Behavior and Social Issues (2022) 31:194–214
https://doi.org/10.1007/s42822-022-00094-2

ORIGINAL PAPER

Goal Setting with Latinx Families of Children with Intellectual and Developmental Disabilities: Case Studies

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Accepted: 4 March 2022 / Published online: 19 April 2022
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Abstract

Behavioral community psychology focuses on studying issues that matter to communities, unpacking contextual factors that impact people's behaviors, and identifying strategies to address such issues. Goal setting is one such strategy often used by behavioral psychologists. Grounded in the values of behavioral community psychology and a behavior analysis paradigm, this study illustrated two case studies of Latinx parents of children with disabilities where goal-setting strategies were implemented to promote behavior change. The first case study focused on the promotion of healthy lifestyle behaviors and routines among Latinx families of children with disabilities in the United States. The second case study examined goal setting related to youth development by parents of adolescents with disabilities in Colombia. In both cases, participants received training on goal setting and had opportunities to discuss progress toward achieving their goals, share action steps taken, and discuss the contextual challenges or barriers that they experienced. The results indicate that behavioral goal-setting procedures can be effective in helping parents attain their goals and brainstorm strategies for addressing behavioral and contextual challenges. Implications for future research advancing behavioral community psychology are discussed.

Keywords Behavioral community psychology · Goal setting · Disability · Latinx families

Behavioral community psychology focuses on unpacking contextual factors that impact people's behaviors and identifying strategies to address such issues. This approach allows for a targeted way to define and address a range of community and

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social problems (Bogat & Jason, 2000; Jason & Glenwick, 2016); breaking down large and complex problems into smaller ones that are much more manageable to solve (Jason et al., 2019). By specifying and measuring specific behaviors through goal setting and goal attainment, behavioral community psychologists can chart those behaviors over time to determine whether a particular intervention is effective (Suarez-Balcazar et al., 2019).

Community psychologists have made contributions in the application of behavior analysis to address issues such as recycling (Zulas, 2009), illegal sales of cigarettes to minors (Jason et al., 1991), and bullying in schools (Embry, 2002), among many others. Behavior analysis has also been used to engage community residents in identifying the contextual factors that contribute to community concerns (see Balcazar et al., 2009; Suarez-Balcazar & Balcazar, 2016), and in developing action plans and behavioral strategies to promote change (e.g., Taylor-Ritzler et al., 2001).

Behavioral psychologists have also developed interventions for parents of children with disabilities. For example, Greer (1997) developed a comprehensive program to teach parents how to promote the social and academic development, play skills, and individual responsibility in their child with a disability using positive parenting practices. Dillenburger and McKeer (2009) interviewed parents of 27 adults with intellectual and developmental disabilities (IDD), about their care and service arrangements, health issues, family support, and future planning. They identified complex networks of relationships and the absence of structured future planning and services as key issues. Per Dillenburger and Keenan (2005), a crucial element of behavioral analysis is understanding how contingencies or the circumstances that influence or shape the behavior of individuals or groups affect their behavior across the lifespan.

The two cases illustrated in this paper are grounded in the values of behavioral community psychology articulated by Fawcett (1991) and a behavior analysis paradigm (see Mattaini et al., 2016). The aim of this paper is to examine the benefits of goal setting to promote behavior change among families of children with IDD in two contexts. The first case study was conducted with immigrant Latinx families in a large city in the United States (US), and the second case study was conducted in a large city in Colombia. Latinx is a gender-neutral term that refers to individuals from Central and/or South American origin.

Values of Behavioral Community Psychology

Fawcett (1991) formulated ten values of behavioral community psychology research to become a catalyst for action and functional change. These values include: (1) forming collaborative relationships with communities; (2) acknowledging behavior-environment relationships that are of importance to communities; (3) investigating modifiable and sustainable environmental events and outcomes of interest; (4) incorporating settings and research measures that are relevant to the community; (5) using measurement systems that capture the functional and dynamic relationship between behavior and environment; (6) developing interventions owned by the community and that are sustainable with local resources; (7) designing interventions

with the community that focus on maximizing impact and benefits to the community; (8) effectively disseminating interventions and providing support for change agents; (9) communicating with community stakeholders and decision makers; and (10) contributing to fundamental social change (see Fawcett, 1991, p. 628-632). These factors were considered in planning the interventions for each of the case studies described herein.

Behavior Analysis Paradigm and Goal Setting

According to Mattaini et al. (2016) a behavior analysis vs a behavior therapy paradigm is most relevant to behavioral community psychology. Within this paradigm, the emphasis is on the environmental context of behavior and the person-environment interactions (see Mattaini et al., 2016). This approach is consistent with Brofenbrenner's (2005) social ecological model (SEM), which posits that understanding human behavior entails examining the systems of interaction between individuals and their environment across multiple settings and levels. SEM states that individuals are nested within levels of influence, such as the family or immediate kinship, the community/neighborhood, within a variety of settings (e.g., school, faith-based organizations, and social service agencies), and the society at large. Similarly, Mattaini and Huffman-Gottschling (2012) referred to an ecobehavioral approach as the ongoing interaction between "changing context factors (i.e., aspects of the contexts and environments in which behavior occurs) and the likelihood of behavior change" (p. 298). Participants are provided then with the skills to act and take control of their behaviors and the context. Goal setting is one such strategy used to help individuals acquire or modify behaviors and act upon their environments.

Behavioral analysts have used goal setting to modify behaviors such as enhancing the performance of special education teachers managing students' behaviors (DiGennaro & Martens, 2007), increasing physical activity in children (Kuhl et al., 2015), improving students' writing skills (Hansen & Wills, 2014), and reducing electricity use (Frazer & Leslie, 2014). According to Locke and Latham (2006), goal setting can be used in any domain in which an individual or group has some control over the desired outcome and there is the wish to modify or learn new behaviors.

Cattaneo and Chapman (2010) posit that cultural values can influence both the importance of a particular goal and the steps people take to pursue their goals. Furthermore, goals can be integrated into a person's sense of personal effectiveness. People act to pursue their goals when they believe the goal is important to meet their needs and when there are positive consequences for shaping their behavior. Goal setting is central to the process of improving health behaviors and enabling people to navigate their environment to promote healthy lifestyles (see Suarez-Balcazar et al., 2016).

Concepts associated with goal-setting such as self-control, independence, and empowerment represent Western values (Riger, 1993) and are often hard to understand by working-class populations who have a history of marginalization and/or non-Western cultures. Empowerment, as defined by Rappaport (1987), is a process by which individuals gain knowledge and skills to identify solutions and take action

to address pressing issues. Empowerment is rooted in Western values. Balcazar et al. (2020) view empowerment through a multilevel lens, which emerges at the individual, group, organizational, and/or community levels. The Latinx community (in the US and Colombia) is a collective culture that typically makes decisions based on family values (Marin, 1993). Therefore, adaptations to the concept of goal setting are described in the case studies to reflect family values and practices.

Latinx Families with Children with Disabilities in two Contexts:

In the United States

According to the US Census Bureau (2019), Latinx represent 18.5% of the total US population or more than 61 million people. There are almost 5.2 million Latinx (8.6%) under age 65 who have a disability and 6.2 million who do not have health insurance. Poverty rates among Latino children rose in 2020 by 4.2 percentage points, from 23.0 percent to 27.3 percent (Paschall, 2020). Latinx families of children with disabilities in the US often experience barriers to engaging in behaviors that promote health and well-being. As such, many Latinx families are likely to live in low-income neighborhoods with limited access to green spaces, accessible opportunities to recreation, and access to cultural and linguistically relevant recreational programming (Suarez-Balcazar et al., 2018a). Access to translated materials and culturally relevant health promotion interventions for Latinx families of children with disabilities in the US has also been recognized as an important need (Balcazar et al., 2012; Buysse et al., 2005; Suarez-Balcazar et al., 2020).

In Colombia

The signing and ratification of the United Nations Convention on the Rights of People with Disabilities (UNCRPD) has been shaped into a human rights approach that provides benefits to Colombians with disabilities. Before the adaptation of the UNCRPD, Colombia had developed policies and legislation that attempted to address some of the needs of this population, but it was not enough to provide full protection. After seven years of the ratification and full commitment to follow the UNCRPD protocol in the country, the implementation of these policies remains the biggest challenge. Unfortunately, people with disabilities are a marginalized and vulnerable population in Colombia (Martínez-Rozo et al., 2015). With respect to caregiving, there is no clear policy, legislation, or program that allows caregivers to have the support needed to take care of their loved ones with disabilities.

The support system for a family of a child with a disability is not well articulated in Colombia. This has led to disparities in terms of services, health outcomes, and community participation for people with disabilities and their families as compared to people without disabilities (Martínez-Rozo et al., 2015). Income disparities are often more pronounced in families raising children with IDD. Furthermore, in Colombia, there are no clear statistics regarding the prevalence of autism spectrum disorder (ASD).

However, it is estimated that 16% of the population under 15 years of age has some type of developmental disability (Departamento Nacional de Planeación, República de Colombia [National Department of Planning, Republic of Colombia], 2017). Research related to ASD mostly focuses on symptoms based on the Diagnostic and Statistical Manual of Mental Disorders (DSM-V), profiles of people with ASD, and factors that might contribute to this condition (Talero-Gutiérrez et al., 2012; Velez van Meerbeke et al., 2007). However, there is a lack of evidence in Colombia regarding programs or strategies to help families of children with ASD address some of the behavioral and social issues they experience.

Case Study 1: Promoting Healthy Lifestyles among Latinx Immigrant Families of Children with Disabilities

Background

Embracing the first principle of behavioral community psychology (see Fawcett, 1991) of developing collaborative relationships with the community of interest and following a participatory approach to research, the investigators developed a collaborative partnership with a community agency located in a predominately Latinx neighborhood in a large city in the US. The agency provides a range of services to people with disabilities across the lifespan, the majority of whom come from a Latinx background (see Suarez-Balcazar, 2020 for a description of the setting). The agency identified the lack of culturally relevant health programing and recognized this as a need for the community. We conducted a review of the existing literature on evidence-based health promotion programs for people with IDD (e.g., Marks et al., 2019) and culturally relevant adaptations for intervention programs with the Latinx community (see Marin, 1993). In alignment with Fawcett's (1991) values, we conducted focus groups with Latinx youth with disabilities and their parents (Suarez-Balcazar et al., 2018a) to gain an understanding of community strengths and needs that affected engagement in healthy behaviors and participation in health programming and the interactions between the individuals and their environments. Input from community leaders and agency staff was collected, and the partnership team (university researchers, community agency personnel, and community leaders) developed, implemented, and pilot-tested a healthy lifestyle curriculum composed of eight interactive sessions. The purpose of this study was to explore the impact of goal setting on the achievement of health-related behaviors of Latinx parents of children with IDD and to identify behavioral and contextual barriers to promoting healthy behaviors.

Method

Participants

The study was conducted over a period of three years. The program was offered twice per year to different cohorts of families, and each cycle consisted of eight

weekly two-hour sessions. Families were recruited through the partner agency, which is well-known within the Latinx community. Flyers in English and Spanish were distributed through other community agencies and local groups, including an advocacy group for Latinx parents of children with IDD (primarily ASD and developmental delays). Flyers were also posted throughout the community, including grocery stores, and health clinics. Participants included 38 families—35 mothers and three fathers. Although both parents were invited to participate if in attendance, mostly one adult per household completed the goal-setting process. The children's age mean was 16.5, and they were 86% boys and 14% girls. The most common disability was ASD followed by severe IDD. Most parents were originally from México.

Procedures

The training sessions included evidence-based components such as engagement in physical activity, health/nutrition education, social learning and empowerment building, and goal setting (Marks et al., 2019). A detailed description of the healthy lifestyle program entitled *Familias Saludables* (*Healthy Families*) is provided in Suarez-Balcazar et al., (2018a, b) and Suarez-Balcazar et al. (2016). The eight-week intervention included two hours of interactive sessions at the local community agency once per week. Each session included 45 minutes of a Zumba[1] class led by the mother of a child with ASD. The session also included a discussion about the benefits of physical activity and ways to promote physical activity at home and in the community. This was followed by 30-minutes of interactive nutrition-related hands-on activities led by a graduate student in nutrition. Thereafter, participants engaged in a 30-minute group problem solving and social learning discussion, led by occupational therapy graduate students on how to incorporate the content into daily routines. The final 15-minutes of the session was dedicated to goal setting.

Each family received a ten-dollar stipend at the end of each session to help cover the cost of transportation to and from the venue. A variety of healthy snacks—fresh fruits and vegetables prepared on site by youth with disabilities and their siblings with the assistance of occupational therapy graduate students were also offered. In alignment with Fawcett's (1991) behavioral community psychology values, all food items were culturally, and contextually relevant—healthy foods typically found within a Latinx household. Food items were low-cost and purchased from a local fresh market, ensuring sustainability and the ability to be replicated at home.

The study procedures were approved by the university's institutional review board. Once participants were recruited, they were invited to the community agency to review a formal consent form and study protocols. Each family met individually with a member of the research team to read and review—in their preferred language—the consent form along with health-related and social support assessment instruments used to measure the impact of the intervention. The principal

[1] Zumba is a fitness class that combines Latin dancing with aerobic exercises

investigator and research assistants were all bilingual and bicultural and had vast experience working with the Latinx community.

Goal Setting

The goal-setting process was culturally adapted to meet the needs and values of Latinx families. A traffic light analogy and visual aids were introduced to promote learning and engagement of parents and youth throughout the goal-setting process. The traffic light helped participants identify behaviors that they wanted to start (green), continue (yellow), or stop (red). Prior to this study, the goal-setting strategy was pilot-tested with 17 families who participated in the program (see Suarez-Balcazar et al., 2016). The pilot study showed that 28% of the goals identified by parents were achieved as expected, nine percent of the goals exceeded expectation, and 63% were in progress. Based on the pilot study and feedback from parents, the traffic light analogy and the coaching process were improved. Participants engaged in a group-based problem-solving activity to review specific and measurable goals related to incorporating content learned from the program into their daily routines.

Per Fawcett's (1991) values of behavioral community psychology, participants were prompted to identify strengths within their family routines that supported their healthy lifestyles, and these areas were identified as goals to continue engaging in, otherwise classified as yellow. Parents and their children had the opportunity to generate goals (identify behaviors they wanted to reduce or stop, increase, or continue) together in a collaboratively and creative way through visual pictures. Following the group sessions, families met individually with one of the researchers to identify goals they wanted to target and to develop a behavioral action plan to address them. Each family kept a copy of their action plan while the researcher took notes of the goals that the family was working on. Behaviors addressing these goals were tracked throughout the intervention. Per Kiresuk and Sherman (1968) and Balcazar and Keys (2014), the progress on each goal was also noted and classified as (a) goal accomplished as expected, (b) goal accomplished more than expected, (c) goal in progress (participants are still working on accomplishing this goal), (d) goal on hold or dropped (participants are currently not working toward accomplishing this goal), or (e) goal modified (the participant has changed the original goal to better suit their family's needs). Each family was assigned to one of three research assistants who were also coaches for the goal-setting process. The researchers kept track of the goals on a goal-tracking form (one per family) and checked with participants bi-weekly on their progress toward achieving their goals and modifying behaviors. They offered support to parents, engaged in problem-solving, and encouraged the use of self-management strategies learned during the *Familias Saludables* sessions in order to achieve the goals. If both parents were present during the goal-setting component, they were both encouraged to identify goals together and participate in the problem-solving and action planning. Youth with IDD were also encouraged to participate. The follow-up checking on goals and coaching was mostly conducted with the mother.

Graduate assistants were trained by the principal investigator on goal setting and coaching. Research assistants recorded goal progress using a form that described the

progress participants were making and the barriers they encountered (behavioral and socio-ecological challenges), including the problem-solving strategies proposed by the participants themselves with support from their coach to overcome any of the barriers identified.

Results

The 38 parents identified a total of 155 goals. Fifty-eight percent (n=90) of the goals were about nutrition and healthy diets, 27% (n=42) were related to physical activity, and 15% (n=23) were about family routines, rules at home, and family leisure activities. Two of the 42 goals related to physical activity included an advocacy component (e.g., advocate for inclusive physical activity programming). Families identified an average of four goals to address. Examples of physical activity goals and behavior to start included walking in the neighborhood for 60 minutes after dinner as a family four times per week and taking the kids to parks on weekends for at least one hour. Nutrition-related goals and behaviors included refraining from drinking soda every day of the week and limiting to three sodas per week and serving water during mealtime for the whole family every day. Goals related to family routines included continuing to limit TV/video game time to no more than 60 minutes every day and not eating in front of the television (habits/routines). Data indicates 55% (n=86) of the goals were achieved as expected, and 44% were in progress (n=68). Of the 68 goals in progress, nine goals (13%) were put on hold although some progress had been made at the time of data collection. Only one goal was dropped. Families reported a sense of satisfaction about achieving most of their goals and working hard toward incorporating new behaviors (e.g., walking after dinner with the children), modifying behaviors (using vegetable oil instead of animal fat to prepare meals), and/or reducing unhealthy behaviors (e.g., not drinking soda every day). Families also identified some challenges experienced in navigating their environment.

Barriers and Contextual Challenges in Accomplishing Family Goals

To identify behavioral and contextual barriers, researchers took notes of the challenges communicated by participants during the bi-weekly calls. Researchers were also trained on how to address such barriers by discussing family-centered and environmentally relevant strategies to facilitate goal achievement. We briefly explain the behavioral and contextual barriers below.

Behavioral Challenges

Participants identified a variety of behavioral challenges while working toward their goals. Most challenges related to behavioral changes that were modifiable throughout the coaching process. Table 1 summarizes some of the behavioral challenges reported by the family members and the strategies discussed with the coach to

Table 1 Examples of Behavioral Challenges and Strategies Discussed

Behavior	Examples of Strategies
Forgot about goal	Write down goal and action steps and place on the refrigerator door. Add a consequence for taking action steps.
Son [youth with IDD] does not like to eat vegetables	Mix veggies child doesn't like with veggies child likes. Offer preferred foods after trying new veggie.
Have a chronic injury that limits functional mobility	Consult with doctor on appropriate types and levels of physical activity/exercise
Habit of Latinx culture to fry traditional foods	Reduce frying foods gradually. Try frying foods with vegetable oil.
Habit of consuming soda and sugary drinks—difficulty breaking old habits	Reduce soda consumption gradually, control purchasing behavior (buy less sodas). Replace for a healthier option of choice. Track calorie intake from sugary drinks when consumed and from healthier option.
Mexican foods are spicy and require several tortillas or rice	Reduce spice in foods gradually.
Youth with IDD becomes upset when introducing new foods or physical activities routine	Disguise new foods with familiar foods. Introduce new foods gradually. Introduce new foods at the beginning of a meal followed by familiar and preferred foods.
Limited knowledge of what foods are high in fat and sugar	Read calorie levels on food products. Create a calorie chart of common foods consumed and place on the refrigerator door.

address the challenges. For example, many parents reported that they had difficulty offering new healthier food options to their children with a disability. With support from their coaches, many of these families were able to use problem-solving strategies such as preparing foods differently (baked, steamed, or boiled instead of fried), offering the new foods gradually and after the preferred foods, or disguising certain foods (e.g., blending vegetables in a fruit smoothie). Parents reported that they were able to manage some of the behavioral challenges through the coaching provided by the researchers.

Contextual and Ecobehavioral Challenges

Participants identified the contextual and ecobehavioral (see Mattaini & Huffman-Gottschling, 2016) challenges that their families often face. Many of these challenges were less modifiable and were often outside the control of the individual, and in some instances, the individual required resources to overcome them (e. g., membership fees to exercise at the gym during winter months). Goals related to higher levels of influence were noted to be put on hold due to the difficulty of accomplishing them. As an example, the mother of two children with ASD wanted recreational programs to be offered for children with IDD within her neighborhood. Additionally,

Table 2 Examples of Contextual and Ecobehavioral Challenges and Examples of Strategies

Contextual and Ecobehavioral Challenge	Examples of Strategies
Extracurricular programs for children and youth with disabilities are not available at the local parks and recreation facility and schools and staff running these programs are not comfortable caring for my child.	Identify the personnel in charge of running extracurricular programs, identify an advocacy strategy (with a peer–parent, advocate, or support person). Meet with such person and advocate for change.
Limited time to work on goal due to other commitments (work schedule, multiple doctors' appointments, adolescent's school schedule)	Identify ways to incorporate goals within the daily routine (e. g., physical activity goal may include walking to doctors' appointment, taking the stairs instead of the elevator).
Unhealthy foods are offered during social events, school events, and often other families tend to bring in unhealthy foods to events	Bring healthy foods to events, request that school events include healthy foods, talk to other parents and school personnel about the benefits of healthy food options. Engage kids and teachers (and family members in a healthy foods campaign).
Limited accessible and inclusive recreational facilities nearby	Identify the manager at these facilities. Identify an advocacy strategy (with a peer-parent, advocate, or support person). Meet with such person and advocate for change. Offer to provide information on inclusive programming, if available.
Limited options to exercise outside due to weather or violence in the neighborhood. According to parents, nearby parks are not safe.	Identify ways to exercise at home (e.g, Zumba dancing on YouTube, climbing stairs, dance to music).
Single parent household makes it challenging to prepare meals.	Prepare meals for several weekdays on weekend or off work hours and freeze. Assign kids roles and reinforce their behavior.
Difficulty accessing affordable fresh fruits and vegetables within the neighborhood	Purchase foods when in season. Check for store coupons. Check access to free meal programs (or food assistance programs in your community). Purchase food products in bulk and split the cost with others.

she wanted the staff managing these programs to be properly trained to work with children with IDD (goal related to advocating for inclusive programs). She decided to speak with her local alderman about the need for accessible and inclusive programming in the city's recreational facilities. After months of requesting meetings and advocacy efforts to work toward this goal, little progress was made due to the lack of response from city officials. Thus, the goal of advocating for inclusive programming was put on hold. More examples of ecobehavioral challenges and strategies identified by the families are presented in Table 2.

Discussion

Overall, this study illustrated the impact of a goal-setting program on the achievement of goals of Latinx families of children with IDD and the type of contextual barriers experienced by the families to promote a healthier lifestyle. Although

families reported that most of their goals were achieved or were in progress, given the lack of a control group and/or follow-up data, we cannot ensure that all the goals were accomplished because of the program. However, most parents recognized that the program allowed them to understand the importance of goal setting and the process of taking small steps and identifying behaviors that enable them to achieve their goals.

Case Study 2: Goal setting with Colombian Families of Children with Disabilities

Background

In 2017, Magaña et al. (2017) implemented an evidence-based program called Parents Taking Action (PTA) in Bogotá, Colombia, with a group of parents. The program was designed to reduce some of the disparities regarding access to knowledge, strategies, and information about ASD-related services, and to enable parents to support their children through their early development. This program targeted parents of children from zero to eight years and focused on the early stages of development and the importance of early intervention services for children with developmental disabilities. However, there is still a gap in knowledge and skills regarding the subsequent developmental stages (eight years and above). Families often face a lack of resources regarding the management of a growing child and the pre-puberty and adolescence years. These include learning how to address their social relationship needs and issues about sexual development. Unfortunately, disability and sexuality are still considered taboo topics in Colombia. Both topics carry a strong stigma that prevents many people with developmental disabilities from fully participating in the community. The lack of research and information about adolescents with ASD limits the understanding among many parents about how ASD can be approached and how to handle their sexual development. Based on this need, the third author of this paper developed a curriculum designed to increase parental empowerment at the family level by enhancing the parents' self-efficacy, knowledge about disability and sexuality, goal attainment skills, and the use of new strategies/skills (Garcia-Torres, 2021).

This curriculum represents an expansion of the original PTA (Magaña et al., 2017), adapted to address the adolescent years of youth with ASD in the Colombian context. The overall purpose of the intervention was to enhance the competencies of caregivers of preadolescents and adolescents with ASD by increasing their self-efficacy, goal attainment, use of strategies/skills, and knowledge regarding puberty, sexuality, and challenges related to ASD. The intervention was designed with input from the participants following Fawcett's (1991) values of maximizing the ownership of and benefits to the participants. During this intervention, goal setting was used to identify how participants understood the content of the program and how they applied the tools at home with their children. This study was started before the beginning of the COVID-19 pandemic. The research question guiding this case study was to explore the impact of behavioral goal setting on parents' goal attainment and to identify barriers to achieving their goals.

Method

Participants

This case study included a group of 12 primary caregivers of preadolescents and adolescents with ASD. Ninety-two percent of the caregivers were female, and the majority (83.3%) were classified as low-income families based on the Colombian class system. The mean age of their children was 12.8 years, and all parents had a child diagnosed with ASD.

Setting

This case study was conducted in Bogotá, Colombia, in collaboration with an organization that works with families of people with ASD—hereafter referred to as *Fundación*[2]. This organization was founded in 2001 to serve children with ASD and their families providing evidence-based resources and services, including behavioral interventions, counseling, speech therapy, physical therapy, and occupational therapy. They also offer programs that support children within their school settings. Additionally, they provide support to families by organizing different workshops around topics of interest to parents. For this project, the *Fundación* provided a space to conduct the workshops conducted by the researcher and collaborated with the researcher to recruit participants.

Procedures

The intervention was structured into four weekly three-hour sessions conducted at the *Fundación.* The program included a total of nine modules, which were designed to provide parents with the space to practice strategies, learn from each other, and set goals. One of the aims of the intervention was to help parents identify the behavior-environment relations and the modifiable environmental events that impacted the behavior of their youth with disabilities. These aims are aligned with Fawcett's (1991) values of acknowledging behavior-environment relationships that are of importance to the community of interest and investigating modifiable and sustainable environmental events on behaviors and outcomes of interest. A curriculum covering disability and sexuality was developed and tested with this group of parents. Each session included a review of the content of the curriculum and after each session, parents were given homework related to goal setting using the content of the session. The topics in the curriculum included (a) Parents Taking Action: Where are we now? (b) body changes and puberty; (c) public or private? (d) strangers, police, and approaching others; (e) mood changes, aggression, and eloping; (f) mental health; (g) friendship and romance; (h) the Internet; and (i) thinking about the future.

[2] The organization name was changed for confidentiality reasons

This study was conducted as part of the dissertation of the third author, under the direction of the second author, and was approved by the university's Institutional Review Board. Once participants were recruited, they were invited to a meeting at the *Fundación* where they reviewed a formal consent form and the study protocols. Each family met individually with the researcher to review and sign the consent form. The researcher is Colombian and has extensive experience working with families and children with IDD.

Goal Setting and Goal Attainment

At the end of each session, parents reflected on the content covered and were asked to set at least one goal to address any of the topics in the session. These goals were recorded in a *goal- setting tracking sheet*. This form allowed participants to practice the strategies at home, document their progress, and identify areas that needed improvement. All parents were asked to bring back the goal-setting tracking sheet to the following session so that they could share their progress and receive feedback from their peers. The tracking sheet required parents to list a goal and report if they practiced any of the strategies learned in the training session to pursue the goal. If yes, they could indicate how many times they did so and record the results (or progress) with the goal, and if not, briefly report some of the barriers or obstacles they faced.

The goal-setting tracking sheet had a mix-method component in which the quantitative portion used the Goal Attainment Scale (GAS) to quantify each goal and its level of achievement based on the responses of each participant. The GAS was developed by Balcazar et al. (2006) and measures each goal on a range from −2 (deterioration) to +3 (accomplished more than expected). The higher the score, the higher the achievement of each goal. The qualitative component consisted of follow-up interviews conducted by the researcher, which included five questions and lasted about 45 minutes each. Examples of the questions include: How do you think you benefited after receiving the program? What aspects do you think were more beneficial? and is there any aspect of the program that was less beneficial? Content analysis was used to identify themes and categorize participants' responses to the questions to better understand how the program helped them in achieving or striving to achieve their goals. The member checking technique for enhancing trustworthiness of quality data was conducted (Levitt et al., 2017). Once the themes were confirmed with participants, they were organized in terms of the number of responses to each of the questions.

Results

Overall, the findings indicated that parents acquired knowledge and applied the strategies learned with their youth through goal setting. The program was reported to be very helpful because information on sexual development is scarce and many parents do not have the resources to learn about the challenges related to adolescent development tailored specifically for youth with disabilities. The quantitative results

showed that, on average, participants set 4.5 goals during the intervention, ranging from zero to nine goals. Additionally, the group had a mean goal attainment score of +1.8, which suggests that participants met their goals as expected and applied what they learned during the four weeks of the program.

With regard to the qualitative analysis, participants set goals based on the following categories: management of emotions, independence, social issues, body parts and private and public spaces, school/work, changing behaviors, changing routines, and caregiver personal goals. Furthermore, the goals were achieved using the strategies learned during the program. These strategies were categorized according to the type of strategy used. For example, behavior analysis strategies included specific tools that aimed to change behavior either by working on the behavior or using positive and/or negative reinforcers. There were also other strategies that the parents used, such as breathing techniques of relaxation, using pictograms to illustrate how some tasks could be completed step-by-step using pictures, and visual supports such as cards that illustrated various body parts to help the youth learn more about their bodies. Table 3 provides a synthesis of the main goal themes and examples of some of the strategies that participants used to achieve their goals.

Barriers and Challenges

As suggested in Table 3, some of the target behaviors were difficult to attain (e.g., anger management, controlling anxiety, and learning about the body). One of the main barriers included a lack of consistency in the process of setting goals. For instance, one parent did not participate in goal setting or use the goal setting tracking sheet during weekly meetings. Other parents set goals but did not do so for every session. Attendance was an additional barrier. Those who missed a session had difficulty understanding the topics of the following session and setting goals on that topic.

On the other hand, parents had multiple opportunities to get feedback from each other and the researcher, and many of them realized that they needed to set smaller and more easily attainable goals. For example, instead of expecting the youth to help with household chores, one mother focused on training and modeling the behavior of picking up the clothes in his room. The parents also enjoyed the opportunity to talk to each other and solve problems as a group. The *Fundación* recognized the value of the group activities and planned to continue holding group sessions with parents on different topics. However, the COVID-19 pandemic hit, and the plans had to be put on hold.

Discussion

Overall, the behavioral goal-setting intervention was effective in promoting goal attainment and the parents appreciated the opportunity to address issues of sexual development with their youth. The parents also learned some basic behavioral modification strategies that they used to shape and/or reinforce desired behaviors and

Table 3 Examples of Strategies used by the Parents to Address some of the Goal Areas

Goal areas	Strategies based on ABA such as: token economy, transition signals, modeling, providing options, sequence cards, ignoring, and positive reinforcement	Breathing techniques	Pictograms and visual supports- videos, images
Emotions	"Support my child so he can go in the school bus calmed by reinforcing him when he does"	"Work on anger management by using respiration techniques"	"Identify emotions by using visuals, movies and videos" "Work on emotions and recognize them by using pictograms"
Independence	"Work on independence. I want my child to pick his clothes by providing reinforcing options and he would choose from the options I selected" "Include brushing teeth as part of the hygiene routine by providing instructions and modeling. Concise instructions and broken-down tasks"	"Help my child sleep in his room and gain independence by using schedules and yoga"	"Work on leaving his clothes in the right place when going to the restroom by using pictograms"
Body, public and private spaces		"Work on breathing techniques before going to sleep to reduce excessive self-stimulation"	(Use of body parts card) "Work on knowing his body, and on differentiating private and public body parts by using cards and activities practiced in the session"
School/work	"Do daily school homework by offering a reinforcer and token economy." "Help my child improve reading and writing by using reinforcers and ignoring him when trying to avoid task"		
Change behaviors	"Try to help my child to go outside in a way that he feels safe and calmed by using positive reinforcement with music at the end of the day"		"Work on reducing time in the shower by using pictograms"

Table 3 (continued)

Caregiver needs	"Try to understand what triggers my son's behaviors by reinforcing desired activities, so maybe he can be less anxious"
Change routine	"Work on reinforcing activities, so my child can enjoy more his activities, and also know when the activity comes to an end" "Keep working on change of routines by using reinforcers and explaining what is going to happen the next day"

decrease or modify some undesired behaviors. Notably, participants lack knowledge and skills on how to talk to their youth with ASD about sexuality. This may speak to barriers parents face in addressing the topic of sexuality with their youth with ASD in their cultural context (Medina-Rico et al., 2018).

General Discussion

Behavioral community psychology values focus on issues of importance to communities. At the core of such values is the ongoing collaboration with the community of interest, so that the behaviors that are targeted for change are important to them. Furthermore, behavioral community psychology emphasizes the interaction between the behavior and the environment and the importance of unpacking contextual and ecobehavioral issues. As such, behavioral community psychologists can become agents of change (Balcazar & Suarez-Balcazar, 2016). Embracing a strong partnership with research participants, as behavioral scholars, we need to deepen our knowledge of cultural and environmental issues that impact human behavior. Such knowledge will enable us to design behavioral interventions that allow participants to navigate their environments to promote health and well-being. Perhaps we could promote both, the values of behavioral community psychology and a behavior analysis paradigm in research efforts conducted in collaboration with diverse and marginalized populations.

In this study, goal-setting strategies were illustrated through two case studies of families of children with disabilities. Goal setting can play a critical role in helping parents of children and youth with disabilities improve their health-related behaviors and learn about appropriate sexual development. As Forneris et al. (2007) pointed out, goal-setting skills are important for people to develop, as they have been shown to support physical, mental, and emotional well-being. In the first case, *Familias Saludables* enabled parents to identify behaviors that promoted their health and that of their families and identify contextual factors that support or hinder goal attainment. The identification of contextual factors facilitated problem-solving skills among parents. In the second case, parents were able to manage antecedent stimuli, provide reinforcers following appropriate behaviors, identify specific contextual factors, learn strategies for managing these contextual factors, and achieving their goals. The use of goal setting to understand how parents of youth with IDD learn and apply new information and strategies related to health promotion and sexual development is an important contribution of this study. The results of both case studies suggest that parents can modify their behavior in their efforts to improve their children's and family's health. The goal setting tracking sheet and the Goal Achievement Scale suggests that parents were able to achieve most of the goals that they set in relation to their children's needs.

Future research should address the limitations of the two case studies. As such, some of the limitations included relying on parents' self-reports of actions taken. Although parents were provided with a goal setting tracking sheet, it is not clear if all parents kept track of their goals regularly or if they completed the form immediately prior to meeting with the researchers. Sample size was also a limitation, in the

second case study. Furthermore, we need to explore the impact of parents' efforts in navigating environmental and community-level challenges. A time series analysis is recommended for future research (see Mattaini et al., 2016), where parents record the level of their health-related behaviors (e.g., number of daily sodas consumed, number of minutes of physical exercise per week) across time and under different targeted conditions. Overall, these two studies have important implications for behavioral community psychology. As such, future research could focus on unpacking the behavioral and ecobehavioral contextual challenges experienced by parents and identifying and evaluating behavioral strategies to address those challenges. We may also explore behavioral strategies for enhancing the quality of self-recorded data. This study also highlighted the importance for behavioral community scholars to consider cultural adaptations of their interventions. The case studies could be replicated in future studies with greater involvement of former participants as facilitators and coaches. This strategy would require the development of detailed instructional guides for the trainers. Such intervention strategy is aligned with the evidence-based intervention *Parents Taking Action* (see Magaña et al., 2017).

The two goal setting interventions were adapted to the context and values of participants. The goal setting intervention enabled parents to break down a behavior in specific action steps. Through engaging in behavioral goal setting, parents and researchers partnered by identifying behaviors of interest and strategies for modifying such behavior and navigating the environment. The researchers facilitated that process through brainstorming and coaching. The process also provided parents an opportunity to identify antecedents and consequences of behaviors and routines they have gotten used to (e.g., drinking soda every day, eating family meals in front of the television). Parents also enjoyed the opportunity to meet other parents experiencing similar circumstances and sharing their knowledge and experiences.

Another important implication for behavior analysists is the need to expand research with the Latinx community in the US. This growing population is experiencing unique challenges at the intersect of ethnicity, race, culture, and linguistic differences. Furthermore, many Latinx families of children with disabilities experience lack of knowledge of disability rights and policies, lack of sense of entitlement to advocate for their children, limited English proficiency, and perceived discrimination (see Balcazar et al., 2020; Suarez-Balcazar et al., 2020). Using the behavior analysis paradigm and the values of behavioral community psychology, parents could learn to advocate for their rights, manage challenging behaviors of their children, and take greater control of their family and children's lives.

Acknowledgments The authors would like to acknowledge the support of the partner organizations, graduate students who supported this work in many ways and the many Latinx families who participated in both case studies.

Funding The first case study described in this paper was supported with funding from The Chicago Community Trust.

Declarations

Conflict of Interest The authors declare no conflict of interest.

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