

## **Physical Recreation Constraints Among Guatemalan Families With Children With Visual Impairments**

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### **Abstract**

**Purpose:** The purpose of this study was to identify constraints related to active participation in physical recreation activities and strategies to overcome those constraints from the perspective of Guatemalan families with children with visual impairments. **Methods:** Participants in this study were Hispanic parents ( $N = 13$ ) of children with visual impairments attending a sports camp held in Guatemala City, Guatemala. Qualitative data were gathered through one-on-one interviews. **Results:** Results of this study indicate that Hispanic families who reside in Guatemala City face constraints that impact their physical recreation choices, although they manage to engage in activity whenever possible and try to do the very best for their children with visual impairments. **Conclusion:** Families voiced their desire to receive help from governmental agencies to establish community programs and activities for family participation.

**Keywords:** *Therapeutic recreation, Hispanic families, parents of children with visual impairments, physical activity, physical recreation, visual impairments*

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## Introduction

Sallis, Prochaska, and Taylor (2000) pursued the premise that active parents have active children, and vice versa. Parental activity levels and the disability of a child may affect the amount and intensity of participation in physical activity (Martin & Choi, 2009). In addition, the presence of a disabling condition significantly alters family processes (Seligman, 1999). Stuart, Lieberman, and Hand (2006) conducted a study in which they surveyed parents ( $N = 25$ ) and their children with visual impairments regarding their beliefs toward physical activity. Results revealed that as vision loss increased, parents' expectations for their children's ability to be physically active decreased, as did the children's and parents' views that physical activity is important or useful. The physical activity of parents is one of the most frequently studied determinants of youth physical activity and or physical recreation (Mactavish & Schleien, 2000, 2004; Sallis et al., 2000). For the purpose of this study, physical recreation will be defined as freely chosen, enjoyable experiences that involve gross body movement and are described as sport, exercise, fitness, dance, or outdoor activities (Henderson & Bialeschki, 1993).

Using a qualitative research design, Perkins, Columna, Lieberman, and Bailey (2013) explored parental perception toward physical recreation for their children with visual impairments and the barriers encountered. Also, the authors explored the strategies parents of children with visual impairments employed when trying to have access to physical recreation. When parents were not able to modify activities, they provided their children with solutions to overcome barriers. Through the use of one-on-one interviews, the authors found that Caucasian parents ( $N = 11$ ) highlighted several barriers that affected the participation of their children in physical activity. These barriers included the lack of qualified staff in recreational programs, lack of programs, and lack of knowledge of physical educators in terms of how to modify activities for their children with visual impairments.

Parents in Perkins et al.'s (2013) study indicated that in order for them to overcome those constraints to physical recreation, they would like to receive ideas from professionals in terms of how to modify activities. Other recommendations provided by the participants were the need for ongoing communication with physical education teachers, pre-teaching, and specific training related to instruction for children with visual impairments in teacher preparation programs. There is a need to provide and disseminate information about existing programs that promote physical activity for children with visual impairments. The purpose of the current study was to identify constraints related to active participation in physical recreation activities and strategies to overcome those constraints from the perspective of Guatemalan families of children with visual impairments.

Researchers have demonstrated that settings such as specialized sport and recreational camps for children with disabilities can alleviate some of these limitations families may encounter (Goodwin, Lieberman, Johnston, & Leo, 2011; Shapiro, Moffett, Lieberman, & Dummer, 2005). However, most summer camps for children with visual impairments do not include sports activities, and most sports camps are not geared specifically for children with visual impairments (see [www.familyconnect.com](http://www.familyconnect.com)). Currently in the United States, there are only two groups of sports camps specifically for children with visual impairments. There are the sport education camps and Camp Abilities, both of which promote sports and recreation for children with visual impairments and blindness (see [www.campabilities.org](http://www.campabilities.org)). The issue is that these camps are not geographically accessible to most children with visual impairments in the United States, and even less accessible for children in sub-developed countries.

## Theoretical Framework

The ecological systems theory of human development served as the theoretical framework to guide this study (Bronfenbrenner, 1977). This theory is based on the concept that systems are interconnected within the environment. According to the ecological theory, the individual influences the environment and the environment impacts the individual (Turnbull & Turnbull, 1991). Bronfenbrenner's ecological systems theory presents four levels of environment that affect the development of an individual: microsystem, mesosystem, exosystem, and macrosystem.

Structures in the microsystem include environments in which the child is directly involved such as home, school, neighborhood, or community programs. The mesosystem is the connection between the structures of the child's microsystem. Examples include the connection between the child's teacher and his or her parents and connection between his or her church and his or her neighborhood. Exosystems define the larger social system in which the child does not function directly (Columna, Pyfer, & Senne, 2011). The structures in this layer impact the child's development by interacting with some structure in his or her microsystem (Berk, 2000). Parent workplace schedules and community-based family resources are examples. The child may not be directly involved at this level, but he or she feels the positive or negative force involved with the interaction with his or her own system. The final level, the macrosystem, comprises cultural values, customs, and laws.

Utilization of ecological theory involves the assessment and evaluation of the individual with a disability and the environment in which the individual is participating. The nature of physical recreation of Hispanic families of children with disabilities can be organized using Bronfenbrenner's model. Parents may face situations concerning their child and their interactions with professionals and the community that directly impact opportunities for their families to be active in physical recreation. Professionals must understand that preferences and constraints to physical recreation may vary based on cultural differences (Columna et al., 2011).

Scholars have acknowledged the paucity of research considering family as a unit in terms of physical recreation (An & Goodwin, 2007; Mactavish & Schleien, 2000, 2004), especially among families with children with visual impairments (Stuart et al., 2006; Perkins et al., 2013). Research that specifically addresses this issue among Hispanic families is more limited (Columna et al., 2011; Temple & Stanish, 2008).

Differences and similarities in the involvement in physical recreation between different cultural groups and social classes must be addressed in order to serve diverse families. Understanding how people of Hispanic descent engage in physical recreation is essential to better serve the physical activity needs of Hispanic children with disabilities. There is a pressing need to focus in this area because as recently as 2008 the rate of obesity in the United States is higher among Hispanics than any other ethnic group (Ogden & Carroll, 2010; Temple & Stanish, 2008). Therefore, it is imperative that professionals who provide services for children with disabilities and their families understand that there are differences among cultural groups and the role parents assume with their children specific to physical recreation.

## Hispanic Families Living in Guatemala

The Republic of Guatemala is a country located in Central America. Guatemala City is the largest city and Guatemala's capital. The demographics of Guatemala are diverse, constituting primarily Mestizos, Amerindians, and Europeans (Food and Agriculture Organization of the United Nations [FAO], 2002; Instituto Nacional de Estadísticas de Guatemala, 2011). Spanish

is the official language in Guatemala; however, 23 indigenous languages have been officially recognized. This briefly explains the great diversity of the Guatemalan population.

There is no state religion; however, the constitution recognizes explicitly the distinct legal personality of the Catholic Church. In spite of this, approximately 35% to 40% of Guatemalans consider themselves evangelical Christians (U.S. Department of State, 2006).

In 2011, it was estimated that 54% of the population was living under the poverty level (Taft-Morales, 2012). In part, this is because many Guatemalans do not attend school, but instead start working at a young age to sustain their families. For this reason, only 2% of Guatemalans attend universities and only half of those graduate (<http://www.compassion.com/about/where/guatemala.htm>). Their attitudes toward education depend on their economic status. Many parents think girls should not attend school because they should be preparing for motherhood. In other cases, parents feel their children will improve through work, not academic study. Others would like to attend but do not have the necessary income to pay the school fees. Guatemalans who are wealthier value education, but still find it to be a financial burden (Taft-Morales, 2012).

In terms of special education, many children with disabilities do not receive services even though the ministry of education has stated that all children and youth with disabilities must receive special education. According to Rodriguez, Espinosa de Gaitan, and Luterbach (2008), about 86% to 95% of school-aged youth with disabilities do not receive special education. Individuals with disabilities in Guatemala have limited opportunities and access to participation in Guatemalan society. This is due to lack of services in education, rehabilitation, culture, sports, and recreation activities, among others (Consejo Nacional para la Atención de las Personas con Discapacidad, 2006). Guatemalans are passionate about soccer, and the country has a rich history in this sport.

The purpose of this study was to identify perceived constraints and strategies related to active participation in physical recreation activities from the perspective of Hispanic families of children with visual impairments living in Guatemala. The current study sought to answer the following research questions: (a) What are the perceived constraints for participation in physical recreation activities of Hispanic families of children with visual impairments living in Guatemala? (b) How do Hispanic families of children with visual impairments living in Guatemala overcome constraints to participate in physical recreation activities?

## Methods

### Participants

Prior to the selection of participants, approval from the Institutional Review Board (IRB) office was obtained. Convenience sampling of parents of participants of Camp Abilities in Guatemala was used to identify possible participants (Creswell, 2003). The criteria required participants to be a Hispanic parent of a child with visual impairments aged 5 to 18 years. Participants ( $N = 13$ ) were mainly mothers who reported income close to the poverty level in Guatemala. Two of the families reported income above the poverty level. Demographic information of the participants and their children are presented in Table 1.

### Data Collection

Participants were recruited from the first Camp Abilities held in Guatemala. Twenty-five children attended the camp. Camp Abilities is a 1-week developmental sports and recreation camp for children and youth who are visually impaired, blind, or deafblind. The camp is set up

**Table 1***Participants' Demographics*

Participant	Child's Gender	Child's Age	Family Income	Mother's Age	Mother's Education	Mother's Employment	Father's Age	Father's Education	Father's Employment
1 (mother)	M	10	-	47	High School	Unemployed	56	High School	Full time
2 (mother)	M	6	Less than \$15,000	35	Middle School	Part time	-	-	-
3 (mother)	M	13	Less than \$15,000	42	Technical College	Unemployed	42	High School	Full time
4 (mother)	F	14	Less than \$15,000	39	Elementary School	Full time	-	-	-
5 (mother)	M	5	Less than \$15,000	36	High School	Part time	36	Bachelor's Degree	Full time
6 (both)	M	9	\$60,000 – 74,999	35	Master's Degree	Full time	36	Bachelor's Degree	Full time
7 (both)	M	18	\$15,000 – 29,999	46	Bachelor's Degree	Unemployed	48	Bachelor's Degree	Full time
8 (both)	M	10	\$15,000 – 29,999	40	Technical College	Unemployed	55	Graduate school	Part time
9 (mother)	F	16	\$15,000 – 29,999	46	Bachelor's Degree	Part time	-	-	-
10 (mother)	F	13	Less than \$15,000	42	Bachelor's Degree	Full time	45	Bachelor's Degree	Full time

to provide a one-on-one instructional situation for each participant ([www.campabilities.org](http://www.campabilities.org)). Camp Abilities started in Brockport, New York, at The College at Brockport State University of New York in 1996. Once it was established, many other camps were set up in the same fashion to provide safe, accessible sports and recreation for children with visual impairments. The Camp Abilities in Guatemala was established to provide sport and recreation opportunities for children with visual impairments or blindness and to educate local professionals about how to teach sport and recreation to children with visual impairments. For the most part, parents dropped their children at the camp facilities and picked them up at the end of the week. Three mothers and one sister were involved as camp counselors for the whole week. They decided to stay either because their child/brother needed personal assistance, because they were afraid for the safety of their child, or because they wanted to learn how to modify activities.

A descriptive qualitative research design was employed. Data were collected in three ways: (1) completion of a personal data sheet to collect demographic information, (2) field notes, and (3) semistructured interviews of parents.

The personal data that was collected included the age and gender of the child with a disability, family income, parental age, employment, and parental education. Demographic information indicated that participants were mainly mothers with limited income. Three of the interviews were conducted with both parents.

The process of interviewing included two researchers. One researcher interviewed the participant and the second recorded notes about the participant's nonverbal behaviors (e.g., seeming detached, emotional, crying, speaking passionately). Additionally, the second researcher took notes during the interview about responses that were striking. Notes were compiled for review and used in conjunction with the interview transcripts. Field notes were taken during all interviews. One-on-one semistructured interviews were conducted following an interview protocol. A panel of four experts in the field of Adapted Physical Activity was recruited to ensure content validity of the interview questions. Based on their recommendations, the primary investigator made changes and redistributed the instrument to the panel for final review and approval. Sample questions included the following: What do families do on a regular basis that involves recreational physical activity? Why do families participate or not participate in recreational physical activities? What constraints, if any, keep the child and family from participating in recreational physical activities? How do families overcome those constraints, and who assists you or your family to overcome those constraints? Follow-up probe questions were asked based on participants' responses. A full description of the data collection process is provided later in this article.

The camp director distributed flyers to parents, teachers, and administrators who provided services to children with visual impairments. Parents who showed interest in having their child be a part of the camp were invited to participate in the study. Also, during the first camp orientation, and after the purpose of the study was explained to all attendees, additional parents were invited to participate. After receiving written informed consent, researchers conducted and recorded the 60- to 90-min interviews at the camp base. We stopped interviewing additional participants when interviewers recognized that similar themes were emerging and the data saturation point had been reached (Flick, 1998 *add ref*).

Two of the interviews were conducted before the beginning of the camp, three during camp, and the rest at the end while the parents picked up their child. Three of the 10 interviews were conducted with both parents and nine of the 10 interviews were conducted in Spanish. Due to various regional differences in interpretation of some Spanish words, the first author, who is bilingual, asked participants for clarification if needed during the interview process.

## Data Analysis

Interviews conducted in Spanish were first transcribed in Spanish and then translated to English. Once interviews were translated into English, the first author sent three translations to a bilingual researcher. The bilingual researcher translated the interviews from English to Spanish following recommended guidelines for translation. Upon translation completion, two investigators whose primary language is Spanish compared the translations with original interview transcripts to ensure content accuracy.

Constant comparative analysis was used to analyze the interview transcripts. This method of analysis required the researcher to take one piece of data (i.e., one interview, one statement, or one theme) and compare it to all other pieces of data that were either similar or different (Creswell, 2003). This process required reading the transcripts numerous times and conducting a line-by-line analysis. Revealing phrases were highlighted and coded with meaningful labels. The data analysis started with a coding process and continued by constantly comparing phrases to determine whether they should be classified separately or whether they belonged to an existing code (Creswell, 2003). Codes that were conceptually similar were gathered together into thematic statements, giving fundamental meaning to the experiences (Patton, 2002). The essential themes that gave fundamental meaning to study were determined. Identified patterns in the data were outlined according to the two main areas related to the purpose of the study: benefits and patterns to physical recreation.

## Validation of the Findings

*Trustworthiness.* To ensure trustworthiness of the data, triangulation was employed. First, the interviewer recorded field notes of parents' body language. Field notes were used to identify nonverbal expressions that could not be captured on the transcripts. In addition to nonverbal expressions, comments or phrases were also noted. Second, a peer debriefing process was conducted. Two researchers analyzed the data independently of one another, and subsequently together to reach consensus. Last, the researchers consulted an external reviewer who reviewed the themes to ensure that they reflected the purpose of the study and corresponded with the research questions.

## Findings

Parents mentioned several roadblocks that made involvement in physical recreation difficult for their child. They also identified strategies to overcome some of these constraints. Three major themes emerged from the data (see Table 2): (1) family constraints, (2) societal constraints, and (3) supports are needed.

### Theme 1: Family Constraints

Families noted three constraints that impeded participation as a family in recreation and physical activity: financial constraints, the child's disability, and lack of knowledge in modifying activities. Each constraint is explored in this section. Family constraints related primarily to the microsystem and mesosystem of the family unit and the interaction of the family with community programs or community settings.

**Financial constraints.** All participants mentioned financial constraints as the number one barrier for the lack of opportunities to be physically active for their children with visual impairments. Participant 10, a father with significant financial resources, mentioned that most of the families who were attending the camp were low-income families. He said, "This group in

**Table 2**  
*Summary of Themes and Subthemes*

Theme	Subtheme
Family Constraints	Financial constraints Child's disability Lack of knowledge in modifying activities
Societal Constraints	Lack of recreational opportunities Negative attitudes Safety concerns
Supports are needed	Creative and low-cost activities Hands-on experience Quality training for all

this town is very poor; there are a few middle class or middle high-class parents, but the rest of them have very limited resources." Other participant comments illustrated the sacrifices many families made to provide opportunities for their child. For example, Participant 1 mentioned the struggle of funding tuition for camp:

Our family has the willingness and the desire to go out, but going out and doing different activities is always an effort...right now I have to buy glasses [for the child]. I have to order another binocular...I have not been able to raise that money...even to participate in this [camp] I am making an extra effort because our economic situation really does not give us to cover these costs. I used the money I was saving for a dental treatment for myself. But I told myself...my son needs it more...and right now...I can't stand the pain.

Similar to this mother, many parents indicated that they have to make miracles with their limited budgets and that taking care of the medical bills related to having a child with visual impairments is cumbersome.

**Child's disability.** All participants indicated that their child's visual impairment is a significant barrier for their child to be an active participant of physical activities. Participant 4 shared her emotional story regarding the situations her son has experienced. She recalled that her child uses a wheelchair and he was able to control his chair; however, once he became visually impaired, everything changed. Her son, as a consequence of his spina bifida, developed hydrocephaly. Due to a strike at a local hospital, the day her son was supposed to have the shunt removed, the operation was postponed for 2 weeks. Consequently, the fluid put pressure on the brain and the child started to lose his vision.

This mother shared that even though her son uses a wheelchair and despite his visual impairment, he is able to maneuver around the house. She indicated that the loss of vision has changed the life of her son. She shared the following:

The only thing that has affected him is his vision...he became depressed...he used to play basketball, soccer, and hanging out with his peers... played, he was with his companions up and down...also his school work was affected...he was very depressed.



Similarly, Participant 9 noted, "Typically my child is left out on activities when he tries to play with his peers." Likewise, Participant 6 said,

I noticed that when he wants to do something [with his friends] and all the kids leave... he asked where did they go...and I say... they went on a bike... then he wants to go on a bike...but by the time we set up the bike... is too late...his peers are too far...and by the time we put his gear on and my gear on it is too late.

Interacting with their peers is what all children strive for when it comes to participation in physical recreation activities. However, due to their visual impairments, their opportunities to interact with their peers are impinged. According to parents, oftentimes their siblings assist with participation, but they also recognize the needs of their children without disabilities to spend time with their peers.

**Lack of knowledge in modifying activities.** In addition to visual impairment being a barrier, a lack of knowledge about how to modify activities is a related barrier that parents expressed. According to Participant 5, this lack of knowledge is an obstacle for her family. She said that she ordinarily is the one who participates in activities with her son [even though she does not know how] because her husband does not have the patience to play with his son. She indicated,

I feel that my husband sometimes does not participate because when [child's name] can't do something quickly, he gets angry. Then, he won't play with him anymore... for that reason...I am the one who spend most of the time with him [child].

Several of the barriers that parents mentioned are related. For example, peers not playing with a child with a visual impairment and lacking information about how to modify activities are related to each other and are related to an additional barrier parents identified: a lack of opportunities for children with visual impairments in Guatemala.

For most participants, finding ways to include their children and their entire family is difficult. According to Participant 6, keeping his son entertained as well as the whole family is always a challenge. Participant 6 (mother) commented in this regard:

In one single activity [can't participate]... not with the interest of all the children... I mean we have three kids... if one wants to go skiing, and the other one wants to go swimming, and the other wants to do whatever... So we just juggle them. Probably the one activity that we can do with the whole family together is go to the beach.

## **Theme 2: Societal Constraints**

Even though families recognized constraints within the family environment, they mentioned other barriers out of their immediate control. Three subthemes were identified under societal constraints: (1) lack of recreational opportunities, (2) negative attitudes, and (3) safety concerns. Societal constraints align with exosystems and macrosystems, systems that affect the child's opportunity for recreation indirectly.

**Lack of recreational opportunities.** Several participants voiced that one major obstacles to engaging their children in physical activities is the lack of opportunities. Participant 8 (mother) shared, "In this country, there is nothing...there is no foundation...or a specific place to help parents and children to develop in a better way." This lack of opportunities has a negative effect on trying to pursue physical activities among these families. Participant 6 (mother) commented,

It's not like you go to a place and everything is adapted for the people and they know how to deal with blind kids. It's a society that's not adapted for people with this kind of disability... in the states [United States], everything has Braille... wherever you go. Here [Guatemala], nothing.

**Negative attitudes.** Another way that having a visual impairment presented a barrier was related to the general negative attitudes of others. Participant 6 explained how people look at her family when they are out with her son. She voiced, "Some people look at you weird when you take the kid [out in the world] and people are really amazed when they see [him]." Participant 10 added in this regard,

Sometimes is difficult when these activities include all the people that are not accustomed to a blind child. But is very difficult for people that are not sensitized and the people that still have these paternal feelings that think, oh poor little child or oh I cry when I see her. That kills any kind of relationship even for the parents because they cannot or some people still have barriers and that is very hard to break.

This feeling of pity and oversensitivity to children with visual impairments can also lead to overprotection by many. This perspective of overprotection can lead to increased concerns about safety for some people including parents. In this case, safety in public parks is a very real concern due to reoccurring issues with crime and physical safety in this part of the country.

**Safety concerns.** The final barrier parents identified was specific to safety. Several participants mentioned that being able to safely access parks and other recreational facilities in Guatemala is a major obstacle for them to be physically active. Participant 10 shared his opinion about safety issues in Guatemala:

We have a security problem, and we have very little investment in recreation. There are places with beautiful parks, but those are very dangerous because the government hasn't put emphasis on it. So security is one important thing. If we go camp out, forget it. You can be assaulted and left with nothing but the sky on your head.

Other participants, such as Participant 8 (husband and wife), indicated that because of the safety issues in their country they overprotect their children. The wife said, "To be honest with you, I think we are the problem... we overprotect our children... especially here in Guatemala... this is a very difficult country, that's why we need to be a little more careful."

Another form of safety mentioned by Participant 8 is the fear of their child being injured. Even though this is not a societal constraint, this mother mentioned, "Fear of being hit. I think I'm the one who overprotected... I prefer to isolate him."

In summary, when there are spaces for recreation that are unsafe, many families are hesitant to utilize those places. All of the families interviewed agreed societal constraints negatively affect their active participation in physical recreation activities.

### **Theme: 3 Supports Are Needed**

Families interviewed identified several constraints to recreation. In this section, a summary of strategies related to the current practices they employed or mentioned as desired resources that may assist in overcoming such barriers are reported. Three subthemes are identified under this theme: (1) creative and low-cost activities, (2) hands-on experience, and (3) quality training for all. The fact that supports are needed relates to the microsystem and exosystem.

**Creative and low-cost activities.** As Participant 10 mentioned, assistance these families receive to support the individual needs of their child is limited. He indicated that families must identify inexpensive alternatives for recreation. For example,

We have to be creative and find things like go to a park or visit someplace that doesn't cost a lot of money. We don't need a super expensive bike. We use what we have and find new things to do in a creative way.

Just as families worked with available resources, families also found positive ways to address the barrier of their child having a visual impairment. But sometimes creativity is not enough, for this reason that Participant 10 voiced: "If we could get funding so we could, let's say, start with a few scholarships and provide them to one of the kids."

**Hands-on experience.** Parents were asked about what supports would be necessary to overcome the barrier of lack of knowledge regarding physical recreational activities. Participant 5 indicated that hands-on experience would be helpful for her to learn new ways in which she can play different sports with her son. She stated,

I think...that a little bit more knowledge in terms of how to do certain sports...for example...the sports that [child's name] played here today [at camp]...I read about those sports in a brochure a while ago when [child's name] was one year old...at school they gave me some copies and a book of how a teacher can teach different sports...but there were some things that were not clear to me...because it's not the same to read it...than to practice it.

This mother (Participant 5) indicated that in her mind she tried to envision how the game was supposed to be played. She tried without success to do the same with her child. She commented that on occasion she is frustrated because teachers at her son's school do not engage him in any of the sports she has read about in a book.

**Quality training for ALL.** To address the barrier of lack of physical recreational opportunities and the lack of knowledge in terms of how to modify activities, all families, especially Participants 6 and 10, noted that training and opportunities to see activities are important. Participant 10 said, "We really need to train parents and teachers to work with a blind child so they see it's not that difficult." He expanded on this, noting that useful activities to train adults could be

Smaller activities where they can participate and go and [someone providing training] has knowledge [to share]...let's say, go for a walk to this park, and they will have something like beeping balls some days. Or maybe supporting organizations will be the difference for our kids.

Parents voiced a need for organizations that provide training for families and recreational specialist in order to better support children with visual impairments. Families were aware that they might overprotect their children with visual impairments and recognized this as a barrier to participate in physical recreational activities.

## Discussion

The purpose of the study was to identify constraints and strategies to overcome barriers related to active participation in physical recreation activities from the perspective of Hispanic families of children with visual impairments living in Guatemala. Bronfenbrenner's (1977)

ecological systems theory consists of four levels (microsystem, mesosystem, exosystem, and macrosystem). The results of the current study shed light on the four levels of Bronfenbrenner's theory. We recognize that it is not an ideal situation to compare our results with the results of Hispanic parents in the United States or in other countries, but we decided to compare our results to Hispanics living in the United States because there are no previous studies among Hispanics in their native countries.

### **Microsystem**

Families were vested in providing opportunities for their children but were not always able to do so, even with personal sacrifice. Similar to Columna et al. (2011) and Stuart et al. (2006), among the family constructs, we found a lack of knowledge on how to modify activities and the child's disability. This lack of knowledge in terms of how to identify programs and how to modify activities for their children resulted in parents getting frustrated when trying to play with their children (Lieberman & MacVicar, 2003). It has been reported that fathers tend to be role models for children with disabilities (Ayvazoglu, Hyun-Kyoung, & Kozub, 2006). If parents are not able to play with their children, a result might be that the children may not know how to be physically active when they grow older. This aligns with findings of Sallis et al. (2000) that showed that childhood activity levels are directly related to activity levels in adulthood. So, how do parents find physical activities that they can do with their children with visual impairments with limited resources and support?

Parents mentioned that they need to be creative when trying to identify activities for their children and, most important, for the entire family. Parents mentioned positive strategies, such as closing a street to the traffic (in which they can walk, run, ride bikes, rollerblade, or spend time with their family) and providing summer camps and scholarships, as steps toward combating issues related to an inactive lifestyle. However, they voiced the lack of opportunities, the lack of skills on their part, and limited financial means, which are important characteristics (microsystem) that need to be considered. These societal barriers, among others, were also found in studies conducted with Hispanics (Columna et al., 2011) and with Caucasian families of children with visual impairments living in the United States (Perkins et al., 2013). Even though parents were emphatic about their socioeconomic position and how not having enough money affected their participation in recreational physical activities, participants in the current study identified activities they could do with little or no money. Most of the activities they stated (i.e., swimming, riding bikes) were the same as the ones found in Lieberman and MacVicar (2003). For this reason, recreation specialists (mesosystem) should promote collaboration with these families and identify strategies to meet their individual needs regarding physical recreation.

### **Mesosystem**

Parents mentioned lacking an organization to support recreational opportunities for children with visual impairments. However, the researchers learned that there is an organization for children with visual impairments, yet the lack of access to available programs is a reality these families confront. Perhaps if this organization would provide information about opportunities in the community and how to access these opportunities, participation would increase. Someone in the community should undertake the responsibility of helping parents access these programs and opportunities in the community; there was no person or agency doing this at the time this study was conducted.

Schools, agencies, and community organizations should account for the needs of these families when developing programs. Parents in the current study highlighted as a rewarding

experience being able to participate with their children in the sport camp. For them, this opportunity provided them with the necessary tools to engage their children and their whole family in fun and active games and sports.

### **Exosystem**

All parents agreed on safety as a main issue for the lack of participation on their part in physical recreation in Guatemala. All participants named places where they could go to participate in physical recreational activities. This finding is contrary with the ones found in Columna et al.'s (2011) research. In this study, the researchers reported a lack of awareness of Hispanics living in the United States concerning opportunities for participation in these types of activities. Even though participating parents in the current study knew where to go to participate, they highlighted that reasons related to safety factored in to why they did not participate. They did not feel safe going out around the city, and they would like the government to get involved and provide them the security they need so they can go to those locations as a family. Safety appears to be a major barrier to participation that might contribute to the overprotection of their children.

Comparing the results of the current study with those reported by Columna et al. (2011) and Perkins et al. (2013), we found parents in the current study focused mainly on safety as a reason for not being physically active. In Columna et al. and Perkins et al., for parents of children with disabilities living in the United States, their work schedule was the number one constraint for them to be active.

### **Macrosystem**

Traditionally, families of children with visual impairments have perceived that most activities are targeted to sighted children's interests (Babkes & Weiss, 1999). Ward, Farnsworth, Babkes-Stellino, and Perrett (2011) indicated that parents should determine activity preferences of their children and pursue those preferences. In the case of this study, parents and professionals did not even know how to adapt physical recreational activities to see whether their children liked certain activities (e.g., soccer). Parents reported that in order for them to determine and meet their children's preferences, they need support from the government in terms of scholarships, affordable programs, and the creation of recreational opportunities that cater to children with visual impairments.

## **Limitations of the Study**

Certain limitations were evident in this study. First, researchers decided to explore perceptions of Guatemalan families with children with visual impairments. The rationale for this approach was that the researchers wanted to acquire a broad perspective reflective of parental experiences across parents of children with visual impairments. Second, a convenience sampling was used. Consequently, these results are limited in terms of generalization. Third, researchers relied on self-report to identify perceived patterns of benefits and constraints to physical activity. Last, the researchers intended to follow up with participants to enhance the trustworthiness of this study. Unfortunately, this process was not possible because we were not able to contact the participants after the authors left Guatemala.

## Practical Application

Guatemalan parents of children with visual impairments have pleaded for more specific and affordable programming that caters to the recreational interests of their children with visual impairments within their native country. In addition, more resources related to how to modify sport and recreational activities to meet the needs not only of their children but also of their entire family are needed. All participants repeatedly voiced the creation of safe and comfortable recreational environments for the family is needed. For this reason, sport camps and community recreation programs should try to involve the whole family and not just the child with a visual impairment. If including the whole family is not possible, then a video can be shared with families so they can enjoy the camp experience as well (Shelton, Duerden, & Witt, 2010). By doing this, parents may be able to try some of the activities the child was able to do at camp. Last, a mechanism for allowing more affluent nations to assist in providing support to developing countries should be implemented. This support can be in the form of resources such as equipment, scholarships, or even professionals conducting training to provide the skills to create and run different sports programs for children with visual impairments and their families.

## Future Research

Recommendations for future research include replicating this study with Hispanic children living in the United States or other countries and having a study with Hispanic children with other types of disabilities and then comparing the results with the results reported in this research. The rationale to replicate this study is to compare what families in Guatemala experience with what Hispanic families in other countries experience when trying to provide recreational opportunities to their children with disabilities. Another recommendation would be a study on perceptions of people who provide physical recreational activities to Hispanic children with disabilities in the United States or other countries and their contribution to reducing or eliminating the barriers to children's participation described in this study. Furthermore, studies should be created that use recreation as an intervention to see whether these families become more involved as a result of the intervention.

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