

Preliminary report: An application of the Good Behavior Game in the developing nation of Belize

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Abstract

Educating children on a global level is a dynamic process where policy, procedure and guideline changes can leave teachers searching for new programs to resolve new challenges. This brief report shows a successful application of the Good Behavior Game in a school in the country of Belize following a significant change in policy regarding acceptable practices in addressing school-based behavioral challenges.

Keywords

Belize, corporal punishment, diverse classroom, Good Behavior Game, intervention

As noted by Donaldson, Vollmer, Krous, Downs, and Berard (2011), the Good Behavior Game (GBG) is an interdependent group contingency that has broad applications across age groups and settings. The use of team concepts, simple rules, and situation specific contingencies allows for easy introduction into most educational settings. Having effective behavioral tools available for school personnel is vitally important for behavior management in diverse classrooms with challenging behaviors (Nolan, Houlihan, Wanzek, & Jenson, 2014). Although the

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Good Behavior Game has a history of successful application in both US and international schools, few studies have occurred in developing countries with diverse classroom participants. Previous studies include a study conducted in one second grade classroom in the El Gazera district of Sudan (Saigh & Umar, 1983) and a longitudinal investigation of 45 children in first and second grade in Santiago, Chile (Pérez, Rodríguez, de la Barra, & Fernández 2005). The present study expands the literature on the GBG by applying it to culturally diverse classrooms within a developing country with few resources. This country banned corporal punishment in schools in 2010.

By adopting the *Education and Training Act* (Government of Belize, 2010a, 2010b), the Ministry of Education in Belize sought to end the practice of corporal punishment in its schools. Rapid establishment of bans on corporal punishment can leave teachers without alternative behavioral strategies to maintain classroom discipline in a quandary as to how to mitigate common behavioral problems (Dupper & Dings, 2008; O'Neil, Killan, & Hough, 2009). While school psychologists are trained to provide teachers with data-based behavioral interventions, evidence of school psychology services is present in only 83 of 192 United Nations member countries, (Jimerson, Skokut, Cardenas, Malone, & Stewart, 2008). Thus, teachers in many countries likely have few resources to identify effective alternatives to corporal punishment. A change in guidelines that form a vital part of the role of teaching without proper alternative resources can lead to unwanted confusion as to how to proceed (Low & Yuan, 2011).

This study was a preliminary trial of the GBG (Barrish, Saunders, & Wolf, 1969) to remediate disruptive classroom behavior in a diverse population of students with limited education resources, in the developing country of Belize. Three research questions were posed. Can the GBG be implemented with treatment fidelity in classrooms with few resources and diverse populations? Second, does the GBG improve classroom behavior problems following the banning of corporal punishment? And third, do teachers and students rate the GBG as an acceptable classroom intervention?

Method

Participants and setting

Thirty-two elementary students aged 6- to 12-years-old from three regular classrooms participated. These included Beginners (i.e. kindergarten), Infant II (i.e. second grade), and a combined Standard II and III classroom (i.e. fourth and fifth grade). Participants represented a diverse mix of cultures including 19% Mestizo, 10% Kriol, 29% Spanish, 32% North American, and 10% Mayan, and reflected the ethnic makeup of the school. The classrooms were approximately equally distributed according to gender. Consent was obtained in accordance with University Institutional Review Board policies and the guidelines of the Belize Ministry of Education. Teachers were recruited through individual meetings in which the

study was explained. Teacher participants had been trained in the United States. Teaching experience ranged from 2–15 years. Two teachers held Bachelors degrees; one held a Masters degree. Classroom resources were limited. No computers were available to students or teachers, and teacher-made tests were hand generated.

Baseline and treatment conditions were conducted in the regular classrooms (15 ft x 20 ft) during typical classroom activities on school days. Two classrooms were set up with traditional rows of desks and chairs and the teacher's desk and blackboard located at the front of the room. In the Beginners' class the students sat at two tables. Data collection was limited to the class period indicated by the teachers as having the most behavior problems and did not exceed 20 minutes in a session. For classroom 1 and 3, all observations occurred during the mathematics class. For classroom 2, all observations occurred during the language arts class.

Measurement

Target behaviors. Teachers in each classroom identified three behaviors to target for intervention. Target behaviors included sitting improperly, talking out, and tattling. Sitting improperly was defined as any position other than being seated with bottom making contact with the chair and facing forward while keeping both feet on the ground. Talking out was defined as verbalization that was not preceded by a raised hand or an indication from the teacher to talk. Tattling was defined as any verbal message that indicated that another student was not following the rules.

Preference assessment. Prior to data collection, the researcher and teacher for each classroom created a paired-choice preference assessment to determine student-preferred reinforcers. The items on the assessment were based on a series of informal teacher, principal, and student interviews and were limited to those that were free or cost effective. This assessment was individually administered to classroom 1 students (Beginners/Kindergarten) by asking them to indicate verbally, which of the pair was preferred. For classrooms 2 and 3 (Infant II/first grade and Standard II and III/fourth and fifth grade) the assessment was administered using a paper and pencil format, with the researcher reading the choices aloud. Items nominated by the students, as most preferred were used as daily reinforcers and included free time, extra credit points, small candies, pencils, erasers, and stickers.

Observations. Trained school psychology doctoral candidates and masters level school personnel conducted the observations during adaptation, baseline, intervention, and follow-up phases. Observers were trained using a video of typical problem classroom behavior and were required to reach a 90% agreement criterion before data collection began.

Data were collected using a 15-second partial interval recording system of one student in the classroom at a time and rotating target students every interval. Each student in the classroom was observed in turn resulting in multiple observations of each child during the 20-minute observation period.

Procedures

Intervention training with teachers

Teacher volunteers were trained in the rules of the GBG in one-on-one sessions in which the rules were explicitly taught, modeled, and practiced with corrective feedback. The teachers were allowed to practice these skills with the researcher before implementing the intervention in their classroom. Training sessions lasted approximately 20 minutes.

Experimental design. A combined single-subject experimental design (multiple baseline with reversal across classrooms) was used to investigate the effectiveness of the intervention (Kazdin, 2011). This eight-week study began with an initial adaptation period in which the observers were present in the classroom for three days prior to beginning of data collection to allow students and teachers time to adapt to their presence. During this time, observers were seated in the back of the room silently practicing coding target behaviors, and avoiding engaging with the students.

Baseline. Adaptation was followed by baseline (A) condition in which trained observers recorded the occurrence of target behaviors during regular classroom activities. When target behaviors occurred during the baseline condition, classroom teachers used common strategies such as ignoring, scolding, penalizing, and removing disruptive students from the room. This phase lasted three days for classroom 1, six days for classroom 2, and nine days for classroom 3. A five-day return to baseline for classroom 1 and a three-day return to baseline for each of classrooms 2 and 3 was implemented.

GBG intervention. At the beginning of the targeted class period, teachers in all three classrooms announced that the class would be playing the Good Behavior Game. Teachers explained that students would have an opportunity to win prizes and privileges during the class period by following the posted class rules each day of the week. Teachers selected daily prizes based on the preference assessment and students were told which prize they would be working toward each day. Teachers gave examples of compliant and non-compliant behaviors for each of the three rules, assigned students to teams each day, and wrote the team names on the board. The composition of teams varied so that students more likely to be disruptive were evenly distributed between teams. Students were instructed that anytime a team member broke a rule, a mark would be written under their team's name that would count against their team. Teachers informed the students that the team with the fewest marks at the end of the period would win the prize for that day. Additionally, each classroom had a criterion for both teams to win. In classroom 1, both teams gained access to the reinforcer as long as each had earned six or fewer hash marks. In classroom 2, the criterion was set at five or fewer, and in classroom 3 both teams had to earn four or fewer marks in order to win the game and receive the reinforcer. If both teams earned more than the criterion, neither team earned

the prize for that day. This occurred on the first day for classroom 1 and two consecutive days for classroom 2. During all other days of the intervention, all teams received access to the reinforcer by meeting the criterion.

When teachers observed a student breaking the rules, a reminder such as ‘Alisa, please keep your backside on your chair’ was issued. The teacher then drew a mark on the board under Alisa’s team name. Initial phase intervention lasted five days for all three classrooms and the length of the return to intervention phase varied among the classrooms in keeping with the multiple baseline design aspect of the combined design. This resulted in 14 days of intervention for classroom 1, 13 days of intervention for classroom 2, and 10 days of intervention for classroom 3.

Follow-up. Follow-up observations were conducted in the classrooms at two-week and two-month intervals to track continued use and to determine if the intervention continued to be successful.

Results and discussion

The results of this intervention are presented in Figure 1. These results indicate that the GBG was successful in reducing disruptive classroom behaviors from baseline to intervention in all three classrooms. In classroom 1, behavior decreased from a mean of 47% of intervals at baseline to a mean of 9% of intervals during intervention. Similar results were demonstrated in classroom 2 with a decrease in disruptive behavior from baseline ($M=23\%$) to intervention ($M=3\%$) and with classroom 3 ($M=42\%$ at baseline & $M=8\%$ at intervention).

Observer agreement. Interobserver agreement (IOA) data were collected for 30% of observations during baseline, intervention, and follow-up sessions. Percentage of agreement was calculated on an interval-by-interval basis by dividing the number of agreements by agreements plus disagreements and multiplying by 100%. Mean IOA was 96% with a range of 88% to 100% and SD of 2.80 across all sampled observations.

Fidelity of implementation. Treatment fidelity was assessed via direct observation using a six-item fidelity checklist during 43% of sessions within each classroom. Treatment fidelity ranged from 75% to 100% with a Mean of 89% and SD of 0.47 across classrooms.

Treatment acceptability. Students were administered the Children’s Intervention Rating Profile (CIRP; Turco & Elliott, 1986) which is a six-item Likert scale measure of treatment acceptability based on Kazdin’s (1981) definition of acceptability. This one-factor measure features internal consistency reliabilities ranging from 0.75–0.89 and is written at a fifth-grade reading level (Finn & Sladeczek, 2001). The wording was changed slightly to reflect that it was used with a class-wide

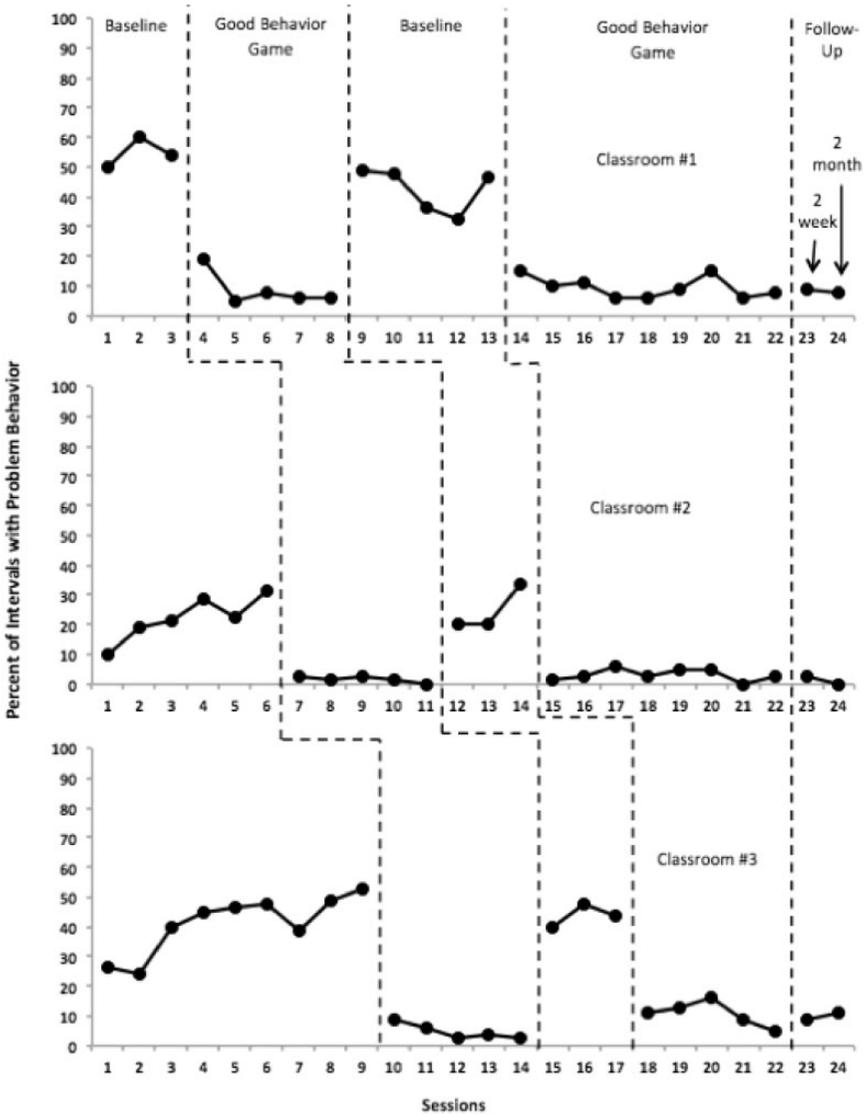


Figure 1. Percent of 15-second intervals with targeted behavior by classroom.

intervention and it was read aloud to the students in order to facilitate comprehension. A mean score of 5.21 of 6 (SD = 1.49) indicated that students reported medium to high treatment acceptability.

The IRP-15 (Martens, Witt, Elliott, & Darveaux, 1985) was administered to the participating teachers. This 15-item, six-point Likert scale measures treatment

acceptability based on Kazdin's (1981) definition of acceptability. This measure was developed for assessing treatment acceptability of interventions in classrooms and has reported internal consistency reliabilities ranging from 0.88–0.98 (Finn & Sladeczek, 2001). The wording on this measure was changed slightly to reflect use with a class-wide rather than individual student intervention. A Mean score of 4.96 of 6 ($SD = 0.84$) was obtained on the CIRP, indicating that teachers reported high treatment acceptability.

This study's attempt to extend the utility of the GBG indicates success in reducing disruptive classroom behaviors in a culturally diverse classroom, good fidelity of the intervention within a challenging setting, and good levels of treatment acceptability among teachers and students involved in implementation. The results of this study strongly encourage the adaptation of the GBG in other similar classroom settings.

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