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# UNIVERSITY OF CALIFORNIA RIVERSIDE

# Conjoint Behavioral Consultation with Spanish-Speaking Families

A Thesis submitted in partial satisfaction of the requirements for the degree of

Master of Arts

in

Education

by

Anacary Ramírez

December 2019

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Conjoint Behavioral Consultation with Spanish-Speaking Families

A disproportionate number of children in the U.S. do not receive the mental health services they need due to familial and logistical barriers (HRSA, 2010). Among the rapidly growing U.S. Latinx population, children and adolescents are at a significantly greater risk for mental health problems than their white counterparts and are disproportionally sanctioned for behavior infractions in comparison to their white counterparts (American Psychiatric Association, 2017; Skiba, Horner, et al., 2011; CDC, 2015). Differences can be due to various factors, some of which are predictive of poor school outcomes.

A factor that is related to poor school outcomes is problem behavior. Problem behaviors are a big concern among teachers because they interfere with the teaching and the learning of others and have a negative relationship with academic performance (Kremer, Flower, Huang, & Vaughn, 2016). Moreover, among Latinx students, research suggests that they have a higher exclusion rate than do their white counterparts, which can affect learning and increase the risk of delinquency (Gregory, Skiba, & Noguera, 2010). To address this disproportionality among Latinx students, various behavior interventions have been adapted to meet the needs of these students.

Various effective interventions exist that address behavior concerns among children and adolescents in school settings. Some evidence-based interventions, such as the Good Behavior Game, have been adapted to address behavior concerns among Latinx students (Ortiz, Bray, Bilias-Lolis, & Kehle, 2017). Results range from effective to

negligible depending on the problem behavior. Those results suggest that further research that evaluates factors contributing to positive outcomes is warranted.

A method that addresses factors that may be contributing to positive outcomes is school-based Behavioral Consultation (BC; Sheridan, Kratochwill, & Bergan, 1996). School-based behavioral consultation is an indirect service delivery model that involves a collaborative, voluntary, and confidential relationship between a school psychologist and teacher to address a student's problem(s). It also attempts to increase the ability of the teacher to problem solve similar issues in the future (Bergan, 1977; Martens, DiGennaro-Reed, & Magnuson, 2014).

Through the accumulation of empirical research, BC has received a substantial amount of support for being an effective model (Medway, 1979; Sheridan, Welch, & Orme, 1996). Because research indicates that high levels of home involvement are associated with stronger intervention outcomes (Vannest, Davis, Davis, Mason, & Burke, 2010) and that students benefit when there is a collaborative relationship between families and educators (Clark & Fiedler, 2003), BC has been adapted to include parents. The model that provides support for both teachers and parents to address student concerns is Conjoint Behavioral Consultation.

Conjoint Behavioral Consultation (CBC) is a strengths-based, problem-solving, decision-making model of service delivery that involves parents and teachers working collaboratively to promote positive outcomes related to a student's development (Sheridan & Kratochwill, 2008). Research has indicated that CBC is also an acceptable and effective model. However, very little research has been done to assess the

effectiveness of CBC with minority clients, and even less work has been done that focuses on Spanish-speaking Latinx families. Additionally, the research that investigates consultation with minority clients who have limited English skills often involves interpreters. Research suggests that using interpreters during consultation can negatively impact the process. Thus, the purpose of this study is to extend the CBC literature to working with Spanish-speaking Latinx families. The present study will investigate several possible outcomes for implementing empirically supported interventions within the context of CBC for children or adolescents exhibiting externalizing behavior concerns in the school and home setting. In particular, there is interest in the extent to which conducting CBC using a Spanish-speaking consultant will result in positive outcomes on various measures for all participants.

#### Literature Review

The following review of the literature provides strong evidence for the importance of creating a collaborative relationship between Latinx families and educators when working with school-aged children. This research proposal will provide an overview of behavior difficulties and interventions, including interventions for Latinx families, and the Behavioral Consultation model. This paper will also provide an overview of how a strong home-school partnership can enhance behavioral interventions. This proposal will then discuss the Conjoint Behavioral Consultation model and the lack of research conducted using the CBC model with Spanish-speaking families. The difficulties of using interpreters in the consultation process will be discussed. Finally, the purpose of this study as well as the research questions will be outlined.

## **Providing Services to the Underserved**

Of the 7.4 million children in the U.S. with a diagnosed emotional, behavioral, or developmental condition, a disproportionate number do not receive the mental health services they need because they are underinsured (HRSA, 2010). Familial and logistical barriers such as income, language, or access to services often prevent families from accessing or maintaining services for their children. In fact, schools are often regarded as the primary providers of services for youth (Atkins, Hoagwood, Kutash, & Seldman, 2010; Burns et al., 1995). Among the U.S. Latinx population, who account for about 24% of the student population, children and adolescents are at a significantly greater risk for mental health problems than their white counterparts (American Psychiatric Association, 2017; CDC, 2015). In addition to mental health disparities, Latinx students also have

some of the lowest reading proficiency levels and highest dropout rates in comparison to their peers (Hemphill & Vanneman, 2010). The gap in Latinx high school graduation rates and academic performance are linked to a host of factors, including segregation of school districts by low socioeconomic status, lack of bilingual programs, and lack of parental involvement as traditionally defined by educators (Marrero, 2016). Research also suggests that Latinx students are disproportionately sanctioned for behavior infractions in comparison to their white counterparts (Skiba et al., 2011). Educational disparities of Latinx students are often neglected (Gudiño, Lau, Yeh, McGabe, & Hough, 2008) and are predictive of poor school outcomes (Cartledge, Singh, & Gibson, 2008). Thus, incorporating effective school-based interventions that meet the needs of all children and adolescents involved in the educational system is imperative.

#### **Behavioral Problems in Schools**

Addressing problem behaviors in school-aged children may be a way to meet the needs of children and adolescents of diverse backgrounds. Problem behaviors in children or adolescents often include behaviors that result in injury to self or others, damage to physical surroundings, interference with skill acquisition, or isolate the child/adolescent. Children do not typically outgrow challenging behaviors. In fact, there is a high potential for problem behaviors to get worse over time (Kazdin, 1993). Problem behaviors can become an impediment to children's and adolescent learning, not just for those displaying the behaviors, but for those around them as well (Chaffee, Johnson, & Volpe, 2017).

Statistics from the National Center for Education Statistics indicate that during the 2015-16 school year, 43% of public-school teachers agreed or strongly agreed that

student misbehavior interfered with their teaching (Musu-Gillette et al., 2018). Moreover, research suggests that problem behaviors in schools have a negative relationship with academic performance (Kremer et al., 2016). With Latinx students, discipline sanctions such as exclusion often result in students becoming less bonded and invested in school, thus increasing the risk for delinquency (Gregory et al., 2010). Unfortunately, existing evidence suggests that Latinx students have a higher exclusion rate than do their white counterparts (Cartledge et al., 2008). The relationship between problem behaviors and academic outcomes provides evidence of the need for empirically supported behavioral interventions for teachers to implement in schools that are adaptive for Latinx students. In fact, there are several behavioral interventions with empirical evidence supporting their effectiveness for decreasing problem behaviors in children and adolescents in school settings. Some of these evidence-based interventions have been adapted for Latinx students.

#### **Behavioral Interventions**

Effectively dealing with problem behaviors can be a challenge for many teachers. Because problematic student behavior can be a daily struggle for teachers, researchers have attempted to address this concern. Most of the commonly implemented and effective behavioral interventions for students with behavioral problems are based on principles of social learning theory and behavior modification. These interventions include strategies such as differential reinforcement, group contingencies, and token economies (Chaffee et al., 2017; Maughan, Christiansen, Jenson, Olympia, & Clark, 2005).

Behavior modification interventions can be implemented at an individual or class-wide level. Class-wide interventions consist of research-based teaching practices that preventively promote and reinforce positive behavioral competence while minimizing problem behaviors (Conroy, Sutherland, Snyder, & Marsh, 2008). Class-wide interventions may include using close supervision, establishing classroom rules, increasing praise, monitoring progress, and providing corrective feedback. An example of a class-wide intervention is the Good Behavior Game (GBG; Flower, McKenna, Bunuan, Muething, & Vega, 2014). GBG is a classroom management strategy that uses a group contingency procedure that involves dividing the class into teams and awarding points for meeting daily expectations. The team with the fewest infractions or most points earned is rewarded. According to a review conducted by Flower et al. (2014), GBG has been used and studied for more than 40 years and has been found to be useful to positively change student behavior.

GBG is just one example of a multitude of effective class-wide interventions. A recent meta-analysis by Chaffee et al. (2017) assessed a range of other effective class-wide interventions that specifically targeted off-task and disruptive behaviors in young students. Results suggest and support that class-wide behaviorally oriented interventions are highly effective at improving student behavior in general education settings. Similar findings are found for class-wide behavioral interventions supporting ethnic-racial minority students with problem behaviors (Long, Miller, & Upright, 2019) and group contingency interventions that include children in special education classrooms (Little, Akin-Little, & O'Neill, 2015).

Parent-based interventions for the treatment of behavioral concerns are also effective for students with behavioral problems. As just one example, a recent meta-analysis by Mingebach et al. (2018) found that behaviorally based parent interventions were effective for changing child behavior. Moreover, follow-up results indicated stability in those behaviors. Another meta-analytic investigation that included between-subject, within-subject, and single-subject experimental designs indicated that behavior parent training as a treatment for externalizing and disruptive behaviors was a successful intervention for the children (Maughan et al., 2005).

#### **Behavioral Interventions with Latinx Families**

A large proportion of evidence-based behavioral interventions fail to focus on culturally and linguistically diverse populations and factors that may be contributing to the success (or failure) of behavioral interventions. To assess whether established evidence-based interventions generalize to other populations, such as students who identify as Latinx, researchers have begun to adapt and then assess these interventions. For example, Ceballos and Bratton (2010) conducted a study to examine the effectiveness of a behavioral intervention for low-income immigrant Latino parents and children to reduce problem behaviors and parental stress. Their findings suggest that the culturally adapted behavioral intervention, Child Parent Relationship Therapy (CPRT), was an effective intervention for both parental stress and children's behavioral problems. Effective characteristics of the intervention were the supportive group format, which responds to Latinx parents' preference for group settings, as well as the intervention's

ability to reach non-English speaking Latinx parents and children (Ceballos & Bratton, 2010).

Another example of the efforts to address behavioral concerns in Latinx students was conducted by Barrera and colleagues (2002). This study included Hispanic and non-Hispanic students with aggressive behaviors and reading difficulties, who were then randomly assigned to either the intervention or control condition. Parents of children in the treatment group received parent training. Meanwhile, their children received social behavior interventions and reading instruction over a 2-year period. At the end of the intervention, playground observations demonstrated that children who received the intervention displayed less negative social behaviors than controls.

A third study that attempted to address behavioral concerns in Latinx students targeted Latino English Language Learners (ELLs) by using GBG. Ortiz and colleagues (2017) evaluated GBG as a targeted intervention for third-grade Latino ELLs for disruptive and out-of-seat behavior. Effects on disruptive behaviors were moderate for this population and the outcomes for out-of-seat behavior were negligible. Thus, although some research suggests that behavioral interventions for Latinx students have a positive impact, further research that evaluates the factors contributing to positive outcomes is still needed. A model that attempts to address factors that may be influencing positive behavior outcomes in schools is Behavioral Consultation.

#### **School-Based Behavioral Consultation**

The Behavioral Consultation (BC) model, originally proposed by Bergan in 1977, is an indirect service delivery model that involves a collaborative, voluntary, and

confidential relationship between a consultant (e.g., school psychologist) and a consultee (e.g., teacher) to address a client's (e.g., student) problems and increase the ability of the consultee to problem-solve a similar issue in the future (Bergan, 1977; Martens et al., 2014). In school settings, although the school psychologist may have little to no contact with the student, BC is considered well suited for addressing school-based problems because of its client-centered, problem-solving focus (Erchul & Martens, 2010). Moreover, this delivery method can be much more cost effective than direct services because it allows the school psychologist to potentially impact more children than she/he would when delivering direct services (Sheridan, Kratochwill, & Bergan, 1996).

School-based BC has two fundamental goals. The first goal is to enhance services to clients and the second is to increase a consultee's capacity to effectively deal with similar situations in the future (Gutkin & Curtis, 2009). The development and implementation of effective and acceptable interventions for students who exhibit externalizing behaviors in the classroom is an important educational problem but supporting and training educators on how to do so is equally so. School-based BC is an effective model through which this can be done.

The school-based BC model combines strategies and tactics of behavior analysis with a problem-solving approach that is used to develop intervention plans and treatment outcomes (Erchul & Martens, 2010). The effectiveness and acceptability of the intervention is taken into particular attention by this model. BC uses a four-stage problem-solving model to increase the probability of creating an effective intervention. The first stage in the process is known as Problem Identification. During this stage, the

estimate of the frequency, duration or intensity of the problem behavior and to identify potential antecedents and consequences (Gresham, 1982). The second stage is known as Problem Analysis. This stage involves validating the existence of a problem, identifying factors that influence the problem solution, and developing a plan with the teacher to address the problem behavior. The third stage is Plan Implementation, which involves the implementation of the intervention that is designed or selected by the school psychologist and teacher in a collaborative manner. Finally, the last stage of school-based BC is Plan Evaluation. Plan evaluation consists of assessing the data collected during consultation and the intervention process to see if the intervention was successful. Next steps are also discussed.

Empirical support for BC. Over the years, BC has received a substantial amount of empirical support for being an effective model of service delivery (Medway, 1979; Sheridan et al., 1996). Support for BC has primarily occurred through the accumulation of empirical research using literature reviews, meta-analyses, methodological reviews, and randomized control trials (RCTs; Erchul & Sheridan, 2014). As just one example among many, Reddy and colleagues (2000) conducted a meta-analytic review and computed effect sizes for different consultation models, including BC. Results indicated that BC produced large, positive effects on clients and consultees, and consultation was particularly effective for externalizing behavior problems.

One illustration of an RCT evaluating the effects of BC is by Cappella et al. (2012). To examine the effects of a teacher consultation and coaching program on

classroom interactions and child adjustment, Cappella et al. randomly assigned thirty-six classrooms within five urban elementary schools (87% Latino, 11% Black) to intervention and control conditions. Results suggest that the consultation and coaching had a positive impact on classroom interactions and child functioning.

A more recent example of the effectiveness of BC manipulated the modality in which school consultation was delivered. In this study, Bice-Urbach and Kratochwill (2016) examined the impact of delivering consultation services via videoconferencing (i.e., teleconsultation) that was designed to reduce disruptive behavior in students living in rural communities. Results indicated that disruptive student behavior improved, and teleconsultation was found acceptable by teachers.

School-based behavioral consultation focuses on teacher collaboration and training to enact change on student behavior. However, research suggests that school-based interventions that involve high levels of home involvement, such as school-home notes, are associated with stronger intervention outcomes (Vannest et al., 2010).

Assessing the effects of this relationship is imperative.

#### The Home-School Partnership

The home and school setting are two big influences in a student's life. Schoolaged individuals spend a significant amount of time in school settings where educators
are primarily responsible for their behavior and education. Meanwhile, another primary
setting for students is their home; therefore, building a strong relationship between school
and home is of utmost importance, especially when behavioral needs are expressed in
both.

Because the family environment is a primary setting in which an individual learns social behaviors, parents can have a strong and lasting influence on those behaviors (Maughan et al., 2005). Therefore, when addressing issues relating to treatment provision of families with children with behavior concerns, it is imperative to give specific attention to the role of the parent(s) on their children's behavior development. Research indicates that students benefit when there is a positive, collaborative relationship between parents and educators (Sheridan, Bovaird, Glover, Garbacz, Witte, & Kwon, 2012).

Reviews of the parental involvement literature suggest that active parent participation is a key factor in student success. Specifically, research indicates that active parent participation is related to factors such as increased student achievement and fewer discipline problems in the classroom and at home (Esler, Godber, & Christenson, 2002; Jeynes, 2012). Moreover, positive interactions between parents and educators based on a common interest increases the likelihood that behavior interventions will be effective (Clark & Fiedler, 2003). Features of an effective home-school partnership include: (a) a belief in a shared responsibility for educating and socializing students; (b) an emphasis on the quality of the interactions among families and school personnel; and (c) a focus on mutually identifying solutions and conditions that support learning and optimal development (Sheridan, Eagle, Cowan, & Mickelsen, 2001).

One method to address service delivery that incorporates a home-school relationship is Conjoint Behavioral Consultation (CBC; Sheridan, Clarke, & Ransom, 2014). CBC offers a structured model that actively engages educators and family members in shared decision making with shared responsibilities regarding a student's

performance. This model conjointly provides support for parents and teachers to address the behavioral needs of students both at home and school.

#### **Conjoint Behavioral Consultation**

CBC is an expansion of school-based behavioral consultation. It is a strengths-based, problem-solving, decision-making model of service delivery in which parents, teachers, and other caregivers work collaboratively to promote positive and consistent outcomes related to the child or adolescents' academic, behavioral, and social-emotional development (Sheridan & Kratochwill, 2008). In CBC, a consultant works with both the teacher and the parents interdependently and simultaneously (i.e., conjointly).

With the active involvement of a trained consultant, the purpose of CBC is to facilitate collaborative work among individuals who play a significant role in a child's life. CBC allows for a collection of data across settings, which may enhance generalization and maintenance of the treatment. CBC makes several assumptions within its model. First, it assumes an ecological behavioral perspective to problem solving (Sheridan, 1997). That is, the home-school relationship is viewed as an interactive and cooperative triadic relationship. Moreover, it assumes that the collaborative problem solving will create the greatest benefits (Sheridan, 1997). Finally, it assumes that all persons involved will be willing to participate, get along, and share information with one another to produce helpful insights and considerations regarding the child.

**Stages of CBC.** The stages of CBC parallel the four stages of BC, but with an added parent component. The first stage of CBC is the Conjoint Problem Identification (CPI) stage (Sheridan et al., 2014). This stage is operationalized through the CPI

interview and therein the consultant works with the parent(s) and teacher to identify the student's needs, operationally define the behavior, determine factors that contribute to the behavior in both settings, and define treatment goals and progress monitoring procedures. The second stage, Conjoint Needs Analysis (CNA), consists of another interview conducted by the consultant with the parent(s) and teacher. This interview is used to evaluate the baseline data collected, which are used to determine variables that influence the behavior and to develop a meaningful plan to address the behavior across the settings. Immediately following the CNA stage is the Plan Implementation stage, which consists of parent(s) and teacher implementing and monitoring the intervention that was developed. The final stage is Conjoint Plan Evaluation (CPE). The CPE stage consists of an interview by the consultant with the teacher and parent(s) to evaluate the effectiveness of the intervention and to determine the future course of action (e.g., continuation, termination, planning for maintenance, and follow-up).

Empirical support for CBC. Research has indicated that CBC is an effective and acceptable model of service delivery that also reflects promising levels of treatment integrity (Sheridan et al., 2014). According to Sheridan et al. (2014), there were a total of 21 published studies that investigated the effects of CBC using experimental or case study designs evaluating various behavioral, social-emotional, and academic concerns. Since then, at least four other empirical studies have been published (i.e., Bellinger, Lee, Jamison, & Reese, 2016; Garbacz & McIntyre, 2015; Garbacz, Watkins, Diaz, Barnabas, Schwartz, & Eiraldi, 2017; Ohmstede & Yetter, 2015).

One of the earliest studies to examine the effectiveness of CBC was conducted by Sheridan, Kratochwill, and Elliott (1990). This study included four socially withdrawn children from the Midwest and its purpose was to examine the effects of a social intervention. Sheridan and colleagues reported that CBC was an effective model of service delivery that showed strong client treatment gains and generalization when compared to the effects of teacher-only behavioral consultation.

A more recent example is a large-scale RCT conducted by Sheridan and colleagues (2013). Sheridan et al. randomly assigned 207 children with disruptive behaviors in kindergarten through grade 3 to treatment and control condition by classroom. Results indicated that there was an increase in parent problem solving, an increase in home-school communication, and a decrease in disruptive behaviors (i.e., arguing, defiance, noncompliance, and tantrums).

Although various studies have assessed CBC using both experimental and case study designs to address behavioral, social-emotional, and academic concerns, few studies have assessed the effectiveness and acceptability of CBC with minority clients. Moreover, far less research has included Spanish-speaking Latinx families as its population of interest. The limited application of CBC to diverse clients may limit the potential for understanding multicultural issues that may develop when working with culturally diverse students and their families.

### **CBC Literature and Minority Clients**

CBC is a structured, organized approach to problem solving that emphasizes the need for specificity, directness, and operationalization of problems, which is seen as

important and logical in Euro-American tradition (Sheridan, 2000). However, this depiction may not be important or helpful to participants from diverse backgrounds. In fact, it may potentially be counterproductive.

To investigate the acceptability and effectiveness of CBC with minority clients, Sheridan, Eagle, and Doll (2006) conducted a large-scale study. The purpose of this study was to examine the effectiveness and acceptability of the CBC process with children who represented various forms of diversity across a variety of key constructs (i.e., ethnicity, socioeconomic status, family composition, maternal education levels, and language spoken in the home). The results suggested that CBC was an effective and acceptable model of service delivery for children representing diversity. However, the limitations of this study included the small number of children with specific diverse characteristics and subjective measures of diversity indicators that only relied on parent report.

Considering the limitations of this study, additional research is needed to further assess various factors affecting the use of CBC as a mode of service delivery, especially among the rapidly growing Latinx community. Some factors that should be considered are language and cultural perceptions. For instance, Becerra (2012) suggested that there are cultural perceptions that create misunderstandings between white teachers and Latinx parents. Cultural norms for Latinx families tend to include the tendency to view educators as authority figures, and therefore, during parent-teacher interactions, Latinx parents often remain quiet and do not ask follow-up questions. Moreover, when information or meetings are not held in Spanish, this may deter parents from getting involved or attending meetings. These situations can be misinterpreted by teachers and educators as a

lack of caring, which may lead to decreased motivation to reach out to these parents.

Although CBC is specific and direct and may potentially promote the educator-as-the expert perception, cultural adaptations have shown promise for this population.

One of the few studies that has investigated CBC with Latinx students and families was conducted by Clarke and colleagues in 2017. This study examined the effects of CBC on a subsample of Latinx students enrolled in two large-scale randomized control efficacy trials. ANCOVA and *t*-test analyses revealed generally positive effects for CBC on Latinx student and parent outcomes, and parent-teacher relationships. However, there were several limitations. One central limitation was that little was known about the level of acculturation or other cultural factors that could have played a role. Another limitation was that all the consultants and teachers in this study identified as being White/non-Hispanic and English speaking. Finally, the potential effect that interpreters may have had on the process or outcomes were indiscernible.

Using an interpreter. Treatment studies involving Spanish-speaking Latinx families tend to involve the use of interpreters (Villalobos, Bridges, Anastasia, Ojeda, Rodriguez, & Gomez, 2016). A concern with involving interpreters during the delivery of consultation services to Spanish-speaking families is that effective collaboration between consultants, consultees, and clients requires clear communication to identify and solve instructional problems; using interpreters may compromise that communication (Rosenfield, 1987). Moreover, some research suggests that working with interpreters is a problematic process. School psychologists have reported having no training working with interpreters and have reported working with untrained interpreters during assessment

sessions and parent conferences (Lopez, 2000). Results of an investigation conducted by Lopez (1994) suggests that interpreters involved in her study made numerous significant errors when translating information of a cognitive assessment from English to Spanish.

To evaluate the role of interpreters during consultation, Lopez (2000) conducted a study with five participants of diverse backgrounds that suggested that interpreters served both as a facilitator and a barrier in the consultation process. In this study, working with interpreters influenced the pace of the instructional consultation process by slowing down the process, which was a source of frustration for consultees. Second, clarity of the communication between consultation participants was both facilitated and hindered by the interpreters. Interpreters were instrumental in obtaining important background information but also failed to translate everything that was communicated. Third, using interpreters affected the establishment of rapport and trust in instructional consultation. Thus, if the consultee was unfamiliar with the interpreter, he or she often felt discomfort communicating personal and confidential information. These identified barriers have implications for the success of the consultation process, particularly when the interpreter is not competent working in consultation situations, when information is omitted, and when sessions are extended. Similar barriers (e.g., increased time required for consultation, quality and quantity of transmitted information, practitioner-client relationship) are reported during mental health care consultations (Brisset et al., 2014).

## **Purpose of Study**

The purpose of this study is to extend the CBC literature to working with Spanishspeaking Latinx families. The proposed study will involve providing CBC to Spanishspeaking families and teachers of children or adolescents exhibiting externalizing problem behaviors in school and home settings, in Spanish, to circumvent the need of an interpreter. In particular, there is interest in documenting the extent to which conducting CBC using a Spanish-speaking consultant will result in positive outcomes on various measures for all participants.

First, it is hypothesized that teachers and Spanish-speaking Latinx parents will carry out the behavior intervention plan developed using CBC with adequate integrity when the services are provided in Spanish. Evidence of support or failure to support will be based on an obtained 80% treatment integrity. Second, it is hypothesized that CBC will be acceptable to teachers and Spanish-speaking Latinx parents as a method for changing identified behavior when services are provided in Spanish. Support for this hypothesis will be dependent upon obtaining a mean rating above the midpoint on a rating scale. Third, it is hypothesized that CBC will be effective in reducing the frequency, duration or intensity of the identified problem behaviors in school. Finally, it is hypothesized that CBC will be effective in reducing the frequency, duration or intensity of the identified problem behaviors at home.

#### Method

## **Participants**

Following IRB approval, the proposed CBC research study will consist of a minimum of three consultation cases. Each case will have a general education teacher, a parent, and the consultant who will be the primary researcher. All three sets of teachers and parents will be Spanish speaking who may or may not identify as Latinx. Teachers

and parents will be recruited from elementary schools in Southern California, where the target students will be enrolled in a general education classroom.

To enhance replicability, several characteristics will be gathered and reported for all participants. For instance, teacher characteristics that will be collected and reported are: (a) education level; (b) years of teaching; (c) gender; (d) age; (e) ethnicity; (f) previous experience with consultation; and (g) available supports in the classroom (e.g., class aide). Parent characteristics that will be collected and reported are: (a) level of acculturation; (b) primary language spoken in the home; (c) education level; (d) level of school participation; (e) age; and (f) relationship to student. For the target students, characteristics that will be collected and reported are: (a) grade; (b) age; (c) primary language; (d) socioeconomic status (SES); (e) gender; and (f) reason for referral. This information will be collected using a demographic information sheet developed by the researcher and an acculturation scale at the start of the proposed research study.

Selection criteria. Teachers and parents will be asked to participate in the study if (a) they have a child that was referred for externalizing behavior concerns in the classroom and (b) if both parents and teachers speak Spanish. Parents and teachers will be asked to complete a rating scale to determine the severity of the problem behaviors. The rating scale that will be used is the Behavior Assessment System for Children - Third Edition (*BASC-III;* Reynolds & Kamphaus, 2015). Students with significant ratings (i.e., at least one and a half standard deviations above the mean) on the externalizing behavior problem scale both at home and school will be eligible to be included. The student must also be in general education and both parents and teachers must give consent. Students

will be asked to assent if they are of age. Permission from schools and districts (e.g., principal and superintendent) will be gathered before the start of the study.

#### Setting

The proposed research study will take place both at school and home. The CBC interviews will be conducted in school, either in a classroom or a conference room, at a time that is convenient for both parents and teachers. The individualized intervention plans that are developed during the second interview and the daily behavior ratings will take place at school and home. However, observations for treatment integrity will only occur in school while the teacher is collecting his/her behavior data. Procedural integrity of the CBC process will be completed at school by the consultant and in a university setting by an independent observer.

The school setting will be one or more elementary schools, ideally within the same school district, in Southern California. The school(s) should be using a Multi-tiered System of Support (MTSS) to identify and make data-based decisions about all students' needs, including behavioral. Important characteristics that will be collected and reported for school(s) are: (a) the general location; (b) type of school (e.g., K-6, TK-5); (c) demographics; (d) percentage of students receiving Free and Reduced Lunch; and (e) years using an MTSS model.

Locations of the interviews and data collection are predicted to be stable.

However, some CBC studies have reported having to modify the modality in which the interviews are conducted because parents were unable to attend (Ohmstede & Yetter, 2015). In Ohmstede and Yetter (2015), interviews were changed so that parents could

participate via telephone. This proposed study would modify the modality of the interviews in a similar fashion, if needed.

## **Design**

The proposed research study will use a nonconcurrent multiple baseline design (MBD) across participants to evaluate the effectiveness of the behavioral intervention developed in the context of CBC delivered in Spanish for both school and home. For each student, the intervention will commence simultaneously at home and school. Phase change will depend on the stability and trend of the data. During all phases, there will be a minimum of 5 data points per single-case standards (Kratochwill et al., 2010). After the baseline phase for each series, the intervention will begin shortly after the second CBC interview. The intervention phase will conclude with the final interview.

MBD analysis will be used because it allows the researcher to protect against threats to the internal validity of the proposed study. Specifically, by replicating the phase changes across the series of students, each series will act as a control for the previous set. Moreover, the staggering of the baseline will occur by at least three data points to ensure phase changes occur at different points in time for the students in the two-series. MBD does not require a withdrawal of the intervention once it is implemented. This is useful for implementing with distinct behaviors across multiple people and is feasible to implement in applied settings (Kazdin, 2011).

#### Instruments

Informed consent form. Informed consent forms for the teacher and parent(s) will be created by the researcher. The form will contain detailed information about the study and an option to sign for participation.

Demographic information. A demographic information sheet created by the researcher will be distributed to the parents and teachers after informed consent for participation has been obtained. Demographic information on the parent's sheet will include the student's gender, age, ethnicity, and relationship to the student. It will also contain questions regarding the parent(s) gender, age, ethnicity, primary language spoken in the home, education level, level of school participation, and socioeconomic status (SES). The demographic sheet the teacher will be asked to complete will contain questions regarding their gender, ethnicity, age, education level (i.e., years of college and highest degree obtained), years of experience, previous experience with consultation, and available supports in the classroom (e.g., class aide).

The Bidimensional Acculturation Scale for Hispanics (BAS; Marin & Gamba, 1996). Parents will be asked to complete the BAS alongside the demographic information sheet to assess each parent's level of acculturation. The BAS is a 24-item measure of acculturation under three domains: general language use, language proficiency, and language use in media. The scale provides a score within two major subscales (Hispanic and non-Hispanic) using a 4-point Likert scale (1 = almost never, 4 = almost always). Research with the BAS has yielded adequate internal consistency measures as a whole  $(\alpha = .90; Marin & Gamba, 1996)$ . Peragallo et al. (2005) found similar alpha coefficients of  $\alpha = .90$  and  $\alpha = .96$  for Hispanics and non-Hispanics respectively.

Behavior Assessment System for Children – Third Edition (BASC-III; Reynolds & Kamphaus, 2015). The BASC-III is a multidimensional and multi-method diagnostic tool designed to assess the behavior and self-perceptions of children and young adults ages 2 to 25 years. Teacher, parent, and self-report measures are available in both English and Spanish. The BASC-III norms are reflective of the 2013 U.S. Census Bureau American Community Survey, which are also differentiated based on sex, age, and clinical status of the child. This study will only use the teacher and parent Spanish versions and scores will be calculated using age-based norms.

Behavioral Observation Recording Form. A behavior observation form will be created by the researcher so that parents and teachers can record the frequency, duration, and/or intensity of the student's inappropriate target behavior(s). The information recorded will be reported to the investigator on a daily basis.

Behavior Intervention Rating Scale (BIRS; Von Brock & Elliott, 1987). The BIRS will be translated to Spanish and used in this study to evaluate the consultees' perception of the effectiveness of the behavioral intervention developed in the context of CBC. The scale contains 24 items that are rated on a 6-point Likert scale. A rating of 6 is the highest possible score, which indicates a high level of acceptability with the behavior intervention. The BIRS produces three factor scores: Acceptability, Effectiveness, and Time to Effectiveness. The reported alpha coefficients for the total scale are .97 for Acceptability, .92 for Effectiveness, and .87 for Time to Effectiveness. Previous research using CBC has reported alpha coefficients of .95 for teachers and .93 for parents

(Sheridan et al., 2001). These results suggest that the *BIRS* is a reliable measure for assessing outcomes of the CBC process.

Consultant Evaluation Form (CEF; Erchul, 1987). The CEF will be translated to Spanish and will be completed by teachers and parents to evaluate their satisfaction with the consultation experience. The CEF is a 12-item, 7-point Likert scale. 7 is the highest possible score, which indicates high satisfaction with the consultant's effectiveness. The CEF asks specific questions about the consultees' perceptions of the helpfulness of the consultant, the benefits of consultation, and the overall satisfaction with the experience. Research with the CEF has yielded adequate internal consistency estimates ( $\alpha$  = .95; Erchul, 1987). Previous research using the CEF within CBC has reported alpha coefficients of  $\alpha$  = .83 and  $\alpha$  = .89 on the teacher and parent scales respectively (Sheridan et al., 2001).

Conjoint Behavioral Consultation Objectives Checklist (Sheridan et al., 2001). The CBC Objectives Checklist is a summary of CBC objectives as listed in the CBC structured interview forms from Sheridan et al., (1996). The CBC Checklist will be updated by the investigator to reflect the objectives listed in Sheridan and Kratochwill (2008).

Treatment integrity checklist. A treatment integrity checklist will be created by the researcher for each consultation case. The checklist will contain all of the steps of the individualized behavior intervention plan developed during consultation and will be completed by both parents and teachers.

#### Procedures

Once students are referred for problem behaviors and express interest to participate in the study, consultees will be asked to complete a BASC-III rating form to determine if the students meet selection criteria. If the criteria are met, the consultees will receive a packet that includes the paperwork needed for the initial stage of the proposed study. This packet will include paperwork such as: (a) an information sheet inviting the individuals to participate and specific details about the study; (b) copies of the informed consent; (c) a copy of a demographic information sheet. Parents will receive copies of the acculturation scale in their packet.

After informed consent, the series of CBC interviews will begin. During the first CBC interview, the consultees will be given copies of a behavior observation form and treatment integrity checklist, which will be completed by the consultees daily. During this initial interview, the procedures for collecting behavioral data will be explained and consultees will be given the opportunity to practice by observing videos and studying vignettes. During this meeting, performance feedback (e.g., praise for correct implementation, corrective feedback, and addressing questions or concerns) and a training manual will be provided. The training manual will serve as a reference for the consultees for all data collection procedures. Parents and teachers will need to meet 100% performance criterion before training is completed. Then, baseline data collection will occur. Once an intervention is developed and agreed upon in the second interview, the conjointly developed intervention will be implemented throughout the day, both at school and home. The structured CBC interviews are expected to last 30-45 minutes. Scheduling of the interviews will be dependent on the stability and trend of the data being collected

and a minimum of 5 data points within baseline because the interviews will preclude phase changes.

The problem behavior will be recorded by the parents and teachers in both the school and home settings. The observation period will occur at the same time, for the same duration, every weekday. Data will be recorded on personalized behavior observation forms provided by the consultant.

The consultees will be asked to complete the *BIRS* and the *CEF* immediately following the second CBC interview and sometime after the initiation of the intervention (e.g., two weeks after). During the final CBC interview, consultees will be asked to complete a second BASC-III form, the *BIRS*, and the *CEF*. In total, the *CEF* and *BIRS* will be completed at three different time points, and the BASC-III will be completed twice (pre/post intervention).

**Procedural integrity.** In the proposed study, the investigator will collect integrity data regarding the fidelity with which the consultant and consultees follow the CBC procedures set forth in the literature. The degree to which parent and teacher consultees correctly implement the behavioral interventions that will be developed through the consultation process will also be measured.

The procedural integrity of the CBC process (that is, the degree of fidelity to the CBC procedures) will be documented in three ways. The first method that will be used to measure adherence to the CBC procedures will be by assessing the adherence of the consultant and the consultees to the different components of the process. The integrity of

the different components of the CBC process will be carried out by documenting teacher and caregiver attendance to the scheduled consultation meetings.

The second method procedural integrity will be documented is by having the consultant complete the updated CBC Objectives Checklist immediately after every CBC interview (Sheridan et al., 2001). The third method for assessing procedural integrity will be by confirming that all interview objectives set forth in the CBC literature are met. The CBC procedures will be monitored during the interviews by audiotaping all the interviews with the consultees. The recorded interviews will be coded by a trained independent observer.

The independent observer will be a graduate student trained in consultation, preferably with previous experience implementing behavioral consultation in a school setting. Moreover, the consultant/researcher will provide the independent observer a brief training on how to assess procedural integrity of the CBC process using the CBC Objectives Checklist. The observer will be provided with concrete examples of the information that each objective targets. The independent observer will listen to 100% of the audiotaped sessions and will complete the CBC Objectives Checklist for all sessions to assess the level of integrity that the consultant adhered to.

Treatment integrity. Treatment integrity (that is, the integrity with which the consultees correctly implement the interventions developed) will also be measured.

Treatment integrity will be assessed by the consultant. The consultant will monitor the rates of completion and other components of the developed interventions by calculating the percentage of intervention steps completed and dividing that by the total number of

intervention steps. The intervention checklists will be designed so that parents and teachers can complete the checklists each day that the intervention is implemented. The checklist will be completed and then reported to the consultant daily via email, Google Documents, or telephone, depending on parent and teacher preference.

The purpose of having the checklist be submitted daily is to encourage the implementation of the intervention with fidelity. If treatment integrity data indicate that the intervention is not being implemented with fidelity (i.e., at least 80% treatment integrity), retraining in the intervention procedures (e.g., booster sessions) and follow-up phone calls or emails will be provided. Intervention data will continue to be collected if treatment integrity is low, but the phase will be extended to collect more information about the intervention when it is implemented with fidelity.

An independent observer will score treatment integrity forms for 20% of all the identified periods to collect interobserver agreement (IOA). So about once a week, the independent observer will go to the school to collect data on the target behavior during the same period and duration in which the teachers conduct his/her observations. The same behavior observation form will be used. IOA will not be collected for the home setting.

## **Social Validity**

Two measures will be used to assess social validity: the *BIRS* and *CEF*. Parents and teachers will be asked to rate their satisfaction with the consultation experience at three different times in the proposed research study: (a) immediately following the second interview; (b) sometime after beginning the intervention (e.g., one week or two

weeks); and (c) at the end of the study. The consultant/researcher will score the rating scales for all participants across the three points of time to indicate the scores of acceptability. Mean scores will be reported and scores above the median on the scale will be considered "acceptable."

## Analysis

Visual analysis. Data collected for the problem behaviors exhibited by the student will be compiled and graphed for further analysis. The frequency, duration or intensity of the targeted externalizing behavior(s) displayed at school and home will be graphed on the same chart. If the student displays multiple problem behaviors, separate lines will be used to identify each behavior in his/her respective setting. Subjective data on treatment integrity and treatment acceptability will be gathered and reported as descriptive statistics.

Visual inspection of the graphed data will involve looking at level, trend, variability, immediacy of the intervention effect, and overlap (Kratochwill et al., 2010). Level changes will be examined to determine the change in behaviors from the end of the baseline phase to the beginning of the intervention phase. If a large change in levels occurs after the intervention is implemented, the level change would suggest a treatment effect. The mean level of each phase will be calculated by adding the ordinate values of data points in each phase and dividing that number by the total sum of the number of data points in that phase.

Trend changes refer to the slope of the best-fitting straight line for the data within a phase (Kratochwill et al., 2010). Specifically, trend changes show systemic increases or

decreases in the data over time. If the intervention phase in the proposed research study is effective, the data for the frequency, duration or intensity of the target behavior(s) will show a systematic decelerating trend across the intervention phase. Variability refers to the range or standard deviation of data about the best-fitting straight line (Kratochwill, et al., 2010). Stability is satisfied if about 85% of the data in a phase fall within a 15% range of the average of all data points for the phase. This is evaluated by calculating the percentage of data points within 15% of the phase mean.

Immediacy of the effect refers to the change in level between the last three data points in one phase and the first three data points of the next (Kratochwill et al., 2010). For example, the more rapid (or immediate) behavior changes in the intervention phase, the more convincing that the change in behavior is the result of the intervention. Meanwhile, overlap refers to the proportion of data from one phase that overlap with data from the previous phase (Kratochwill, et al., 2010). That is, the larger the separation between data points, the more compelling that there is a demonstration of an effect.

Effect size. Apart from visual analysis, effect size estimates will also be derived from each individual case to determine whether CBC delivered in Spanish produced an effect, and if so, the magnitude of that effect. Recent consultation studies have used single-case effect size calculations to determine the magnitude of intervention in conjunction with visual analysis (Ohmstede & Yetter, 2015). Effect size estimates will be calculated from the daily observational data by computing the percentage of nonoverlapping data points (PND) in the baseline and intervention phases.

PND refers to the percentage of data points in treatment that are better than the best data point in baseline (Scruggs, Mastropieri, & Castro, 1987). This will be calculated by dividing the number of data points in the treatment phase that exceed the best data point in the baseline phase by the total number of data points in the treatment phase, which is then multiplied by 100.

**Descriptive data.** Descriptive data that will be obtained from the subjective measures completed by the consultees, consultant, and independent observer will also be analyzed in the proposed research study. Specifically, data regarding the student's problem behavior(s) will be analyzed using pre- and post-data from the BASC-III. Meanwhile, social validity of the intervention and consultation process will be examined using the BIRS, CEF, and treatment integrity measures. Data regarding the procedural integrity of the CBC process will be calculated by tallying the information from the CBC Objective Checklists that were completed by the consultant and by the independent observer for each consultation meeting. The percentage of procedures followed with integrity will be computed by adding the number of objectives met in the interviews and dividing that by the total number of objectives for all sessions. Information regarding the treatment integrity of the behavioral intervention will be calculated and reported in a similar fashion. Specifically, treatment integrity will be analyzed by calculating the percentage of steps completed, as reported by the consultees, by the total number of interventions steps included in the intervention plan.

### **Expected Results**

#### **Intervention Outcomes**

It is expected that for all students in the proposed research study, the frequency, duration or intensity of problem behavior(s) displayed at school and home will be lower compared to the levels collected during baseline. Specifically, there will be an immediate and marked difference in the level and trend of the frequency, duration or intensity of problem behavior(s) during the intervention phase compared to baseline. It is also expected that the BASC-III Parent and Teacher forms administered at baseline and following treatment will show significant decreased levels (i.e., greater than 1 standard deviation) of problem behavior(s) for all students.

Although the frequency, duration or intensity of the problem behaviors is expected to decrease for all students after the interventions are implemented, there is a possibility that it will not. It may be that during problem identification, the wrong problem behavior(s) will be identified and prioritized, that the intervention will not be implemented with sufficient fidelity overall, that core components of the interventions will not be implemented with fidelity, or that consultees will not be provided with enough supports. If this is the case, the CBC protocol dictates that the consultant and consultees must discuss options to either: (a) end the consultative process, (b) continue data collection, or (c) revert back to problem identification and develop a new intervention plan.

## **Procedural and Treatment Integrity**

It is expected that the independent observer who listens to the audiotaped sessions for each case will indicate that the CBC procedures were implemented with 93% to 96% adherence to CBC procedural requirements (Sheridan, Witte, Holmes, et al., 2017; Sheridan, Witte, Kunz, et al., 2018). The teachers' and parents' adherence to the CBC process (i.e. participation in CBC meetings) is expected to be 100% in all cases.

For each consultation case in the school setting, the weekly observer agreement between the teacher and independent observer is expected to average about 82% or more (Sheridan, Witte, Holmes, et al., 2017). Teachers and parents in all cases are also expected to have moderate to high levels of treatment integrity for implementation of the intervention. Based on previous CBC research, it is expected the percentages for teachers will range from 72% to 92%, and for parents, percentages are expected to range from 44% to 82% (Ohmstede & Yetter, 2015; Sheridan et al., 2012).

### **Social Validity**

The *BIRS* and *CEF* will be administered by the consultant at three different points in the study. It is expected that overall mean scores on the *BIRS* will indicate that teachers and parent(s) have moderate to high levels of treatment acceptability. It is expected that the overall mean scores on the *CEF* will indicate that teachers and parent(s) have high levels of satisfaction with the effectiveness of the consultant.

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