, and 3% of people with a bachelor’s degree. In addition, only 1% of people without a high school diploma were found to be “proficient” in health literacy (Kutner, 2003). This is significant since higher levels of health literacy are associated with better behavioral outcomes for both chronic disease prevention and management, such as attending appropriate medical visits, following through with treatment instructions, eating more fruits and vegetables, and exercising more (Egerter et al., 2008). There is also evidence of an association between higher levels of health literacy and increased responsiveness to health-promoting behaviors in public health interventions such as smoking cessation (de Walque, 2004).

Secondly, higher levels of education provide a pathway towards more stable employment, including jobs with higher wages, less occupational hazards, and better benefits

(Egerter et al., 2008). Only 41.3% of the working age population (16-64 years old) without high school diplomas are employed, compared to 54% of people with a high school diploma, and 72.6% of college graduates (BLS, 2016). This is significant, given the association between unemployment and poorer health (Wilkinson & Marmot, 2003). The median annual earnings for people aged over 25 without a high school diploma is \$25,636, compared to \$35,256 for people with a high school diploma, and \$59,124 for people with a bachelor's degree (BLS, 2015). From 1979 to 2010, the median weekly income dropped 31% for males without a high school degree, (BLS, 2015; Iceland, 2012, p.86). Researchers have clearly demonstrated that as a person's income level rises, so does their access to safe housing, healthy neighborhoods, and quality grocery markets - all associated with improved health (Davis-Kean, 2005). In addition, Cutler and Llera-Muney (2006) found that members of the workforce with less formal education are more likely to be exposed to occupational hazards and physically exhausting work that increase risk for workplace injury and fatality. Despite working in conditions that are more hazardous to their health, people with less education often receive less health-related benefits such as child care, paid sick leave, parental leave, and company sponsored health promotion programs (see RWJF, *Work and Health* 2008). Stanton (2004) also found that employers were less likely to provide healthcare to employees with less formal education.

Thirdly, psychological and social factors also contribute to education and health. Higher levels of education are associated with higher levels of social support, social standing, and sense of control: all of which have been empirically found to be associated with better health (Kawachi & Berkman, 2001). Kawachi and Berkman (2001) emphasize the links between social connectivity and an individual's capacity to cope with environmental stressors. "The social environment of a neighborhood affects the health of its residents. People need strong social networks to thrive. Such networks foster a sense of belonging and affirm culture and community" (p.30). Social ties and interpersonal relationships help an individual cope with stress. This is significant as Salleh (2008) concluded that untreated chronic stress can lead to

hypertension, cardiovascular disease, immune suppression, stomach ulcers, depression and a variety of other negative physical and mental health outcomes. In summary, educational attainment leads to improved environmental, occupational, and social conditions and these conditions are deeply linked to health.

### **Understanding the Achievement Gap in High School Graduation.**

In the 2013-14 academic school year, the Department of Education (ED) announced that high school graduation rates<sup>1</sup> are at an all-time high in the United States (82.3% (ED, 2015)). Despite this accomplishment, there is still cause for concern in K-12 education. Still, too many young people are not completing high school. Each year, nearly 1.3 million youth dropout of schools across the United States (APA, 2012). When compared to the other 28 Organization for Economic Cooperation and Development (OECD) member countries, the United States ranks in the lowest quartile for high school completion rates despite spending 39% more than the average OECD country (OECD, 2009). Shockingly, the United States is the only industrialized country where young people are less likely to graduate from high school than their parents (Egerter et al., 2008).

Not only are high school graduation rates in the United States relatively low when compared internationally, they are deeply linked a student's race. In 2001, only about two thirds of students from all races graduated on time, while only half of Native American, African American, and Latino students graduated on time (Orfield, 2004). This study used the five broad<sup>2</sup> racial categories defined by the Department of Education to report high school

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<sup>1</sup> This study used the adjusted cohort graduation rate (ACGR) to measure high school graduation. The Department of Education debuted the ACGR beginning in 2011 as a "more precise measurement" that calculates graduation rates as the percentage of 9th graders who complete high school, on time with a regular diploma, on a given school year (Stillwell, 2013).

<sup>2</sup> Contemporary racial groups are imperfect. They have the effect of homogenizing diverse groups of people and rendering other groups invisible. *Asian Americans Advancing Justice in Los Angeles* (2013) found that the Asian / Pacific Islander (API) racial group includes people who identify with 48 ethnic

graduation outcomes: African American or black, American Indian or Alaska Native, Asian American or Pacific Islander, European American<sup>3</sup> or white, and Latino or Hispanic. The parameters of each racial group are aggregated, taking into account both racial and ethnic group distinctions. Table 1 describes that while graduation rates from 2000 to 2014 have increased significantly for students of all racial groups, K-12 educational attainment is deeply linked to a student's race.

Racial Group	Graduation Rate by Year	
	2001	2014
All races	68.0%	82.3%
African American or black	50.2%	72.5%
American Indian or Alaska Native	51.1%	69.6%
Asian American or Pacific Islander	76.8%	89.4%
European American or white	74.9%	87.2%
Latino or Hispanic	53.2%	67.3%

**Table 1:** Graduation rates from 2001 to 2014 across racial groups

**Source:** Department of Education Common Core Data ED Facts Data Groups 695 and 696, School year 2013–14; September 4, 2015.

subgroups (ex. Filipino, Japanese, Chinese, Korean, Cambodian, Pakistani, Hawaiian, etc...) and speak over 300 languages. The groups found this problematic, as there are significant API group differentials, given their unique sociopolitical contexts. When comparing educational outcomes for adults 25 years and older in Seattle, 87% of Asian Americans were found to have a high school degree. However, there were significant intragroup differentials between Laotian (65%), Cambodian (68%), and Vietnamese (71%) ethnic subgroups and Indian (91%), Filipino (92%), and Japanese (96%) ethnic subgroups (AAAJ, 2013). These group differentials could be analyzed for each racial group.

<sup>3</sup> The term “European American” will be used in this study as an alternative to “Caucasian.” The term Caucasian differs from culture and generally applies to people from European, North and East African, and Western, South, and Central Asian descent (Coon, 1939; Painter 2003). This includes people who are not considered white and who do not experience white privilege, see *United States v. Bhagat Singh Thind* (Mukhopadhyay, 2008; Ford & Airhihenbuwa, 2010). Thus, the term European American is included to more clearly describe the social group as well as an attempt to challenge racial hierarchy associated with whiteness (Mukhopadhyay, 2008; Ford & Airhihenbuwa, 2010).

Applying these percentages to a randomly<sup>4</sup> assigned 9<sup>th</sup> grade class of 500 students, 412 students would be expected to graduate, including: 58 African American, 3 Native American, 22 Asian American, 222 European American, and 81 Latino students. However, 88 students would be left behind, including 22 African American, 2 Native American, 3 Asian American, 33 European American, and 39 Latino students. Of students who do not graduate high school, Latino students represent the largest total number and percentage of dropouts (44%), despite accounting for only 24% of the student population and 20% of the high school graduates in the United States (ED, 2016).

Racial disparities in educational achievement and opportunity exist in relation with other social disparities. For example, students are also less likely to graduate high school if they have a disability (63.1%), lower socioeconomic status (74.6%), or lower level of English proficiency (62.6%) (ED, 2015). LGBTQ youth also experience disparate treatment in schools and at home that inhibit their academic potential, though data for this social group is inadequate to analyze on a national level (Majd, 2009; Himmelstein, 2011; Snapp, 2015). Other social group disparities are interconnected and important areas that deserve immediate redress. However, because racial disparities are highlighted in this study, other social disparities are outside the scope of this literature review.

Though this study focused on high school graduation as a benchmark, racialized outcomes in education are prevalent across elementary, middle, and school school metrics in discipline, behavioral referrals, assignments to special education, and academic success (Quintana & Mahgoub, 2016; DeAngelo et al., 2015). Boykin and Noguera (2000) posit that the achievement gap in education is a reflection of the myriad of opportunity gaps which “are

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<sup>4</sup> In 2013, The Department of Education reported that the racial / ethnic composition of the roughly 50 million students in public elementary and secondary schools was 16% African American, 1% Native American, 6% Asian American / Pacific Islander, 51% European American, 24% Latino (ED, Common Core Data 2016).

perpetuated by two related aspects of inequality: inequities that are directly related to children's backgrounds and school practices that reinforce and often exacerbate inequity" (p.186).

The first aspect of the opportunity gap looks to class differences. Rumberger (2004) bluntly states "family, school, and community conditions for racial and ethnic minorities in the US are generally much worse than for white(s)" (p.46). There is an abundant amount of literature that explains the historical and contemporary barriers communities of color face while trying to advance their education and fulfill their families' basic economic needs. For example, the racial wealth gap is significant. The median family net worth for white families in the United States is \$134,230, which is 12 times more than black families (\$11,030) and nearly 10 times more than Latino families (\$13,730) (Urban Institute, 2013). Poverty rates in the United States also vary race. In 2011, the the federal poverty level was \$10,890 for individuals and the following percentages of people in each racial group were at or below the poverty level: African American (27.6%), Native American (29.5%), Asian American (12.3%), European American (9.8%) and Latino (25.3%) (Iceland, 2013). These socioeconomic differentials create significant barriers that inhibit young people from accessing educational opportunities.

The second approach to explaining the opportunity gap states that socioeconomics only paint part of the picture. Reardon (2016) looked at data from 2009-2013 and concluded that "even in places where white and black or white and Hispanic students come from families with the same socioeconomic characteristics, racial/ethnic achievement gaps are present, and substantial" (p.13). The sociocultural perspective includes socioeconomic stratification, but seeks to understand how members of marginalized groups interact differently with social institutions through systems of power and privilege (Iceland 2012). This includes both differential treatment within schools and differential responses by students towards educational norms (Quintana & Mahgoub, 2016). The sociocultural perspective draws upon the overwhelming evidence showing that families of color experience a disproportionate level of economic and environmental stress when compared to white families- both in school and

outside of school (Williams, 2011). For example, in addressing the myriad of educational barriers that undocumented Latino students face, Abrego and Gonzalez (2010) argue that educational policy which assumes all students have white privilege will continue to marginalize students of color. Clarke and colleagues (2012) outline several key issues emerge when successfully engaging with students and families from marginalized backgrounds in US schools: “(1) lack of language proficiency; (2) discrimination; (3) immigration status; (4) shortage of racially and culturally diverse providers; (5) cultural attitudes and values (p.766). Quintana and Mahgoub (2016) conclude “research has demonstrated that ethnic and racial bias translates into biased interactions between teacher and students and, importantly, that this differential treatment increases the racial disparities in academic achievement” (p.97).

### ***Racialization, Race, and Racism.***

John A. Powell's book *Racing to Justice* (2012) offers important insights into the interlocking achievement and opportunity gaps not only in education, but in health care, marriage, housing, and other social institutions. For Powell, race-based outcomes are imbedded within a particular historical context in which “a group's situation must be seen as a whole, including prior discrimination in education, housing, and health care, and the ways those earlier factors contribute to the problem at hand” (Powell, 2012, p.16). The full historical legacy of race, racism, and racialization in the United States is outside the scope of this study. However, it would be an oversight to fail to contextualize the sociopolitical history that has produced the racial achievement and opportunity gap in education.

The context for the contemporary achievement and opportunity gap in education is illuminated through Michelle Alexander's *The New Jim Crow: Mass Incarceration in the Age of Colorblindness* (2010). Alexander's historical analysis helps us understand the degree to which youth of color have and continue to be disenfranchised from the resources available in the United States. Alexander accounts for globalization, deindustrialization, free trade policies, historical segregation, historical records of income inequality, “get tough” crime laws, racially

biased “stop and frisk” law enforcement, differential treatment in drug sentencing, school discipline, and dropout rates. Alexander also argues that the loss of millions of manufacturing jobs in the United States has coincided with the proliferation of prisons which incarcerates 2.2 million young people a year, disproportionately youth of color, and especially black youth (Kim et al., 2010). She calls this the “school to prison” pipeline where students who are struggling to succeed in school get in trouble, are arrested and marked as a “criminals,” and later are expected to reintegrate into society without proper support. This reinforces the racialized cycle of poverty for families who are already economically stressed and are not seeing their youth graduate high school.

The evolving field of “implicit racial bias”<sup>5</sup> helps describe the accumulative effects of “structural racialization” on the human subconscious. Greenwald and Krieger (2006) found that implicit bias, inscribed in our subconscious, influences our ways of understanding, behaving, and interacting with others much more centrally than originally proposed by Freud. Insights into these psychological processes help explain human behavior and interactions. They also may help explain racial inequities in education (Quintana & Mahgoub, 2016). Further, racialized images in the media exacerbate negative racial stereotypes (Alexander, 2010). This may provide important implications for explaining why teachers may be perpetuating racialized power dynamics, without conscious awareness (powell, 2012). This could help explain explain “discipline gap” for students of color, especially black boys (Quintana & Mahgoub, 2016). powell uses a clear example to describe of this “vicious cycle” of racial oppression and perpetuation of racial stereotypes:

For example, in our society, many people associate African American men with crime- a cognitive associate. Currently African American men in the United States are several times more likely to go to prison than white men, a structural “verification” of that cycle. When such associations form in both mental and structural contexts, they reinforce one another, creating a vicious cycle. (p.22).

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<sup>5</sup> See <https://implicit.harvard.edu>

This key consideration to understanding implicit bias is the process of racialization, defined as “the set of practices, cultural norms, and institutional arrangements that both reflect and help to create and maintain race-based outcomes in society” (powell, 2012, p.4) He continues, “Because racialization is a set of historical and cultural processes, it does not have one particular meaning. Instead it describes conditions and norms that are constantly evolving and interacting with the sociopolitical environment, varying from location to location as well as through different periods of history” (powell, 2012, p.4).

The origins of racial groups may help explain the process of racialization in the United States. Racial groups, defined by skin color, did not become clearly defined until the 18th century, during the European colonization of the Americas (Calisher, 2007; DeGruy, 2005; Ford & Airhihenbuwa, 2010). Carl Von Linnaeus wrote *Systema Naturae* (1758), a scientific breakthrough in the classification of plants and animals through a new method called binomial nomenclature. In classifying humans by skin color, Linnaeus attributed personality, morality, and intelligence to four distinct racial groups: *europaeus*, *asiaticus*, *americanus*, and *africanus*. DeGruy (2005) points to this landmark “scientific” finding as the root of racial hierarchy, completely void of scientific evidence. For example, Linnaeus described homo europaeus (European Americans) as active, adventurous, acute, inventive, gentle and ruled by laws, while describing homo afer (African Americans) as phlegmatic, crafty, lazy, careless, sly, and ruled by caprice (Linnaeus, 1758). Native Americans and Asians were labeled with similarly stereotypical and disparaging descriptions. Ford & Airhihenbuwa (2010) state that “both Linnaeus’s concept of race and the subsequent racial groupings devalued and degraded those classified as non-European.” DeGruy (2005) goes further, by claiming that Linnaeus’ work was the “scientific” foundation for not only racial classification, but racial hierarchy and white supremacy. Critical race theorists have established that the racial groupings, as defined by Linnaeus, created “whiteness” and people who were perceived as not white were seen in the eyes of the law as “less than” and “other.”

Taking a historical perspective, the first wave of racial oppression in American education was marked by violence, exclusion, and cultural genocide (Young, 2009). During the 250 years of chattel slavery, black children were systematically denied access to education, literacy, and cultural ways of knowing (Young, 2009). In 1864, the United States Congress mandated the assimilation of Native American youth in boarding schools where a Bureau of Indian Affairs school officials infamously aimed to “kill the Indian to save the man.” Plessy v. Ferguson (1896) legalized *de jure* racial segregation, justifying that segregated public schools were “separate but equal,” despite reports from the 1930’s South displaying annual spending allocated to white students five times as much as funding allocated for black students. Further, instruction time was 20.5 percent less in black schools (Carruther & Wanamaker, 2016). Because of the glaring disparities in segregated schools, the Supreme Court unanimously recognized in *Brown v. Board of Education of Topeka* (1954) that racially segregated schools were inherently unequal and that every child has the right to equal access to education. Despite *Brown* declaring every student’s right to an equal opportunity in education and the considerable gains towards racial equality won after the lunch counter sit-ins, marches, bus boycotts, and legal battles of the civil rights movement, Powell (2012) concludes:

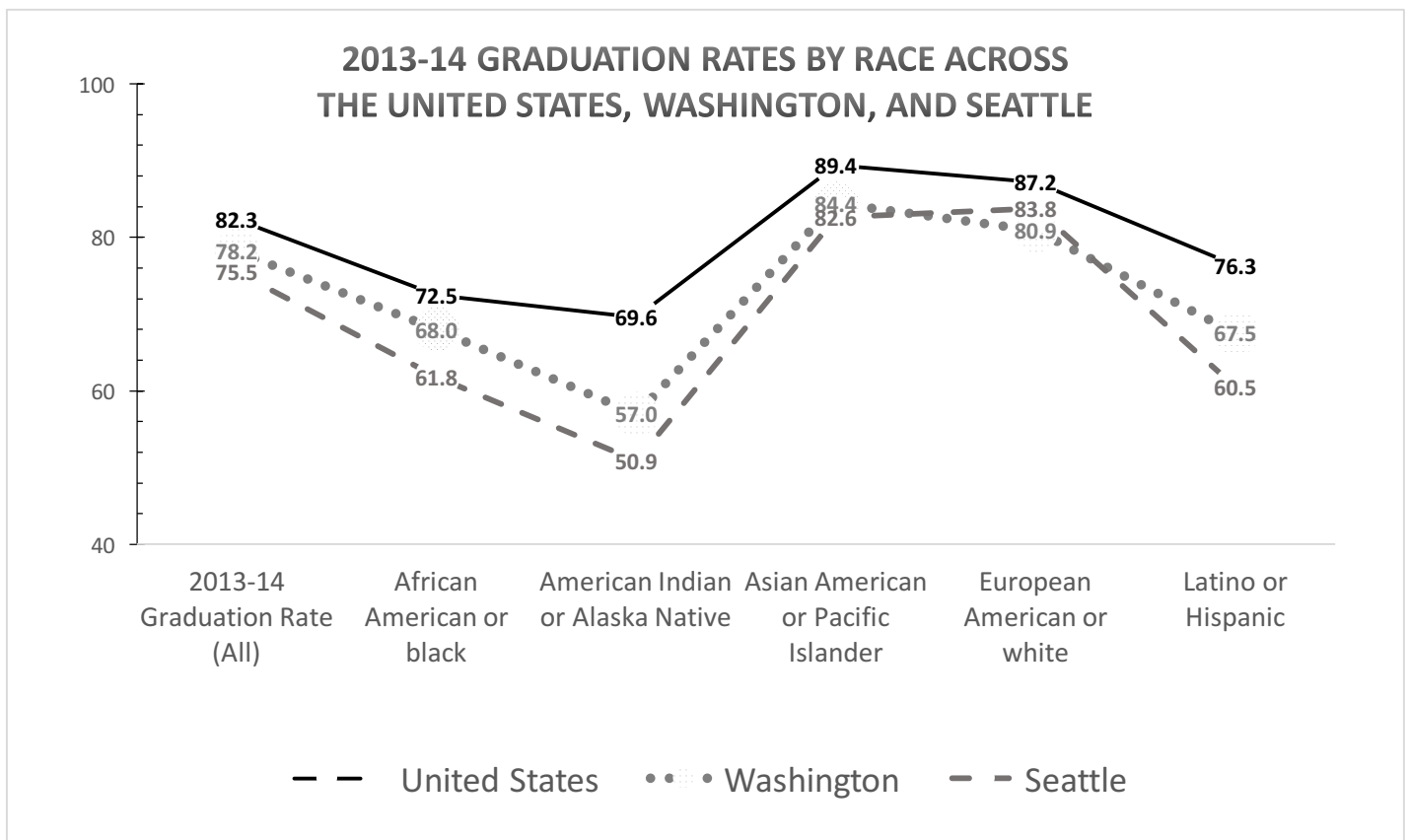
We continue to live in racially segregated neighborhoods, send our children to racially segregated schools, have transportation and health care systems that are highly racialized, and distribute future opportunity through racialized wealth, all with virtually no reference to race or racism. (p.149)

***Post Brown: Underfunded and Segregated in Seattle.***

Rothstein’s *The Racial Achievement Gap, Segregated Schools, and Segregated Neighborhoods- A Constitutional Insult* (2014) critiques the promise made in *Brown* for every child’s right to equal access and “opportunity to an education”. Rothstein and others have established that despite declaring an end to *de jure* segregation in education under *Brown*, racial segregation and discrimination remains prevalent today in housing, education, employment and other social arenas-(Rothstein, 2014; Williams, 2011). He continues,

“residential segregation’s causes are both known and knowable. Twentieth century federal, state, and local policies explicitly designed to separate the races and whose impacts endure today.” (p.2)

Addressing high school graduation outcomes in the Seattle Public Schools (SPS) is a particularly urgent public policy issue. Despite the gains won in *Brown* and the civil rights movement, Figure 2 illustrates the 2013-14 racial disparities in high school graduation rates in Seattle, Washington, and across the country. SPS graduation rates (75.5%) are lower than the State of Washington (78.2%), which are also below the national average (82.3%) (OSPI, 2015; ED, 2015). Further, racial disparities in Seattle graduation rates are exacerbated when compared to the national average. Graduation rates for students in the following racial groups



**Figure 2:** 2013-14 Graduation Rates by Race and Place

are: African American / black (61.3%), American Indian / Alaska Native (50.9%), Asian / Pacific Islander (82.6%), European American / white (83.8%), Hispanic /Latino (60.5%) (OSPI, 2015). The stratification across the city, state, and nation level is consistent across racial and social group comparisons. One exception is that Seattle has higher graduation rates than Washington State, but still not above the national averages, for white students and students who speak English as a second language.

Race-based graduation rates in Seattle are imbedded in a political context that underfunds public schools. The Washington State Supreme Court ruled against the State of Washington in the *McCleary Decision* (2012) for failing to meet its “paramount duty to make ample provision for the education of all children residing within its borders, without distinction or preference on account of race, color, caste, or sex.” The court’s assessment noted that the amount of funding allocated for public education by the State was less than the requirement outlined in the State Constitution. Despite being a relatively wealthy city, with a median income of \$91,898, neither the City of Seattle nor the State of Washington collects income tax to fund public schools (Census, 2010). The divestment from public education in Seattle may also be linked to the city’s high proportion of private school attendance (22%) and Washington state’s recent legalization of charter schools (Census, 2010).

Seattle’s underfunded schools are also situated in neighborhoods that have a history of segregation, desegregation, gentrification, and resegregation (powell, 2010; Massatt, 2015; Census, 2010). Seattle Public School demographer Natasha Rivers (2013) has accounted for historical demographic maps of Seattle that display the aforementioned trends in racialized Seattle’s neighborhoods, especially between the north and south side of the city. Williams (2011) describes segregation as a “central determinant of the creation and perpetuation of racial inequalities in America” (p.405).

Since segregated neighborhoods produce segregated schools, district-wide busing began in 1978 to intentionally integrate Seattle schools (Rothstein, 2014). However, the

Supreme Court decided in *Parents Involved in Community Schools v. Seattle Schools* (2007) that it was unconstitutional to assign students to schools based upon their race, regardless if the outcome was racial integration. The swing vote in a split decision came from Justice Kennedy who concluded that there was not enough evidence to prove that bussing to circumvent residential segregation was a necessity in Seattle:

[a] compelling interest exists in avoiding racial isolation, an interest that a school district, in its discretion and expertise, may choose to pursue... However, the government is not permitted to, absent a showing of necessity not made here, is to classify every student on the basis of race and to assign each of them to schools based on that classification.

*Parents Involved* (2007) ended the Seattle Public School's district wide busing policy. However, by failing to account for the historical legacy of redlining and other forms of racial segregation in Seattle, the Supreme Court's ruling had the effect of resegregating schools in Seattle (Massat, 2016). Thus, contemporary "colorblind" educational policy actually produces segregated schools and exacerbates racial inequity in education and health. This is an important consideration, given that race is a salient determinant in both health and educational attainment (Williams, 2011). The term "targeted universalism" used as a framework for understanding this approach to policy. This approach sees the benefit of creating systems that *universally* increase graduation rates, and *target* the most substantial barriers that disadvantaged students face in accessing a quality education.

Programs should be universal in goals, but unless they are targeted in approach, the goals of fairness and inclusion will falter- not just for the most marginalized blacks and the undocumented, but also for many other racialized and non-racialized groups, such as people in rural areas, people with disabilities, and the elderly (powell, 2012, p.12).

The process of dropping out of school, or disengaging from school, is complex. It occurs across multiple systems, multiple stakeholders, and is associated with a variety of interrelated risk and protective factors (Gleason & Dynarski, 2002, Freudenberg & Riglis 2007, Anderson et al., 2004; Orfield, 2004; Christenson & Thurlow, 2004; White & Kelly, 2010). The risk factors that lead to dropping out of school are replicated in Appendix 1 and are grouped in individual or family, neighborhood or community, and school system factors (Freudenberg & Riglis 2007). In

*Reframing School Dropout as a Public Health Issue*, Freudenberg and Riglis (2007) conclude “the multiple factors associated with dropout rates suggest that no single type of intervention can end our nation’s dropout crisis” (p.2). Despite the complexity, the APA notes that “fortunately, there is a growing and encouraging body of research for schools on how to prevent dropout by addressing problem behaviors, promoting academic success, and enhancing overall health and wellbeing for students.” Arthur and colleagues (2015) found academic achievement and test scores could be improved by implementing prevention programs that target empirically established risk and protective factors that are nonacademic.

This strategy coincides with the emerging approach to educational policy that is currently being implemented in Seattle schools: multi-tiered systems of support (MTSS). This call came from Superintendent Jose Banda who stated that “We believe high-quality instruction is key to our students’ success and is built on a rigorous and relevant curriculum that is aligned to standards, measurable outcomes, positive relationships, culturally responsive teaching, appropriate professional development and equitable access to education opportunities” (SPS, 2014). MTSS is a framework for approaching universal goals and targeted student populations. This approach recognizes that the same educational environment will not suit every student, and further, that every student is not coming into the classroom with the same life experience, learning preference, and educational need. Thus, MTSS is described as “a classroom and team-based approach in general education for identification, assessment, planning, and intervention with students who are at risk for academic failure. MTSS seeks to implement coordinated and tiered interventions depending on each individual school building’s needs, capacity, and priorities” (Massat, 2015). Prevention programs, such as GGC, interface with this approach to supporting the whole student through coordinated prevention efforts.

## Theoretical Framework for Intervention

This study draws upon several theoretical frameworks and then applies the *social development model* (SDM) to explain the rationale for addressing community risk and protective factors through the intervention (Catalano & Hawkins 1996). Finally, the strategies and interventions are outlined, along with implications for public health policy and practice.

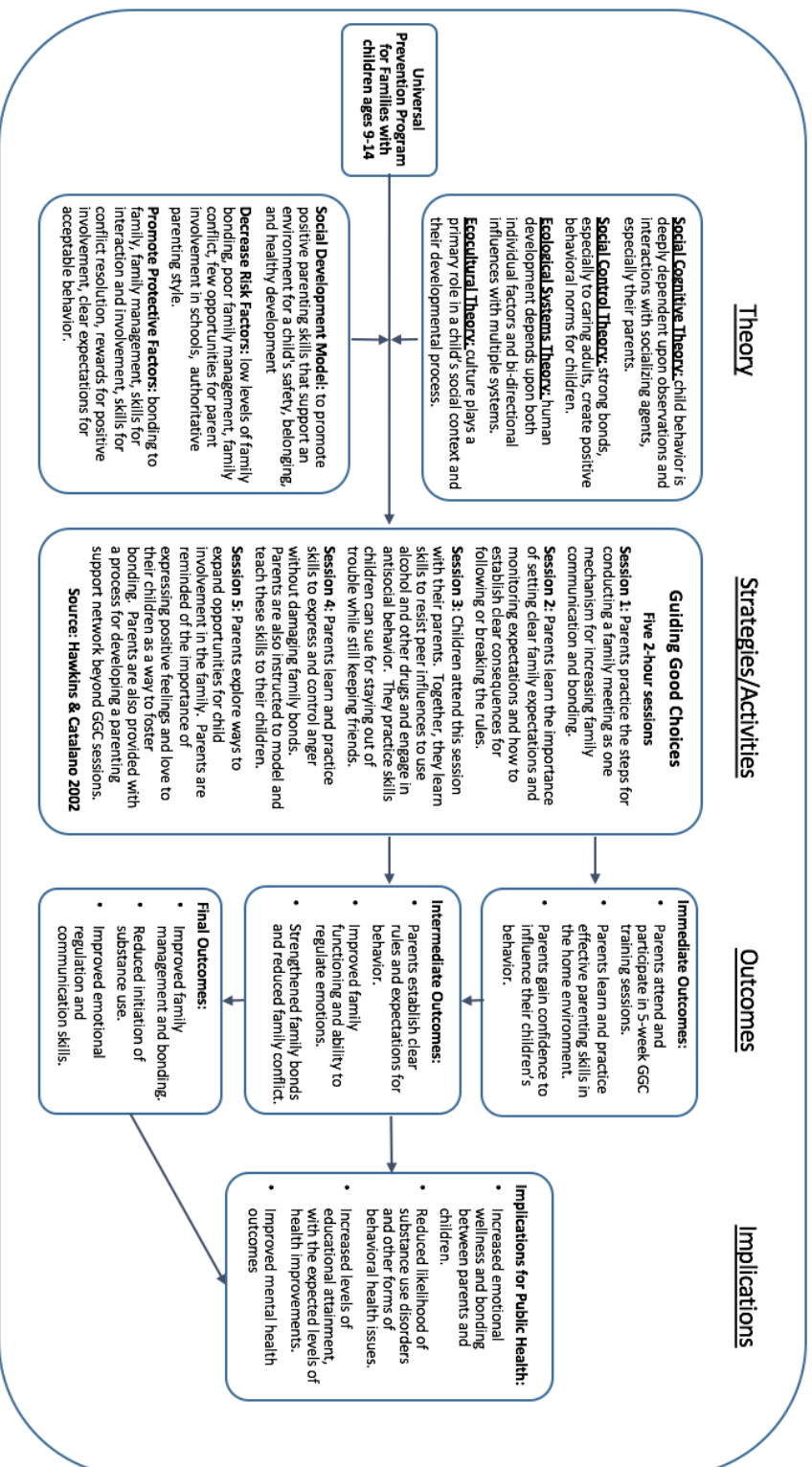
Since the risk and protective factors associated with healthy youth development have been illuminated through rigorous empirical evidence, prevention scientists seek to prevent behavioral health problems before they emerge. As Benjamin Franklin reflected, “an ounce of prevention is worth a pound of cure.” The SDM conceptualizes that a child’s behavior can be explained through a myriad of relationships with multiple social contexts. Relationships with family, friends, schools, communities, and other “socializing agents” can help explain a child’s behavioral adaptation (Choi et al., 2005). Both individual and environmental factors are considered as either protective or risk-related (Catalano & Hawkins 1996). Protective factors increase the likelihood of positive youth development, whereas risk factors increase the likelihood of antisocial behavior (Arthur, 2015).

Four theories help inform the SDM’s understanding of the developmental process of a child. **Social cognitive theory** explains the process in which a young person bonds to other people, and in particular, with their parents. A child’s behavior can be explained in relation to their social environment, through observing and interacting with others (Bandura, 1977). Through recognizing what behavior is valued or not valued, a child learns to behave cognitively. **Social control theory** derived from criminology, posits that establishing strong bonds, especially to caring adults, creates positive behavioral norms (Aloise-Young & Chavez 2002). These bonds and relationships then prevent the likelihood that a child will be harmed, experience adverse child experiences, feel isolated, and unable to cope. Strong family bonds have also been found to prevent the likelihood that a child will engage in antisocial, self-harm, or violent behavior (Mason et al., 2007). **Ecological systems theory** (Bronfenbrenner, 1979) that

suggests human development depends upon both individual factors (race, gender, class...) and “bi-directional influences” between microsystems, mesosystems, exosystems, macrosystems, and chronosystems. Thus connecting parents to schools and other community based organizations increases the multiple systems of support for young people (Massat, 2015). Another focus is the concept of “ecological transitions” where people take on roles through developmental stages (Bronfenbrenner, 1979, p.7). The key transition targeted in this model, is from middle to high school, where children are likely between of 9-14 years old. Ecocultural theory (Weisner, 1997) adds to this analysis by building upon ecological systems theory to emphasize the role that culture plays in relationship to a child’s social context and their developmental process. These cultural aspects include “shared beliefs, values, and practices related to childrearing, whereas ecological aspects of families’ lives are believed to reflect social, institutional, and material resources and constraint (Garner et al., 2014, p.167).

The SDM is rooted in this theoretical framework and states that healthy behaviors and relationships naturally arise when a child is given (a) opportunities to engage within the family; (b) opportunities to build skills for “participation, problem-solving, and positive interaction” with other family members; and (c) recognition from parents for appropriate and inappropriate behaviors (Mason et al., 2007). There is significant evidence finding that interventions grounded in the SDM help facilitate strong family connections, preventing problem behavior, and fostering academic success (Hawkins et al., 1992; Durlak, 1998; Catalano et al., 2004; Welsh, 2007; Arthur, 2015). Though the SDM accounts for a comprehensive list of community risk and protective factors, the GGC program most directly addresses: family management, substance use prevention, and emotional regulation. These categories are deeply interconnected (Van Wormer, 2011; Mate, 2007) and linked to both academic achievement and health. This conceptual model is illustrated in Figure 3.

## Conceptual Model



**Figure 3: Conceptual Model for Study**

## **Family Management.**

Parson's research (1948) established that parents and other adult caregivers create the primary institution to facilitate or impede their life chances. Chamberlain and colleagues (1998) built upon this foundation and found that partnering with parents or adult caregivers is a viable intervention strategy to support some of the most marginalized and at-risk students succeed in school. These findings have been replicated across multiple academic fields, finding that parent, family, and community involvement increase academic achievement reduce the risk of dropout prevention (APA, 2008; Balfanz & Legters, 2004; Toldson, 2008; ED, 2006). There is a growing body of interventions aiming to meaningfully increase student and family engagement with schools (Anderson et al., 2004; Catalano et al., 2003, Christenson & Thurlow, 2004). Schargel and Smink (2001) emphasize the importance of partnering with parents to support student success:

The most accurate predictor of a student's achievement in school is the extent to which that student's family is able to (1) create a home environment that encourages learning; (2) communicate high, yet reasonable, expectations for their children's achievement and future careers; and (3) become involved in their children's education at school and in the community (p. 52-54).

Parent involvement and skill-building programs improve academic outcomes for parents of diverse backgrounds (Jeynes, 2012). However, parenting practices differ from culture to culture. Cultural competence or cultural responsive practice for parenting interventions has emerged from the recognition that "the language, values, customs, child-rearing traditions, expectancies for child and parent behavior, and distinctive stressors and resources associated with different cultural groups" (Weisz et al., 1998, p. 70). Culturally responsive practice both acknowledges this reality and responds to address needs of people in ways that are meaningful and appropriate (Walters, 2000). The ability to acknowledge group differences is balanced by the reality that "diversity exists within diversity" (Walters, 2000, p.414). Walters continues to describe that though parents may be of a particular racial or ethnic group, "they can be different

with respect to nationality, socioeconomic status, gender status ability status, sexual orientation, and religious or spiritual practice” (Walters, 2000, p.414). Despite these complexities, prevention scientists have found that “it is critical that children’s social emotional competence be viewed in light of not only the sociocultural demands of the dominant culture but also the sociocultural expectations of their families” (Garner et al., 2014, p.168). These complexities have emerged as both challenges and opportunities (Choi, 2005). There are limitless cultural expressions of effective parenting, yet every family’s goal is to create an environment of safety, belonging, and appropriate communication for their child (Massat, 2015).

A parent’s level of educational attainment is also linked to their child’s health and development (Egerter et al., 2009). As mentioned in the introduction, higher levels of education are associated with higher levels of health and wellness. This has an intergenerational effect for parents and children, as parents with better health have healthier children (Egerter et al., 2009). This trend is unsettling given the limited opportunities for economic mobility in the United States, where the lowest waged workers have the most difficult time moving up in class, while their children attend underfunded schools (Iceland, 2013). This dynamic may help explain why students whose parents graduated college were more than 6 times as likely to graduate from college, when compared to student’s whose parents did not graduate from high school (Snyder, 2007).

### **Substance Use Prevention.**

Substance use disorders have been linked with negative outcomes in mental, physical, and social health (Van Wormer, 2011). Early initiation of use has been found as a pronounced risk factor associated with increased likelihood of being diagnosed with a substance use disorder later in life (Grant and Dawson, 1998). White and colleagues (2006) also found that increasing family protective factors helps support emerging adults from not using drugs in alcohol as they transition out of high school. This creates an important challenge in public health, as substance use is associated with difficulties regulating emotions, controlling impulses,

and maintaining relationships with family, friends, and colleagues (Bacio, 2015). An opportunity exists with interventions that partner with parents to prevent young people from initiating substance use at an early age (Kosterman et al., 1997; Spoth et al., 2001; Dishion, et al., 2002; Bacio, 2015). However, some studies have shown that access to substance use prevention and treatment services is limited (Terry-McElrath et al., 2003).

Townsend and colleagues (2007) conducted a systematic review of peer reviewed literature in the United States<sup>6</sup> from 1990 to 2006 to understand the link between substance use and high school completion. They accounted for the plethora of studies linking the risk of dropping out with alcohol use, cannabis use, other illicit drug use and the “unique effect of cigarette use” on dropout (Fagan & Pabon 1990; Eggert & Herting 1993, Flisher & Chalton 1995; Wang et al. 1998; Zimmerman & Maton 1992, Aloise-Young et al. 2002). However, Townsend and colleagues (2007) found significant limitations to their review of the literature, stating “the possibility exists that not all potential confounders were included in their analyses. It is entirely possible that as yet undetected confounders may exist” (p.313).

To further understand the association between substance use and educational attainment, Grant and colleagues (2012) conducted a co-twin control analysis with 6,242 Vietnam era veteran male twins to test whether substance use was associated with lifetime educational attainment levels, after controlling for familial background characteristics. They found a potentially causal relationship and a clear association between early alcohol use, alcohol dependence, and daily nicotine use measures with decreased educational attainment (Grant et al., 2012). Grant and colleagues (2012) were surprised to find no association between educational attainment and nicotine dependence, illicit drug dependence, multiple cannabis measures. Overall, their study was limited by an almost all white, veteran, middle aged male sample. Further, the marker for educational attainment was an undergraduate degree, rather

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<sup>6</sup> One article originated from South Africa.

than high school. However, this study produced important literature by controlling for potential confounding variables that may influence the relationship between substance use and educational attainment.

### **Emotional Regulation.**

Recent literature has established that nonacademic factors, such as helping youth regulate their emotions, are not only an effective strategy to promote health and wellness, but to increase their educational outcomes (Durlak et al., 2011, Brackett et al., 2012). “Mental health is a critical component of children’s learning and general health. Fostering social and emotional health in children as a part of healthy child development must therefore be a national priority” (U. S. Public Health Service, 2000, p. 3). Durlak, Brackett, and colleague are on the forefront of centering social and emotional learning (SEL) in American classrooms through the *RULER (Recognizing, Understanding, Labeling, Expressing, Regulating emotions)* program. The strategy is to equip youth with social-emotional competencies that support their relationships with their peers, parents, school, and community. That connection then increases their engagement in school and thus their levels of academic achievement (Durlak et al., 2011, Brackett et al., 2012). On the other side, failure to achieve competence in SEL can lead to psychological, social, and academic problems (Eisenberg, 2006; Guerra & Bradshaw, 2008). A recent study found similar parallels for students in higher education, as “emotional distress /depression” was the most commonly cited reason for students who dropped out of college at the University of Washington in 2014 (Beyer et al., 2014).

Literature also suggests that another viable pathway towards enhancing the emotional intelligence of students is through parenting interventions (Durlak et al., 2011). Sometimes these parenting interventions are coordinated with universal prevention programs provided to students in school, to build a common framework for both parents and students (Durlak et al., 2011). The logic behind this approach is that the family system is central to a child’s emotional development and that parents must be meaningfully involved in their child’s development. For

parents, coping with anger is an important intervention area, given the poor outcomes associated with authoritative parenting and harsh discipline such as inhibiting a child's ability to cope, trust, and establish secure attachments (Catalano and Hawkins, 1996; Gordon, 2003; Bailey et al., 2009). Further, the literature suggests that authoritarian parenting practices are intergenerational (Conger and colleagues, 2003; Bailey et al., 2009). Thus, supporting parents with skills to regulate their emotional will not only benefit their children's well being today, but will help influence the parenting practices of tomorrow.

Early childhood experiences within families determine the developmental trajectory of children and help explain behavioral adaptations later in life (Garner et al., 2011). This has implications for both mental and physical health and demonstrates the interconnectedness between the three aforementioned learning domains (Van Wormer, 2011). An emerging field of trauma-informed care has illuminated prevalence and negative outcomes associated with adverse childhood experiences (such as exposure to toxic stress). Trauma informed care is a strengths-based approach "that is grounded in an understanding of and responsiveness to the impact of trauma, that emphasizes physical, psychological, and emotional safety for both providers and survivors, and that creates opportunities for survivors to rebuild a sense of control and empowerment" (Hopper et al., 2010, p.82). Garner and colleagues (2011) emphasize the importance of early childhood experience and conclude that "prevention of long-term, adverse consequences is best achieved by the buffering protection afforded by stable, responsive relationships that help children develop a sense of safety" (p.225).

### **Evidence-based Practice: Balancing Fidelity and Fit**

Given the scarcity of public funding to effectively address urgent community needs, there has been an increasing trend of evidence-based practice (EBP) and evidence-informed policy (Fixsen et al 2005, Angelo et al., 2015). Barrera and Castro (2006) outline a current tension in EBP, "involving two competing aims: (a) to develop universal prevention interventions and

implement them with fidelity and (b) to design prevention interventions that are responsive to the cultural needs of a local community.”

EBP's began in the field of medicine in order to equip physicians with the most current empirical research to best serve their patients, rather than making decisions based upon their own intuition (Gambril, 2001). EBP's quickly spread to multiple fields, including education, social work, and psychology. EBP is defined as “the conscientious, explicit and judicious use of current best evidence in making decisions about the care of the individual. It means integrating individual clinical expertise with the best available external clinical evidence from systematic research” (Sackett, 1996). The rationale for implementing programs that are proven to work is best illustrated in Dishion's article *When Interventions Harm* (1999). After group treatment for youth experiencing both depression and antisocial behavior, Dishion observed iatrogenic effects, or undesired treatment outcomes, after this peer-group intervention. The learning is key: sometimes interventions can harm. The process for developing evidence-based universal prevention programs must be done through rigorous academic research and by randomized control trials that determine both the cost and effect size (Wandersman, 2003).

Over time and across multiple communities, the next set of challenges is to implement the EBP within a variety of real-world contexts, while maintaining fidelity to the model that the core elements in which the program was proven effective (Durlak, 2008). This need was highlighted when Weisz and colleagues (1995) reported that effects of an intervention in a community-based setting were much different than the effects when observed in the control trials. There has been extensive research indicating the procedures, conditions, and partnerships that are essential for successful program implementation (Wandersman, Fixen, Durlak). In Durlak's (2008) systematic review of the literature, over 500 studies confirmed that there is “strong support for the premise that effective implementation is associated with better outcomes” (p.340). They summarized 23 contextual factors related to the interventions, components of the prevention support system, the prevention delivery system, and key

stakeholders in communities. Key components are positive working climates, shared decision making, community participation, adequate funding, coordination and support, administrative support, and monitoring of outcomes (Durlak, 2008)

The “most provocative finding” of Durlak’s (2008) review of best practices in the field was the challenge to ensure that EBP’s are relevant and responsive to the cultural strengths, needs, and preferences of the community that they are being provided to (p. 341). Miranda and colleagues (2005) conducted a systematic review of peer reviewed research and found that EBP’s may generalize to multiple racial groups (Miranda et al., 2005). Examining the efficacy of evidence-based psychosocial treatments, such as such as cognitive behavioral therapy, parent management training, and multisystem therapy, Miranda (2005) concluded:

“that the impact of evidence-based mental health care on ethnic minorities found a growing literature that supports the effectiveness of this care for ethnic minorities. The largest and most rigorous literature available clearly demonstrates that evidence-based care for depression improves outcomes for African Americans and Latinos, and that results are equal to or greater than for white Americans. Much fewer data are available for Asian populations, but the literature that is available suggests that established psychosocial care may well be effective for this population, (p. 133)

Aisenberg (2008) critiqued Miranda’s “optimistic” study, citing clear facts that display the “exclusion and homogenization of racial and ethnic minority populations” in mental health research (p.299). Aisenberg illustrates that from 1986-1994, the science base used to legitimize the effectiveness of treatments for four main mental health disorders (depression, bipolar disorder, schizophrenia, and attention-deficit/hyperactivity disorder) was established on almost an entirely European American / white population. Aisenberg cites the U.S. Department of Health and Human Services HHS report, *Mental Health: Culture, Race, and Ethnicity. A Supplement to Mental Health: A Report of the Surgeon General* (2001) detailing that of nearly 10,000 RCT participants, only 561 African Americans, 99 Latinos, 11 Asian Americans/Pacific Islanders, and 0 American Indians/Alaska Natives were included in the analysis (Aisenberg, 2008). Further, the study failed to collect racial identification for over half the study sample

(Aisenberg, 2008). These findings highlight the extent to which people of color were left out of the process to determine what EBP's were proven effective. Kirmayer (2012) agrees with this grave overrepresentation of white people and underrepresentation of people of color from the evidence-base: "in the case of cultural diversity, the extant research literature does not represent the diversity of the population in the U.S. or elsewhere (p.250).

Castro and colleagues (2006) articulate the dynamic of a "cultural mismatch" in EBP prevention programs: when the group in which the intervention was determined effective, differs in meaningful ways from the group who is exposed to the intervention in the real world. One simple example proves this point. If an evidence-based parenting program is implemented in language A. Then this intervention is provided to a group of parents that only speak language B, there will likely be no effect from the intervention. At the same time, if the intervention is provided in a substantially different way that ignores the core components, it may be ineffective (Durlak, 2013). Barrera and Castro (2006) illustrate that sources of cultural mismatches can occur across three domains: (a) group characteristics (such as gender, race, language, ethnicity, class), (b) program provider characteristics (type of staff, provider cultural identity and cultural connectedness to participants), or structural/organizational characteristics (community readiness and level of collaboration). In cases of cultural mismatch, Lau (2006) raises important concerns regarding the generalizability of universal prevention programs provided to social groups situated differently in regards to race, immigration, class, and other intersecting identities: "A lack of generalization might be characterized by inequity in clinical outcomes when the EBP is administered with fidelity and at the optimal dose. Alternately, generalization may fail when there is differential engagement of ethnic groups such that it becomes difficult to deliver what would otherwise be an effective dose of the EBP" (p.296).

## Research Questions

- **Research Question #1:** To what degree was GGC provided to Seattle parents with fidelity to the model?
- **Research Question #2:** Who participated in GGC and what was the retention rate of parents who completed a pretest survey?
- **Research Question #3:** After exposure to the intervention, did learning occur? Was this learning statistically significant?

# **METHODS**

## Overview of Intervention

Guiding Good Choices (GGC), originally titled Preparing for the Drug Free Years, is a universal parenting program targeted for parents with children ages 9-14 (Hawkins & Catalano, 2002). Drawing from the social development model, Haggerty (1999) outlines GGC's core assumption: "that parents can protect their children by offering them opportunities for involvement within the family, teaching them skills for success, recognizing and rewarding their involvement, and communicating clear family norms for appropriate behavior" (p.4). The program was developed with parents in Seattle during the 1980's as part of the Seattle Social Development Project. The main driver to develop GGC came out of increasing trends towards drug and alcohol use in the 1980's and a community desire for programs that equip parents with skills to help their children stay safe and healthy in light of health risks associated with drug and alcohol use (Haggerty, 1999). The program was officially developed in 1987 and field tested for several years in 10 Seattle public schools where 52 percent of the students were students of color and 48 percent of students came from low-income families (Haggerty, 1999). The program increased its reach and notoriety in 1988 when it was used in the "Getting to No" project with the local King 5 news TV station across Western Washington.

The program length is intentionally short, as parents meet for weekly 2-hour sessions over a 5-week period. This length makes it easier for parents to attend all sessions, compared to a lengthier program with more sessions. Each GGC session covers specific topics as follows:

- *Session 1: Getting Started: How to Prevent Drug Use in Your Family;*
- *Session 2: Setting Guidelines: How to Develop Health Beliefs and Clear Expectations;*
- *Session 3: Avoiding Trouble: How to Say No to Drugs;*
- *Session 4: Managing Conflict: How to Control and Express Anger Constructively;*
- *Session 5: Involving Everyone: How to Strengthen Family Bonds*

The GGC program introduces a framework to help parents develop effective family management practices, particularly regarding substance use issues, to enhance family cohesion and relationships (Hawkins & Catalano, 2002). Parents participate through discussions, videos, role plays, and family activities. Children join parents during one session to practice emotional regulation skills with their parents. Researchers have found in 2 efficacy trials that parents and families who participate in the GGC program have more favorable outcomes related to social, emotional, behavioral, and physical health, and that have been shown to be sustained for 6 years following intervention. (Kosterman et al., 1997; Spoth et al., 1998; Reuter et al., 1999; Park et al., 2000; Mason et al., 2007).

### **Study Purpose and Design**

Previous studies have established the efficacy of Guiding Good Choices (GGC) in improving interpersonal family relationships (Kosterman et al., 1997), delaying alcohol and tobacco use (Spoth et al., 2001), reducing depressive symptoms (Mason et al., 2007), and reducing various measures of negative behavior (Mason et al., 2007). This program evaluation addresses an important gap in the field of implementation science: program monitoring and continuous quality improvement (Meyers et al., 2012). This study examined lessons learned from practice, offering contemporary feedback, and the potential to improve future applications of a program that is nearly 30 years old. Simply put, the primary question in this study is one of the least studied in field of implementation science: “What have these efforts taught us about quality implementation?” (Meyers et al., 2012, p.471).

Specifically, this study described the level of implementation fidelity, the reach, and the effectiveness of GGC. Both the process and outcomes are important components of program evaluations (Durlak, 2008) and were assessed in this study. The data collection instruments used in this study were (a) implementation fidelity checklists for assessing processes and (b) pretest and posttest surveys for assessing outcomes. This program evaluation was conducted using a pretest-posttest design, as a control group was not available to monitor the

implementation of GGC. The design's purpose addressed three research questions: (1) was program implementation high quality, (2) who were the parents who participated in GGC, and (3) to what degree did parental knowledge, attitudes, and behaviors change from pretest to posttest.

### **Study Setting**

The Department of Education funded GGC, amongst other prevention programs, as part of the 5-year High School Graduation Initiative (HSGI) grant that funded 29 local or state educational agencies across the country to “support effective, sustainable, and coordinated dropout prevention and reentry programs in high schools with annual dropout rates that exceeded their state average annual dropout rate” (ED, 2010, p.1). The strategy to fulfill the HSGI grant in Seattle was to (a) identify the schools with the lowest rates of graduation from the Office of Superintendent of Public Instruction of Washington (OSPI), (b) identify the individualized risk and protective factors for each high school and “feeder” middle school from the 2010 Healthy Youth Survey administered by the Seattle Public Schools, (c) match appropriate evidence-based prevention programs with community needs and capacity, (d) provide quality evidence-based prevention programs to targeted students, families, and communities, and (e) monitor and evaluate program outcomes (Arthur, 2016). The GGC parenting program was selected along with eight other prevention programs, as part as a comprehensive prevention strategy to promote high school graduation in the SPS. Participating schools selected specific prevention programs tailored to their profiles of risk, as well as school capacity for implementing the programs.

### **Sampling Method and Participants**

Parents with children ages 9-14 in the targeted HSGI schools were invited to participate in GGC groups. Specifically, parents were recruited by flyers circulated in schools and to community based organizations. From 2012-2015, GGC was provided to 16 different groups of parents (i.e., 16 cycles), across six Seattle public middle schools. In total, 207 parents

participated. Parents were included in the study if they had (a) a child in targeted age range, (b) attended either the first or last session, and (c) completed either a pretest or a posttest or both.

This research design took several steps to protect the human subjects included in this study sample. First, this study used existing data from Kuklinski and colleagues' (2015) evaluation of the HSGI grant. All procedures used in this evaluation were previously approved by the University of Washington's Institutional Review Board. Participants were also informed about the purpose of the study and the evaluation before providing consent to participate. Members of the prevention delivery team assigned each parent a numerical code so that individual identifying information was not included on any parent survey. Parents used the same code on pretests and posttests so that their surveys could be matched when determining both the longitudinal and study sample.

## **Measures**

The framework for evaluating implementation fidelity in this study draws from Fagan and colleagues (2008) approach to monitoring prevention programs. Each of the 16 GGC "cycles" was evaluated based on its adherence to program content, level of dosage, level participant involvement, and quality of delivery. Adherence (2 items) refers to the degree to which the core components, content, and objectives of GGC were covered. Dosage (3 items) refers to the required number, length, and frequency of sessions determined necessary to have an effect on parents taking the programs. Participant Involvement (3 items) refers to the degree to which parents were actively engaged in the GGC sessions. Quality of Delivery (5 items) refers to the overall quality of program organization, facilitation, and balance of teaching techniques. This framework was also applied to the evaluation of prevention programs provided in Seattle via the HSGI grant, including GGC. Appendix 4 describes the methodology that Kuklinski and colleagues (2015) generated and to evaluate implementation fidelity. This methodology evaluates programs on a scale of 1-10, depending on the degree to which each criterion of the four domains (adherence, dosage, participant involvement, quality of delivery) was met.

The second instrument used in this study was the 24-item GGC survey<sup>7</sup>. It included 3 demographic questions containing several demographic items (gender, race, and education level) and 21 Likert scale questions measuring three interconnected dimensions of parenting behavior that have been shown to prevent substance use in adolescents: parent management (7 items), substance use prevention (7 items), and emotion regulation (7 items) (Hawkins and Catalano, 1999). All items on the survey, except for one question measuring family meeting times (yes/no), were evaluated on a 7-point Likert scale. The Likert scale questions were coded as Strongly Agree (1), Agree (2), Tend to Agree (3), Neutral (4), Tend to Disagree (5), Disagree (6), and Strongly Disagree (7). This survey provided data for addressing research questions 2 and 3 (who were the parent participants and to what degree did parental knowledge, attitudes, and behaviors change from pretest to posttest).

Parents self reported demographic data on the GGC survey presented in Appendix 3. Parents were asked to identify their race/ethnicity “White, not of Hispanic origin; Black or African; American Indian / Alaska Native, Eskimo or Aleut; Spanish/Hispanic /Latino; Asian or Pacific Islander, and Other (Please specify)” and highest level of education “Completed grade school or less, Some high school, Completed high school, Some college, Completed college, Graduate or professional school after college.” Options for gender were “Male” and “Female”

The *Family Management* topic consisted of 7 items. All questions except for those about family meetings (either a yes or no) were based on a 7-point Likert scale ranging from 1-Strongly Disagree to 7-Strongly Agree. The questions, along with the desired answer in

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<sup>7</sup> The GGC survey originally contained 40 items and was shorted to 24 items. Program providers made this recommendation after the first year of implementation, because many participants had somewhat limited knowledge of English and there were issues with taking too much time to administer the survey. The items selected covered a wide range of topics from the curriculum. Omitted items tended to be more difficult for non-native speakers to read and/or understand or were addressed adequately by the items included in the 21 selected questions. Either surveys were translated beforehand, or a translator was available to help participants with the surveys. Analyses assessed whether changes occurred in the desired direction after program exposure.

parentheses, are as follows: (1) *Have you ever had family meetings? (Yes)*. (2) *Young people do what their friends do, and there's not much parents can do about it (Disagree)*. (3) *Children should be involved in deciding what the family rules will be (Agree)*. (4) *Family meetings are a waste of time (Disagree)*. (5) *Good family management reduces the risk of drug use (Agree)*. (6) *Parents should identify positive consequences for following rules as well as negative consequences for breaking the rules (Agree)*. (7) *The only way to get your children to do family tasks is to lay down the law (Disagree)*.

The *Substance Use Prevention* topic consisted of 7 items, all based on a 7-point Likert scale ranging from 1- Strongly Disagree to 7-Strongly Agree. The questions, along with the desired answer in parentheses, are as follows: (1) *Part of learning to say "no" to drugs is to suggest something different to do with friends (Agree)*. (2) *Developing a family position on drugs encourages children to test and break the rules (Disagree)*. (3) *Children who are bonded to their families are less likely to use drugs (Agree)*. (4) *The best way to prevent drug use is for parents to simply lay down the law to their children (Disagree)*. (5) *Before parents can develop a clear family position on drug use they must be clear about their own views (Agree)*. (6) *Parents can reduce the chance their children will begin using drugs (Agree)*. (7) *Young people who refuse to try alcohol or other drugs should be prepared to lose popularity (Disagree)*.

The *Emotional Regulation* topic consisted of 7 items, all based on a 7-point Likert scale ranging from 1- Strongly Disagree to 7-Strongly Agree. The questions, along with the desired answer in parentheses, are as follows: (1) *Telling your children you love them only embarrasses them (Disagree)*. (2) *Children know when their parents are pleased with them so parents don't need to say so directly (Disagree)*. (3) *When parents are angry with their children, they should keep the specific reasons for their anger to themselves (Disagree)*. (4) *Children can tell what their parents think about the use of alcohol and other drugs even if their parents do not say so directly (Disagree)*. (5) *Asking your children to do chores only increases their resentment (Disagree)*. (6) *Yelling at children when you're angry with them gets the best results (Disagree)*.

*(7) When you are angry with your child, it is always best to tell him or her immediately (Disagree).*

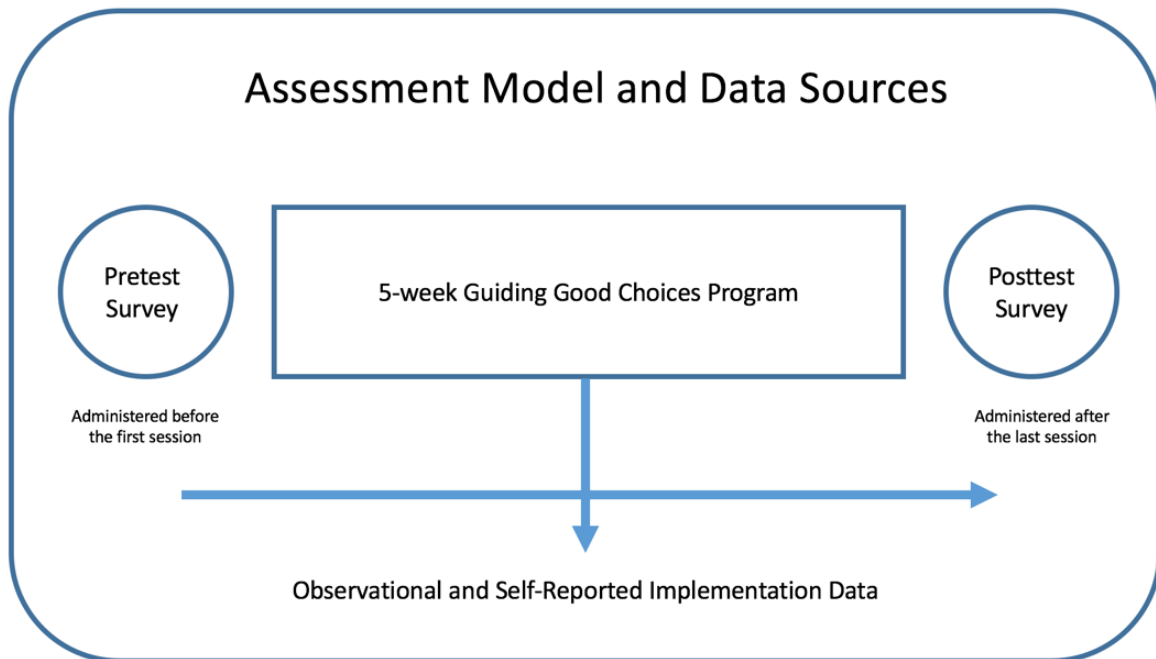
### **Study Procedures**

Seattle Public School's manager of Prevention and Intervention for the district oversaw the implementation of prevention programs at participating schools. She worked with principals and other key school-based staff to select appropriate prevention programs and ensure program delivery teams were adequately trained to deliver programs with fidelity and high quality. Prevention delivery teams at each school included 2-5 professionals or community members who were affiliated with community based organizations and schools. They are also referred to as program providers or program facilitators throughout this study. Prevention delivery teams coordinated with university researchers and school district administrators to implement the GGC program with fidelity and to monitor outcomes.

Each prevention delivery team planned how best to deliver the GGC with program with high quality and high fidelity to the standards, while also meeting the unique needs, preferences, and learning styles in their community. Each team was unique, consistent with this project's priority on employing strategies to ensure culturally responsive practice. Cultural adaptations included both surface-level (i.e., translating materials, providing community-specific examples, and respecting cultural values) and structural changes (i.e., hiring bicultural program providers, providing food and child care, and conducting groups in accessible locations in the community) (Lau, 2006). These adaptations have been found to improve engagement with multiracial and multicultural families (Harachi et al., 1997; Lau, 2006).

Each prevention delivery team was responsible for recruiting parents, organizing accommodations (such as procuring food, child care, and translated materials), facilitating GGC sessions, and administering the evaluation tool. The lead facilitator in each team of two administered the pretest survey at the beginning of the first GGC session and the posttest survey at the end of the last session, which required about 30 minutes each. After the program

facilitators collected parent surveys, a project support person entered the data into Microsoft Excel spreadsheets and sent them to a university research team. The university research team then evaluated the pretest and posttest outcomes and provided feedback to the prevention delivery team after analysis. Figure 4 summarizes the procedures for implementing GGC and collecting the data used in this study.



**Figure 4:** Assessment Model and Data Sources

# **ANALYSIS AND RESULTS**

## **Data Preparation and Analysis Strategy**

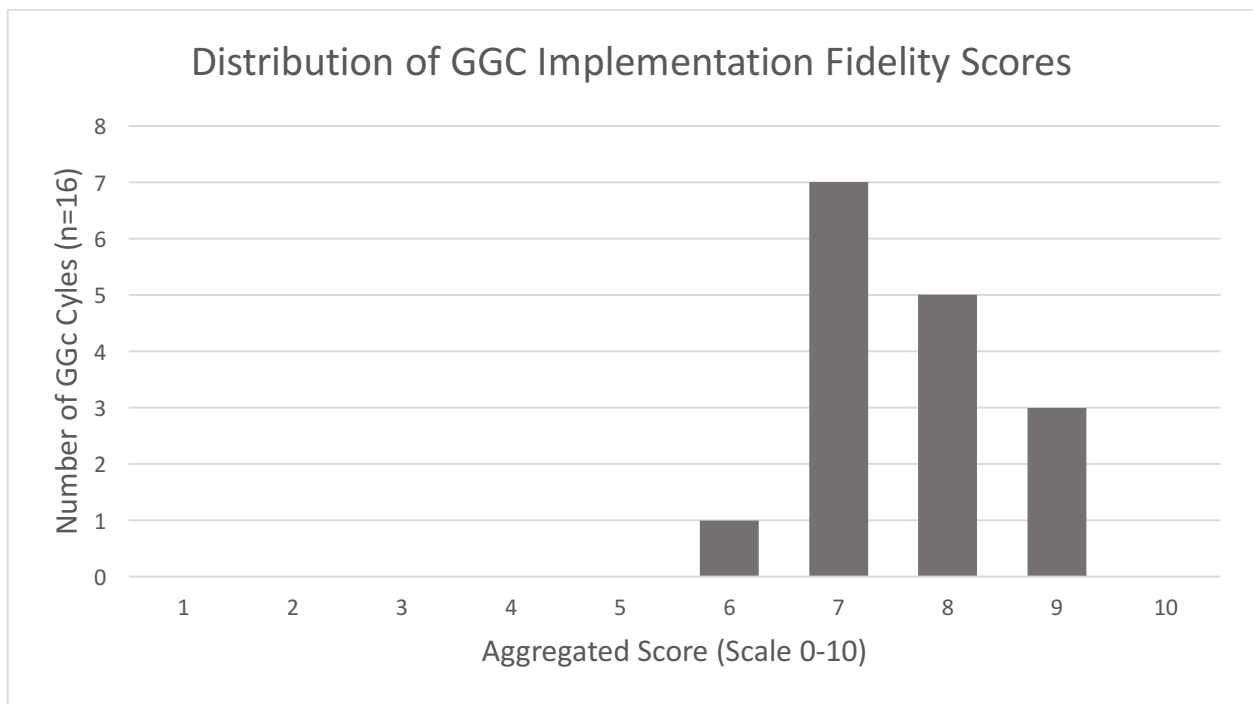
This program evaluation used various statistical techniques to assess the (1) level of implementation fidelity, (2) characteristics of the study sample, and (3) magnitude of participant learning. Pretest and posttest data from 16 individual cycles of GGC were compiled into a single aggregate data set. The resulting data set was then compared to the original results to ensure validity. Missing data were coded as “99” and omitted from analysis. A similar process was used to aggregate implementation data from individual program cycles into one data set. This data set was also compared to the original findings to ensure validity. Analyses were performed with the Statistical Package for the Social Sciences (SPSS) software package.

Participant identification and demographic data were numerically coded and entered according to the key in Appendix 3. To determine how many parents participated in the GGC program and how many were retained, an additional variable was created to differentiate between parents who (1) completed only a pretest (2) parented who completed only a posttest, or (3) parents who completed both a pretest and a posttest. All three mutually exclusive groups were included in the study sample. Only parents who completed both a pretest and a posttest were included in the longitudinal sample to measure differences between their pretests and posttests. The retention rate was calculated as the total number of pretests divided by the total number of parents who completed both a pretest and posttest.

### **Research Question #1: To what degree was GGC provided to Seattle parents with fidelity to the model?**

Implementation fidelity refers to the extent to which the GGC curriculum was followed according to the practices and procedures designed by the program developer and which were followed when it was established as a tested, effective program (Fagan et al., 2008). Data were gathered from the implementation fidelity checklist during the HSGI project. This data set was then aggregated to include all 16 cycles. For each cycle, there were 13 items imbedded in four

scales: Adherence (2 items), Dosage (3 items), Participant Involvement (3 items) and Quality (5 items). In their evaluation of prevention programs for the HSGI grant, Kuklinski and colleagues (2015) established a rubric to score the 13 implementation-related measures to create an overall fidelity score on a scale of 0-10. This criterion allocates one point per item satisfied, except for the four items related to teaching techniques. Each of the various teaching techniques (lecture, discussion, demonstration, and practice) received ¼ point each.



**Figure 5:** Implementation Fidelity Outcomes

Figure 5 displays the implementation fidelity scores across the 16 GGC cycles provided to parents in Seattle from 2012-2015. Throughout the 16 cycles all programs were scored in between the range of 6 to 9. The average implementation fidelity score was 7.6, and the individual scores for each GGC cycle, including results related to adherence, dosage, participant involvement, and quality are described in detail in Appendix 6.

This analysis highlighted several successes in regards to implementing GGC. All but one GGC cycle (94%) managed to provide GGC for the suggested dosage: two hours a week, for five continuous weeks. Interestingly, program time was augmented across the 16 GGC cycles, as an average of 5.1 sessions were held for an average of 130 minutes. Program providers and observers reported covering 90% of the program content. In general, items that measured the level of participant responsiveness (4.4 / 5.0), participation (2.9/3.0), and overall program quality (4.4/5.0) were high.

However this analysis also indicated areas where fidelity to the GGC model was not met. Seven of the 16 cycles (44%) reported conducting major program modifications of GGC. Eleven of the 16 cycles (69%) did not meeting the saturation requirement. Finally, only 3 GGC cycles (19%) were found to have been delivered using the recommended proportion of teaching techniques (25% per each technique). On average, GGC programs included time allocated for lectures (29%), discussions (37%), demonstrations (14%), and practice (20%). These findings are addressed in the discussion section.

## **Research Question #2: Who participated in GGC and what was the retention rate of parents who completed a pretest survey?**

Descriptive statistics addressed the second research question: to understand the characteristics of the study sample of parents who participated in GGC from 2012-15. These analyses described parental race, gender, and level of educational attainment for both the study and longitudinal samples. Demographic data was collected from the participant pretests and posttests. Some parents marked the "Other" category and wrote in their ethnicity (i.e., Somali). When possible, these alternative responses were reassigned into the associated racial group (i.e., black or African American). To describe the study and longitudinal samples, frequency tables generated the number and proportion of parents in each demographic subgroup (e.g., gender: female, male).

<b>Characteristics of Study Sample</b>				
<b>Demographic</b>	<b>Longitudinal Sample</b>		<b>Study Sample</b>	
<b>Gender</b>	<b>N=108</b>		<b>N=214</b>	
<b>Male</b>	5	<b>7%</b>	10	<b>9%</b>
<b>Female</b>	63	<b>93%</b>	105	<b>91%</b>
<b>Missing</b>	40	<b>37%</b>	99	<b>46%</b>
<b>Education</b>				
<b>Completed Grade School or Less</b>	14	<b>14%</b>	32	<b>17%</b>
<b>Some High School</b>	24	<b>24%</b>	35	<b>19%</b>
<b>Completed High School</b>	18	<b>18%</b>	33	<b>18%</b>
<b>Some College</b>	8	<b>8%</b>	21	<b>11%</b>
<b>Completed College</b>	19	<b>19%</b>	32	<b>17%</b>
<b>Graduate or Professional Degree</b>	16	<b>16%</b>	31	<b>17%</b>
<b>Missing</b>	7	<b>7%</b>	30	<b>14%</b>
<b>Race</b>				
<b>African American / black</b>	43	<b>41%</b>	72	<b>36%</b>
<b>American Indian / Alaska Native</b>	2	<b>2%</b>	2	<b>1%</b>
<b>Asian / Pacific Islander</b>	13	<b>13%</b>	38	<b>19%</b>
<b>European American / white</b>	32	<b>31%</b>	68	<b>34%</b>
<b>Latino / Hispanic</b>	10	<b>10%</b>	11	<b>5%</b>
<b>Multiracial/Other Race</b>	4	<b>4%</b>	11	<b>5%</b>
<b>Missing</b>	2	<b>2%</b>	12	<b>6%</b>

**Table 2:** Characteristics of the Study Sample

Table 2 displays the characteristics of the study sample. Participant gender was a salient demographic feature of the study sample, as 91% of the participants were female. There was substantial variation in regards to level of educational attainment, as 38% of the participants did not graduate from high school, 26% were high school graduates, 19% completed college, and 16% had a professional or graduate degree. The racial composition of the group was: African American / black (43%), American Indian / Alaska Native (2%), Asian / Pacific Islander (13%), European American / white (32%), Latino / Hispanic (10%), and Multiracial (4%). Finally, there

were 214 Seattle parents who completed either a pretest or a posttest. About half (108) completed both, while 74 parents completed only a pretest, and 32 parents only completed a posttest. This yielded a retention rate of 59%.

**Research Question #3: After exposure to the intervention, did learning occur? Was this learning statistically significant?**

Descriptive statistics generated means for 21 survey items across three learning domains (1) Family Management, (2) Substance Abuse Prevention, and (3) Emotional Regulation for the longitudinal sample (n= 108). The “desired” response changed between “Strongly Agree” to “Strongly Disagree,” depending on the question. This variability generally increases the validity of an instrument, yet required several survey to be recoded. The purpose for this change was to increase the coherency of the results table, so that the desired response for each question was a 7 (the highest on scale). See Appendix 3 for further detail about the coding process described on the survey. The final procedure used SPSS to conduct a two-tailed t test with an *alpha of .05* ( $p\ value < 0.05$ ) to determine whether changes from pretest to posttest were statistically significant.

Table 3 displays the consistent and significant learning that occurred for all parents who completed both a pretest and posttest survey. Overall, 19 of the 21 items (90%) moved in the expected direction. After running two-tailed t tests, 15 (71%) of these changes from pretest to posttest were statistically significant. Average pretest means started at (5.0) and posttest means ending in the upper end of the range (5.6). Two of the 21 comparisons (10%) showed movement counter to what was expected.

Both the highest scores on the survey and the greatest magnitude of positive change from pretest to posttest occurred on items in the “Family Management” topic. All seven items changed in the desired direction, six were statistically significant. The question that had the

Participant Learning from Pretest to Posttest							
Survey Questions by Learning Area	Likert Scale		Pretest	Posttest	Change	Desired?	p value
	Low	High					
<b>Family Management</b>	<b>1</b>	<b>7</b>					
Have you ever had family meetings?	Range 0 to 100%		83%	99%	16%	Yes*	0.000
Young people do what their friends do, and there's not much parents can do about it.	Strongly Agree	Strongly Disagree	4.8	5.9	1.1	Yes*	0.000
Children should be involved in deciding what the family rules will be.	Strongly Disagree	Strongly Agree	5.1	6.0	1.0	Yes*	0.000
Family meetings are a waste of time.	Strongly Agree	Strongly Disagree	5.6	6.4	0.8	Yes*	0.000
Good family management reduces the risk of drug use.	Strongly Disagree	Strongly Agree	5.9	6.5	0.5	Yes*	0.000
Parents should identify positive consequences for following rules as well as negative consequences for breaking rules.	Strongly Disagree	Strongly Agree	5.9	6.4	0.5	Yes*	0.004
The only way to get your children to do family tasks is to lay down the law.	Strongly Agree	Strongly Disagree	3.8	3.9	0.1	Yes	0.809
<b>Substance Use Prevention</b>							
Part of learning to say "no" to drugs is to suggest something different to do with friends.	Strongly Disagree	Strongly Agree	5.2	6.2	1.1	Yes*	0.000
Developing a family position on drugs encourages children to test and break the rules.	Strongly Agree	Strongly Disagree	4.4	5.3	0.9	Yes*	0.000
Children who are bonded to their families are less likely to use drugs and alcohol.	Strongly Disagree	Strongly Agree	5.8	6.4	0.6	Yes*	0.003
The best way to prevent drug use is for parents to simply lay down the law to their children.	Strongly Agree	Strongly Disagree	3.3	3.6	0.3	Yes	0.076
Before parents can develop a clear family position on drug use they must be clear about their own views.	Strongly Disagree	Strongly Agree	5.6	5.9	0.3	Yes*	0.041
Parents can reduce the chance their children will begin using drugs.	Strongly Disagree	Strongly Agree	6.3	6.5	0.2	Yes	0.197
Young people who refuse to try alcohol or other drugs should be prepared to lose popularity.	Strongly Agree	Strongly Disagree	4.4	3.7	-0.7	No*	0.012
<b>Emotional Regulation</b>							
Children know when their parents are pleased with them so parents don't need to say so directly.	Strongly Agree	Strongly Disagree	4.7	5.5	0.9	Yes*	0.000
Children can tell what their parents think about the use of alcohol and other drugs even if their parents never say so directly.	Strongly Agree	Strongly Disagree	3.7	4.5	0.8	Yes*	0.004
When parents are angry with their children, they should keep the specific reasons for their anger to themselves.	Strongly Agree	Strongly Disagree	4.8	5.5	0.7	Yes*	0.003
Asking your children to do chores only increases their resentment.	Strongly Agree	Strongly Disagree	5.3	5.9	0.6	Yes*	0.003
Yelling at children when you're angry with them gets the best results.	Strongly Agree	Strongly Disagree	6.0	6.3	0.3	Yes	0.147
Telling your children you love them only embarrasses them.	Strongly Agree	Strongly Disagree	5.6	5.8	0.2	Yes	0.381
When you are angry with your child, it is always best to tell him or her immediately.	Strongly Agree	Strongly Disagree	3.9	3.7	-0.2	No	0.427
<b>Total</b>			<b>5.0</b>	<b>5.5</b>	<b>0.5</b>	<b>19/21</b>	

\*p < .05

**Table 3:** Participant Learning for Parents Who Participated in GGC

greatest gain from pretest to posttest (1.1) was “Young people do what their friends do, and there’s not much that parents can do about it.” The item that had the lowest gain from pretest to posttest (0.1) was “The only way to get your children to do family tasks is to lay down the law.” The results also indicate that before this parent training program, only 80% of the participants had hosted a family meeting. After the implementation, 99% of parents had practiced this skill with their family.

In the “Substance Use Prevention” learning area, six of the seven items moved in the desired direction (86%) and five of the changes were statistically significant. The highest item in this learning area (6.5) was for the question “Parents can reduce the chance their children will begin using drugs.” One question in this learning area moved in the unexpected direction. It states “*Young people who refuse to try alcohol and other drugs should be prepared to lose popularity.*” The GGC curriculum expects that parents would tend to disagree with this sentiment. However, after the intervention, parents were more likely to agree with this statement. This negative change was also statistically significant (p-value of 0.012).

Finally, six of the seven items for “Emotional Regulation” changed in the desired direction (86%), and four of those items were statistically significant. In comparison with the other learning areas, the average score and magnitude of change from pretest to posttest for Emotional Regulation items were lower. One question moved in the unexpected direction from pretest to posttest, though the change was not statistically significant (p-value of 0.427): “*When you are angry with your child, it is always best to tell him or her immediately.*” The GGC curriculum expects that parents disagree with this statement, while parents tended to disagree.

# **DISCUSSION**

## **Primary Findings**

This study described contemporary feedback from process and outcomes related to providing an evidence-based parenting program to parents in an urban middle school. Prevention support and delivery teams coordinated efforts to deliver GGC to 208 parents in Seattle with fidelity and in a culturally responsive way. Sessions were held at the recommended number, length, and frequency per the GGC curriculum. Additionally, 90% of the content was reported to have been covered. Instructors were evaluated as being knowledgeable, confident and responsive to participants. Parent responsiveness (4.4/5.0), participation (98%), and overall quality of programs (4.5/5.0) were strong components of implementation fidelity. Outside of the process, parent learning was significant across all three learning areas: family management, substance use prevention, and emotional regulation. Further, 19 of the 21 items (90%) moved in the expected direction and 99% of parents reported facilitating family meetings with their children. This demonstrates that GGC, when implemented with moderate levels of fidelity, can be effective in a multicultural urban setting.

## **Comparing Findings to Recent Literature and Policy**

School administrators, community providers, and university researchers coordinated efforts to provide GGC to Seattle parents with as part of a comprehensive dropout prevention strategy funded by the Department of Education's *High School Graduation Initiative (HSGI, 2010)*. In particular, GGC was provided to parents who have children in schools that had the lowest high school graduation rates in Seattle Public Schools in 2010. The HSGI took this approach to (a) implement universal prevention programs to all students (b) target "tiered-two" interventions for particular communities (e.g., parents with students underfunded and segregated schools). This strategy stemmed from the recognition that members of marginalized communities face particular challenges when attempting to access educational opportunities.

The *social development model* (SDM) described the rationale for this study's method of assessing, planning, delivering, monitoring, and evaluating evidence-based prevention programs in a community setting (Catalano & Hawkins 1996). Proponents of prevention science conceptualize that "reducing risk and enhancing protection among all young people will reduce the rates of behavioral health problems. Preventing problems before they occur reduces human suffering and obviates costly punitive responses to these problems from law enforcement, child welfare, mental health, or juvenile justice systems" (Hawkins et al., 2016). The findings of this study validate immediate outcomes in this theoretical approach. Parents attended a 5-week parenting program where they learned and practiced skills related to family management, substance use prevention, and emotional regulation.

### **Recruitment and Retention.**

Perennial concerns for parenting programs are reach and retention (Spath, 1997; Choi, 2005, Leslie et al., 2016). In this study, only 5 GGC cycles (31%) satisfied the the saturation requirement of "12-20 parents in a group or 80%-100% of students in a grade." Saturation, in regards to prevention, can be compared to "reach" and it describes the desired proportion of the number of people that are exposed to intervention and the number of people that could benefit from the intervention (Proctor et al., 2010). This finding indicates that the number of parents exposed to GGC was significantly less than the number needed to have the desired effect across the Seattle community. For example, while Seattle Public Schools (SPS) serves over 50,000 young people, only 108 individual parents completed the GGC program over a 3-year period. A greater level of saturation would be beneficial to improving health outcomes across the community. Further, reaching underrepresented parents in this sample should be a priority for future practice. Despite the challenges related to reaching parents, GGC delivery teams were able to retain 59% of parents who attended the first class.

### **Teaching Techniques and Major Modifications.**

The balance of teaching techniques used by program providers also raised both concerns and questions. Balancing interactive techniques has been found to increase treatment outcomes in prevention programs (Tobler & Stratton, 1997). This proved to be a challenge. While the recommended level of usage is 25% per each technique, we found that facilitators allocated more of their time in lectures (29%) and discussions (37%) than in demonstrations (14%) and practice (20%). The concern is that with less opportunities to demonstrate and practice the skills presented in the program, the less confident the parent is likely to be in practicing the skill with their child (Miller & Rollnick, 2012). An emerging question is *why* program providers used more time to deliver lectures and facilitate discussions. In regards to program adherence, seven cycles (44%) reported conducting a major program modification. This is a significant number of modifications to the GGC programs and prompts qualitative prompts regarding program modification such as: When were programs modified? What was the rationale for modifying programs? How were they modified? To what degree and how were they modified? Would providers make the same modifications in the future?

### **Cultural Adaptations.**

The literature acknowledged the need for culturally responsive practice that respects “differences in the myriad of national and historical backgrounds, social classes, legal statuses, and migration histories, languages, religious beliefs, and other sociocultural stressors” (Clarke et al., 2012, p.768). These intergroup differences emerged as both challenges and opportunities in this study as GGC was provided to racially diverse parents in multiple social contexts. This also included four languages other than English: Khmer, Spanish, Somali, and Vietnamese. Given the racial inequities of public education (ED, 2016), the salience of racial equity in public health, education, and social work research (Davis et al., 2003; Bell, 2007; Ford & Airhihenbuwa, 2010; Williams and Collins, 2011) and the rising diversification of the United

States' population, Barrera and colleagues (2011) framed an urgent question in the field of prevention science:

Proponents of prevention science envision a society that broadly implements evidence-based practices to improve health and promote positive human development. In general, prevention science's mission and promise convey the importance of inclusion and broad reach. Challenging questions emerge when the aspiration for inclusiveness meets the reality of our nation's growing heterogeneity. Can preventive interventions reach our nation's diverse subcultural groups, demonstrate effectiveness with those groups, and achieve adoption by community agents that serve culturally diverse communities? (p.439)

## **Limitations**

Despite the important findings that demonstrated quality implementation and significant parent learning, this study was not designed to measure the final outcomes from this prevention program. This is often the case in prevention programs, given their nature to buffer protective factors and preclude long-term effects that are difficult to measure (Shaw, 2011). Outcomes that were not studied included measurements of perceived family bonding, of substance use behaviors, mental health metrics, academic achievement, and graduation rates.

Although this study design included a variety of methodological intention, there are still many limitations. The first set of limitations is in regards to the study sample used in this pre-experimental design. No control group was used. Further, selection bias may have occurred, as prevention delivery teams recruited parents from urban middle schools and community based organizations. There may have been confounding factors that attracted some parents to the program, while failing to reach others.

The small sample size limits the generalizability of these findings and creates gaps in demographic representation for several social groups. This is particularly evident for male participants who accounted for only 7% of the longitudinal sample. This is surprising and the lack of male parents participating in parenting programs deserves further attention and future research. Another problem arises from the small study sample, in regards to the aggregated racial groups used in this analysis. These racial groups have tremendous intragroup

heterogeneity (AAAJ, 2013). This study design would have strengthened by increasing the sample size and accounting for both racial and ethnic data for parents. The analysis would then have the power to examine the intragroup differences within oversimplified racial categories, allowing researchers to better understand the role that ethnicity, level of English proficiency, and immigration play in the effectiveness of universal prevention programs.

The implementation monitoring systems designed for this study lacked components that are generally present when monitoring fidelity for a program efficacy study (Fagan et al., 2008). For example, the implementation checklists used draw upon self-reported data from program providers. These results may be inflated because of social desirability (Lillehoj et al., 2004). To bring in a second data source to monitor implementation fidelity, university researchers or school administrators conducted program observations for each GGC cycle. Both sources of self-reported data are vulnerable to bias because of the subjectivity of categories like “quality of delivery” and “participant responsiveness” (Fagan, et al., 2008). These evaluative measures are also compromised as GGC was provided to parents in four languages other than English (Khmer, Spanish, Somali, and Vietnamese).

### **Implications for Public Health Practice and Research**

This study reframed high school graduation as an important intervention area to promote public health and health equity. Education is a major pathway for economic mobility and emotional wellness. Universal and targeted prevention programs have the power to meaningfully address the opportunity and achievement gaps in education. Unfortunately, research indicates that there are still many schools who do not implement evidence-based prevention programs (57.4%), or implement them with poor quality (Ringwalt et al., 2009).

Further, this study illustrated that universal prevention programs targeted towards parents can be implemented with success in a diverse urban school district. This strategy coincides with the emerging approach to educational policy: multi-tiered systems of support

(MTSS). Massat (2015) describes MTSS as “a classroom and team-based approach in general education for identification, assessment, planning, and intervention with students who are at risk for academic failure.” MTSS seeks to implement coordinated and tiered interventions depending on each individual school building’s needs, capacity, and priorities. Prevention programs, such as GGC, interface well in this approach to supporting the whole student.

In addition to the adoption of prevention in institutions of public educational, the Affordable Care Act (ACA) offers a promising opportunity to increase access to parenting programs. The ACA’s call for (a) the integration of mental and physical health and (b) the salience of prevention and health promotion suggest that there are pathways to provide parenting interventions through health services (i.e., a family doctor’s recommendation once a child turns 9 years old) (could help reduce barriers in outreach and retention. Secondly, this may be an effective pathway to increase access to preventative and behavioral health interventions (Hawkins et al., 2016).

This study design and data collection instruments provided valuable feedback. Of course, after this study, more research questions emerge. Future research is needed to illuminate the qualitative perspectives children, parents, care givers, teachers, and service providers. Studies designed in grounded theory may help illuminate these perspectives and increase the reach and retention of prevention programs (Spoth et a., 1997). Finally, future research designs that prioritize the active and authentic engagement of those most affected by educational policies, such as families and providers, may promote more equitable and sustainable outcomes (Toney & Keleher, 2013).

Another important question that emerges from this study is in regards to implementation fidelity. As observed in this study, prevention delivery and support teams were able to deliver GGC in a diverse urban community. Future mixed methods research would help reveal what core components of implementation fidelity are linked to outcomes (i.e., participant learning, participant retention, and saturation) (Durlak, 2008). Further research to understand cultural

differences of the parents who participated in this program, from a strengths-based perspective, would be invaluable (Lau, 2006). Examining these questions are surely to enhance program effectiveness and reach.

## **Conclusion**

This studied accomplished several tasks and revealed even more compelling research questions. The literature review reframed the opportunity gap in high school graduation as a strategic focus-area to promote public health and improve health equity. Secondly, the literature reviewed critically examined prevention programs. When implemented with fidelity and in a culturally responsive way, these programs have the ability to improve academic outcomes for all students, and especially students who face significant barriers to learning. Overall, coordinated efforts were made to provide GGC to Seattle families with moderate fidelity and consistent learning across all three major topics: Family Management, Substance Use Prevention, and Emotional Regulation. Two salient questions arise after the initial analysis of this study: (a) how do demographic features (such as race, gender, education level) influence outcomes of universal prevention programs? (b) what specific elements of implementation fidelity are linked to outcomes?

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# **APPENDIX**

**Appendix 1:** Examples of Interventions with Empirical Evidence of Effectiveness to Promote High School Graduation. Source: White and Kelly (2010)

<b>Examples of Interventions with Empirical Evidence of Effectiveness to Promote High School Graduation</b>	
<b>Addressing Protective Factors</b>	
Social Support	Institute a peer mentoring system or buddy system. Assign socially skilled, academically successful mentors to support and coach at-risk students. Develop a helping culture and encourage peer support within the school.
Monitoring and Mentoring	Assign adult monitors or advocates to identified at-risk students to track progress and follow up with parents. Partner with volunteers from the community, local colleges, and so forth to identify capable and motivated adult mentors.
Personal and Social Skill Development	Provide explicit social skills instruction. Teach relevant coping and problem solving skills (e.g., time management with part-time jobs and school, caring for family members while in school). Implement service-learning activities.
Parent Involvement	Involve parents in dropout prevention programs (e.g., provide information on student's participation in school-based programs, offer parent training). Identify person (e.g., family advocate) in the school with whom parents can feel comfortable communicating their concerns.
<b>Addressing Risk Factors</b>	
Academic Instruction	Assist teachers in providing more academic instruction and spending less time on behavior management. Provide teacher training on effective and efficient classroom management strategies.
Academic Support	Offer after-school study skills and time management classes. Implement adult/peer tutoring programs at times convenient for students.
White and Kelly (2010).	

**Appendix 2: Risk Factors Associated with Dropping Out of High School**  
Source: (Freudenberg & Riglis, 2007)

### Risk Factors Associated with Dropping out of High School

Individual or Family	Neighborhood or Community	School or School System
<ul style="list-style-type: none"> <li>• Low family socioeconomic status</li> <li>• Racial or ethnic group</li> <li>• Male</li> <li>• Special education status</li> <li>• Low family support for education, less opportunity for nonschool learning, few study aids and resources in the home</li> <li>• Low parental educational attainment</li> <li>• Residential mobility</li> <li>• Low acceptance of adult authority</li> <li>• High levels of social isolation</li> <li>• Behaviors such as disruptive conduct, truancy, absenteeism, and lateness</li> <li>• Being held back in school</li> <li>• Poor academic achievement, low grades or test scores</li> <li>• Academic problems in early grades</li> <li>• Not liking school</li> <li>• Feelings of “not fitting in” and of not belonging</li> <li>• Perceptions of unfair or harsh disciplines</li> <li>• Feeling unsafe in school</li> <li>• Not engaged in school</li> <li>• Being suspended or expelled</li> <li>• Conflicts between work and school</li> <li>• Having to work or support family</li> <li>• Substance use</li> <li>• Pregnancy</li> </ul>	<ul style="list-style-type: none"> <li>• Living in a low-income neighborhood</li> <li>• Having peers with low educational aspirations</li> <li>• Having friends or siblings who are dropouts</li> </ul>	<ul style="list-style-type: none"> <li>• Low socioeconomic status of school population</li> <li>• High level of racial or ethnic segregation of students between schools in a district or within tracks or classes in a building</li> <li>• High proportion of students of color in school</li> <li>• High proportion of students enrolled in special education</li> <li>• Location in central city</li> <li>• Large school district</li> <li>• School safety and disciplinary policies</li> <li>• High-stakes testing</li> <li>• High student-to-teacher ratios</li> <li>• Academic tracking</li> <li>• Discrepancy between the racial or ethnic composition of students and faculty</li> <li>• Lack of programs and support for transition into high school for 9th and 10th graders</li> </ul>

Freudenberg & Riglis 2007

**Appendix 3: Guiding Good Choices Survey and Data Coding Directions**  
Source: (Kuklinski et al., 2015)

# Guiding Good Choices

## Pre-Post Data Entry Instructions

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Enter the school, GGC workshop leader, whether it's a Pre or a Post survey, the date it was taken, and the participant's ID code in Columns A-E. Then go across the spreadsheet, entering the numbers (red font) that correspond to the participant's responses or follow the directions (red font).

*Hint: The column headers (top row) will freeze as you scroll down the page for more students as long as you're in "Normal" mode (see View tab above).*

## SECTION ONE

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1. Have you ever had family meetings? (By family meetings, we meantime set aside to discuss concerns, issues, plans or decisions about family matters)

1 Yes → CONTINUE

2 No → GO TO QUESTION 2

## SECTION TWO

**Directions:** Read each statement below and then indicate how much you agree with each one by checking the appropriate box.

	1 Strongly Agree	2 Agree	3 Tend to Agree	4 Neutral	5 Tend to Disagree	6 Disagree	7 Strongly Disagree
2. Parents can reduce the chance their children will begin using drugs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Children who are bonded to their families are less likely to use drugs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Developing a family position on drugs encourages children to test and often break rules.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Parents should identify positive consequences for following rules as well as negative consequences for breaking rules.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Good family management reduces the risk of drug use.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Children can tell what their parents think about the use of alcohol and other drugs even if their parents never say so directly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	1 Strongly Agree	2 Agree	3 Tend to Agree	4 Neutral	5 Tend to Disagree	6 Disagree	7 Strongly Disagree
8. The best way to prevent drug use is for parents to simply lay down the law to their children.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Before parents can develop a clear family position on drug use, they must be clear about their own views.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Family meetings to make decisions and rules are a waste of time.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Young people do what their friends do and there's not much parents can do about it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Part of learning to say "no" to drugs is to suggest something different to do with friends.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Young people who refuse to try alcohol or other drugs should be prepared to lose popularity.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. When you are angry with your child, it is always best to tell him/her immediately.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Yelling at children when you're angry with them gets the best results.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	1 Strongly Agree	2 Agree	3 Tend to Agree	4 Neutral	5 Tend to Disagree	6 Disagree	7 Strongly Disagree
16. When parents are angry with their children, they should keep the specific reasons for their anger to themselves.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Children should be involved in deciding what the family rules will be.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Children know when their parents are pleased with them so parents don't need to say so directly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. The only way to get your children to do family tasks is to lay down the law.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Telling your children you love them only embarrasses them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. Asking your children to do chores for the family only increases their resentment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## SECTION THREE

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22. Please describe your gender: \_\_\_\_\_ 1 Male \_\_\_\_\_ 2 Female

23. Please choose the one answer that best describes what you consider yourself to be.

- 1 White, not of Hispanic origin
- 2 Black or African American
- 3 American Indian/Native American, Eskimo or Aleut
- 4 Spanish/Hispanic/Latino
- 5 Asian or Pacific Islander
- 6 Other (Please specify \_\_\_\_\_)

24. What is your highest level of education?

- 1 Completed grade school or less
- 2 Some high school
- 3 Completed high school
- 4 Some college
- 5 Completed college
- 6 Graduate or professional school after college

**THANK YOU FOR COMPLETING THIS SURVEY  
PLEASE PUT YOUR SURVEY INTO THE ENVELOPE THAT IS BEING PASSED AROUND**

**Appendix 4: Guiding Good Choices Implementation Checklist Sample**  
Source: (Kuklinski et al., 2015)



## OVERALL COMMENTS ABOUT THE LESSONS

### 1. Did you make any modifications to the curriculum?

If yes, please check which of the following modifications were made:	Yes	No
<i>a. Deleting lessons or parts of lessons</i>	<input type="checkbox"/>	<input type="checkbox"/>
<i>b. Adding worksheets not in the manual</i>	<input type="checkbox"/>	<input type="checkbox"/>
<i>c. Inviting guest speakers</i>	<input type="checkbox"/>	<input type="checkbox"/>
<i>d. Adding audio-visual aids</i>	<input type="checkbox"/>	<input type="checkbox"/>
<i>e. Other (please specify):</i>	<input type="checkbox"/>	<input type="checkbox"/>

*If you made any of the above modifications, briefly explain the changes made and rationale(s) for them. Please specify the periods for which these modifications apply.*

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### 2. Approximately what percentage of time was spent using each of the teaching techniques listed below? (Total must equal 100% of class)

% _____ Lecture	_____ % Discussion	_____ % Demonstration	_____ % Practice
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### 3. For each session in the box below (a) rate on a scale from 1 (low) to 5 (high) how well parents responded to the session and (b) approximately what percentage of parents participated in the discussions and role plays:

a) Response: 1 2 3 4 5	b) Participation: _____ %
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### 4. Did you encounter any obstacles or problems during the sessions?

If yes, please check which of the following obstacles were encountered:	Yes	No
<i>a. Participant misbehavior</i>	<input type="checkbox"/>	<input type="checkbox"/>
<i>b. Lack of participant responsiveness</i>	<input type="checkbox"/>	<input type="checkbox"/>
<i>c. Shortage of time</i>	<input type="checkbox"/>	<input type="checkbox"/>
<i>d. Inadequate location/facilities</i>	<input type="checkbox"/>	<input type="checkbox"/>
<i>e. Other (please specify):</i>	<input type="checkbox"/>	<input type="checkbox"/>

*If you encountered any of the above obstacles in any of your sessions today, briefly describe how you addressed the problem. Please specify the periods for which these obstacles apply.*

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### 5. Please briefly describe any special events or accomplishments achieved during one or more of the sessions taught.

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### 6. Other General Comments:

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**Appendix 5: Rubric for Scoring the Implementation Checklist**  
Source: (Kuklinski et al., 2015)

<b>Domain</b>	<b>Description</b>	<b>Criteria</b>
<b>Adherence</b>	Degree to which the instructor taught required program objectives and/or core components.	1. Content: 70% - 100% 2. Modifications: No major modifications 2 points total, 1 for meeting each criterion.
<b>Dosage</b>	Delivery of required lessons in terms of overall number of sessions, session length, and sessions frequency	1. Number: Taught all lessons 2. Length: Recommended or longer 3. Frequency: Recommended 3 points total, 1 for meeting each criterion.
<b>Participant Involvement</b>	Degree to which participants actively participated in session and responses indicated understanding. Also includes saturation at grade level.	1. Overall Participation: 80-100% 2. Responsiveness: 3.5 or higher out of 5 3. Saturation: 12-20 parents or 80-100% of students at grade 3 points total, 1 for meeting each criterion.
<b>Quality of Delivery</b>	Overall teaching style, based on observation, as well as instructor's use of balanced teaching techniques	1. Overall quality: 3.8 or higher out of 5 2. Balance of styles (lecture, discussion, demonstration, practice): 20% - 30% for each style 2 points total, 1 for Overall Quality, ¼ point for adequate balance in each of the four styles.

(Source: Kuklinski et al., 2015)

**Appendix 6: Table of Implementation Fidelity Outcomes**

**Table 3: Summary of Implementation Fidelity**

Group	Overall Fidelity Score	Adherence			Dosage			Participant Involvement			Quality of Delivery							
		Content Covered	Major Modifications	Total	Sessions Held	Session Length	Session Frequency	Total	Saturation	Participant Responsiveness	Participant Participation	Total	Overall Quality	% Lecture	% Discussion	% Demonstration	% Practice	Total
1	7	100%	Yes	1	5	120	1	3	12	2.9	na	2	5	na	na	na	na	1
2	7	92%	No	2	5	120	1	3	10	4.7	na	1	5	na	na	na	na	1
3	8	96%	No	2	5	128	1	3	10	4.6	100%	2	4.6	40%	na	na	na	1
4	9	97%	No	2	5	120	1	3	11	4.4	100%	2	4.5	30%	30%	10%	30%	2
5	8	96%	No	2	5	150	1	3	9	4.4	98%	2	4.6	35%	36%	7%	22%	1
6	7	53%	Yes	0	6	150	1	3	19	4.5	86%	3	3.8	37%	31%	14%	18%	1
7	9	97%	No	2	5	120	1	3	10	4.8	100%	2	4.5	24%	38%	20%	18%	2
8	7	93%	Yes	1	5	122	1	3	12	5	100%	3	NA	16%	61%	7%	15%	0
9	8	100%	No	2	5	153	1	3	9	3.8	94%	2	4.8	48%	14%	14%	24%	1
10	7	96%	No	2	5	150	1	3	7	4.7	100%	2	NA	25%	56%	5%	14%	0
11	8	91%	Yes	1	5	119	1	3	15	5	98%	3	3.8	26%	42%	11%	20%	1
12	6	82%	Yes	1	5	120	1	2	8	4.8	98%	2	4.8	30%	36%	17%	18%	1
13	7	88%	Yes	1	5	130	1	3	10	4.2	100%	2	4.6	26%	40%	19%	17%	1
14	7	70%	Yes	1	5	144	1	3	13	4	92%	3	3.5	44%	18%	18%	18%	0
15	9	98%	No	2	5	120	1	3	4	5	100%	2	4.6	25%	25%	25%	25%	2
16	8	90%	No	2	5	120	1	3	10	4	100%	2	4.4	2%	63%	17%	18%	1
16 groups	7.6	90%	7 Y / 9 N	1.5	5.1	130.4	1	2.9	10.6	4.4	98%	2.2	4.5	29%	37%	14%	20%	1.0