1. **Title:**

Effects of Physical Activity on Children with Visual Impairments: Relationship between Motor Skill Development and Physical Activity.

1. **Investigator(s):**

Carlos M. Cervantes, Ph.D. and Ting Liu, Ph.D.

1. **Summary of the Research:**

Children with visual impairments have been identified as those who are in greater need for increasing physical activity levels. However, little is known about the underlying mechanisms that affect physical activity behavior for this population. It has been suggested that motor skill development is an important influential factor in children’s physical activity behavior. To the researchers’ knowledge, no previous study has investigated the relationship between motor skill development and physical activity behavior in children with visual impairments in the U.S. Therefore, the purpose of the proposed research study is to examine the relationship between motor skill development and physical activity levels in children with visual impairments. Children (ages 5-10 years) with visual impairments from Texas State school for the blind and visually impaired will be included in the study. Motor skills will be assessed using the Test of Gross Motor Development – 2 (TGMD-2). Physical activity levels will be assessed using GT3X ActiGraph accelerometers. The knowledge gained from this study has applications as researchers and practitioners search for salient factors affecting physical activity levels in children with visual impairments, and to design and implement interventions specifically focusing on increasing children’s physical activity.

**Background and Literature Review:**

The importance of promoting physical activity for children with disabilities has been recognized in the *2005 Surgeon General’s Call to Action to Improve the Health and Wellness of Persons with Disabilities* (United States Department of Health & Human Services [USDHHS], 2005). For children with special needs, the higher incidence of inactivity coupled with overweight and obesity presents a greater risk for developing secondary conditions associated with the primary disability, which can result in a poor quality of life (Rimmer, Rowland, & Yamaki, 2007). Children with visual impairments have been identified as those who are in greater need for increasing physical activity levels (Longmuir & Bar-Or, 2000). When compared to children without disabilities, children with visual impairments have demonstrated lower levels of health-related physical fitness (Lieberman & McHugh, 2001), lower levels of physical activity (Kozub & Oh, 2004; Longmuir & Bar-Or, 2000) and a greater likelihood for sedentary lifestyles (Houwen, Visscher, Hartman, & Lemmink, 2007), which increase their risks for obesity. Therefore, the development of intervention strategies that are specially designed to promote physical activity behavior in children with visual impairments is warranted (Longmuir & Bar-Or, 2000). However, it is difficult to develop effective interventions without first having a clear understanding of the underlying mechanisms that affect physical activity behavior.

There is a paucity of research on physical activity in children with visual impairments. Few studies have examined the underlying mechanisms that explain and predict children’s physical activity. One potential underlying mechanism that has received little attention is influence of motor skill development on physical activity levels (Stodden et al., 2008; Stodden & Goodway, 2007). Fundamental motor skills (e.g., run, skip, catch, throw) have been identified as building blocks for developing more complex and skilled movement forms (Ulrich, 2000). When compared to age-matched children without visual impairments, those with visual loss have exhibited significantly lower motor skill scores (Houwen, Visscher, Lemmink, & Hartman, 2008). It has been reported that it is common to observe delays in motor skill development associated with physical inactivity in children with visual impairments during early childhood. Unfortunately, a common misconception is to assume is that as a natural process children will develop proficient motor skill patterns (Clark, 2007; Stodden & Goodway, 2007). However, for children with visual impairments attainment of competent motor skill patterns may not occur at the same level as that of typically developing children. Thus, lack of adequate motor skill development may prevent these children from applying skills that could enable them to engage in lifelong physical activity.

It has been documented that children with higher motor skill scores tend to exhibit greater levels of physical activity than those with lower scores. (Fischer et al., 2005; McKenzie et al., 2002; Okely, Booth, & Patterson, 2001). A number of researchers have suggested that this association could be stronger if children with lower motor skill scores were examined (e.g., Fisher et al., 2005), such as children with visual impairments. Unfortunately, little empirical research has been conducted to evaluate such relationships among an underserved population such as that of children with visual impairments (Houwen, Visscher, et al., 2008). Nonetheless, it is important to consider motor skill development as plausible important factor for physical activity behavior in this group.

**Research Purpose and Objectives:**

The overarching goal of this proposed study is to examine the relationship between motor skill development and physical activity levels in children with visual impairments. The following specific aims will be addressed:

* Aim 1: To examine the physical activity levels for children with visual impairments.
* Aim 2: To examine the motor skill development for children with visual impairments.
* Aim 3: To examine the relationship between motor skills development and physical activity levels for children with visual impairments.

**IV. Human Subject Interactions**

1. **Sources of Potential Participants:**

All participants will be recruited from Texas school for the blind (TSBVI) in Austin, Texas. It is expected to include all students with visual impairments (ages 5 to 10) who are attending the school or at least 60 children to this study. The TSBVI serves as a special public school in the continuum of statewide placements for students (ages 6 to 21) who have a visual impairment, including those with blindness or deafblind. The lead investigator (i.e., Dr. Carlos M. Cervantes) has previously discussed the research with the schools’ administration (i.e., William E. Daugherty, Superintendent) and has received full support from the school for this research endeavor.

1. **Procedures for the Recruitment of Participants:**

Recruitment of participants will be conducted by the following methods: (a) word-of-mouth among teachers and school staff, and (b) contact with mail and email generated from schools’ database. When potential participants are identified, a preliminary email/letter (a copy of the email/cover letter is included in Appendix A) will be sent to the parents. Then a phone call will be followed if the phone contact information is available. The parents will be encouraged to contact the investigator if they are interested in obtaining more information about the research study. A visit to school classrooms (for target age group as agreed with school administration) will be conducted to inform potential participants about the research.

1. **Procedure for Obtaining Informed Consent:**

Lead researcher will be responsible for soliciting and obtaining consent and assent form. Consent forms (Appendix A) will be mailed to the parents or legal guardians of potential participants. Parents will sign a consent form to allow their children participate in the study. A cover letter (Appendix B) will be sent alongside the consent form explaining to parents the purpose, aims, and procedures of the study. Parents will be given the opportunity to contact the lead researcher for questions and answers associated with the study. All parents will be assured that they can terminate their child’s participation at any time. Assent form (Appendix C) for each child will be obtained prior to motor assessment. Only participants with signed consent and assent forms will participate in the study.

1. **Research Methods and Activities:**

Children with visual impairments (ages 5-10) will be included in this study. Assent and consent forms from participants and their parents (respectively) will be obtained. Demographic data will be obtained and analyzed using descriptive statistics. Data collection instruments will include:

1. *Test of Gross Motor Development (TGMD-2)* – The TGMD-2 (Ulrich, 2000) is a norm and criterion-referenced test that assesses the gross motor ability of children 3-10 years. It measures performance of 12 fundamental motor skills. Two subscales (consisting of 6 motor skills) make up the instrument: the locomotor subscale (run, gallop, hop, leap, jump, and slide) and the object control subscale (strike, dribble, catch, kick, throw, and roll). The TGMD-2 has shown evidence of validity and reliability among children (Evaggelinou, Tsigilis, & Papa, 2002; Ulrich, 2000). All measures of motor skill development will be assessed in the school’s gymnasium during the time allocated for physical education or at a time determined by the school administration.

1. *GT3X ActiGraph Accelerometers* – Physical activity levels will be assessed using GT3X accelerometers (ActiGraph, Pensacola, FL). ActiGraph accelerometers (pedometer-liked non-invasive devices) are small, lightweight, water resistant, and have a large storage capacity. ActiGraph accelerometers have been previously used to objectively assess physical activity among children and adolescents with visual impairments (Cervantes, 2009; Houwen et al., 2008?; Kim & Yun, 2009). Accelerometers will be attached to using a neoprene belt and worn by the participants for an entire week, both at home and school. It has been recommended that four days of monitoring are needed to capture daily physical activity patterns among children with special needs (Kim & Yun, 2009). The accelerometers will be initialized (using specialized software) with a pre-determined time and using a 15-second epoch length as recommended in the literature. Based on the literature (Trost, McIver, & Pate, 2005), compliance with wearing the ActiGraph accelerometers will be facilitated by: (1) explaining to participants placement and proper use of the device as well as a letter to the parents explaining placement, including a diagram, (2) visual aid on accelerometer and belt to indicate right side or proper location for using the device, (3) training participants, including their teachers to fit the belt and practice wearing the device prior to formal data collection, (4) prompts to teachers to remind participants to wear belt at school, (5) prompts to parents (e.g., email, phone calls) to remind participant to wear the belt when at home, (6) checking person-to-person placement of accelerometers when participants are at school, and (7) a reward system may be in place to promote daily wearing of the belt at school and home.

Children with visual impairments will be classified as sedentary or active condition according to their physical activity assessments. In addition, to better understand the relationship between motor skill development and physical activity, participants will be classified according to age (i.e., 5-6, 7-8, and 9-10) to evaluate how motor skill development may change from early childhood to late childhood (Ulrich, 2000). A linear correlation and multiple regression analysis will be used to examine the relationship between motor skill development and physical activity levels.

1. **Potential Risks:**

No potential risks are expected in this study. Any information that is obtained in connection with this study, and that can be identified with the participant will remain confidential. It will be disclosed only with parental permission. The data collected in this study may also be reanalyzed and used in future studies and publications. Neither in the present study nor in any future analyses of these data the participants will be individually identified. The researchers will have access to the data. All the files and data relate to this study will be kept secure in a lock-key cabinet.

1. **Reasonably Anticipated Benefits:**

There are no immediate benefits for children participating in this proposed study. However, potential findings may increase our knowledge on relationship between motor skill development and physical activity in an underserved population such as children with visual impairments. The knowledge gained from this research has applications as researchers and practitioners search for salient variables affecting physical activity levels in children with visual impairments, and to design and implement interventions specifically focus on increasing children’s physical activity levels. For example, if motor skill development may play a role in the multifaceted behavior know as physical activity, then school practitioners can design an intervention program to effectively improve motor skill development at an early stage of the child’s schooling, which may lead to greater physical activity participation for this group.

1. **Incentives to Participate:**

There will be no incentives for participation in this study. All participants and their parents will be informed that their participation or non-participation in this study is voluntary and their decision will not influence their present or future involvement with Texas State University-San Marcos or the Texas School for the Blind and Visually Impaired.

1. **Sites or Agencies Involved in the Research Project:**

Research study will be conducted at the Texas School for the Blind and Visually Impaired located at 1100 W. 45th Street, Austin, Texas 78756. No explicit letters of approval have been included at the time this document is being submitted for IRB review. However, a letter of research approval and support from the TSBVI superintendent has been sent out to the lead research and is pending arrival. All data collection will be taking place at the school gymnasium.

1. **Review by Another IRB:**

This protocol is submitted for its approval only to Texas State University-San Marcos IRB.

**References**

Cervantes, C. (2009). *The effects of an after school program on leisure time physical activity behavior among adolescents with visual impairments*. (Unpublished doctoral dissertation). The Ohio State University, USA.

Clark, E. (2007). On the problem of motor skill development. *Journal of Physical Education, Recreation, and Dance, 78*(5), 27-36.

Evaggelinou, C., Tsigilis, N., & Papa, A. (2002). Construct validity of the test of gross motor development: A cross-validation approach. *Adapted Physical Activity Quarterly, 19,* 483-495.

Fischer, A., Reilly, J., Kelly, L., Montgomery, C., Williamson, A., Patton, J., et al. (2005). Fundamental movement skills and habitual physical activity in young children. *Medicine & Science in Sports & Exercise, 37,* 684-688.

Houwen, S., Visscher, C., Hartman, E., & Lemmink, K. (2007). Gross motor skills and sports participation of children with visual impairments. *Research Quarterly for Exercise and Sport, 78,* 16-23.

Houwen, S., Visscher, C., Lemmink, K., & Hartman, E. (2008). Motor skill performance of school-age children with visual impairments. *Developmental Medicine & Child Neurology, 50,* 139-145.

Kim, S. & Yun, J. (2009). Determining daily physical activity level of youth with developmental disabilities: How many days of monitoring are required? *Adapted Physical Activity Quarterly, 26,* 220-235.

Kozub, F. & Oh, H-K. (2004). An exploratory study of physical activity levels in children and adolescents with visual impairments. *Clinical Kinesiology, 58,* 1-7.

Lieberman, L. & McHugh, E. (2001). Health-related fitness of children who are visually impaired. *Journal of Visual Impairment & Blindness, 95,* 272-287.

Longmuir, P. & Bar-Or, O. (2000). Factors influencing the physical activity levels of youth with physical and sensory disabilities. *Adapted Physical Activity Quarterly, 17,* 40-53.

McKenzie, T., Salus, F., Broyles, S., Zive, M., Nader, P., Berry, C., & Brennan, J. (2002). Childhood movement skills: Predictors of physical activity in anglo-and mexican-american adolescents? *Research Quarterly for Exercise and Sport, 73*(3), 238-244.

Okely, A., Booth, M., & Patterson, J. (2001). Relationship of physical activity to fundamental movement skills among adolescents. *Medicine & Science in Sports & Exercise, 33,* 1899-1904.

Rimmer, J., Rowland, J., & Yamaki, K. (2007). Obesity and secondary conditions in adolescents with disabilities: Addressing the needs of an underserved population. *Journal of Adolescent Health, 41,* 224-229.

Stodden, D. F., & Goodway, J. D., (2007). The dynamic association between motor skill development and physical activity. *Journal of Physical Education, Recreation, and Dance, 78,* 33-34 & 48-49.

Stodden, D. F., Goodway, J. D., Langendorfer, S. J., Roberton, M. A., Rudisill, M. E., Garcia, C., & Garcia, L. E. (2008). A developmental perspective on the role of motor skill competence in physical activity: An emergent relationship. *Quest, 60*, 290-306.

Trost, S., McIver, K., & Pate, R. (2005). Conducting accelerometer-based activity assessment in field-based research. *Medicine & Science in Sport & Exercise, 37*(11 suppl), S531-S543.

Ulrich, D. (2000). *Test of gross motor development-2*. Austin, TX: Pro-Ed.

**Appendix A**

**Parental Consent for Child’s Participation in Research**

**Study Title:** Effects of Physical Activity on Children with Visual Impairments: Relationship between Motor Skill Development and Physical Activity.

**Researchers:** Carlos M. Cervantes, Ph.D. and Ting Liu, Ph.D., Texas State University.

**Sponsor:** Research Enhancement Program (REP).

* **This is a parental permission form for research participation.** It contains important information about this study and what to expect if you permit your child to participate.
* **Your child’s participation is voluntary.** Please consider the information carefully. Feel free to discuss the study with your friends and family and to ask questions before making your decision whether or not to permit your child to participate. If you permit your child to participate, you will be asked to sign this form and will receive a copy of the form.

**Purpose**

The purpose of this study is to evaluate how the motor skill development of children with visual impairments may affect their physical activity patterns.

**Procedures and Tasks**

Participants will be asked to complete a set of 12 motor skills (run, gallop, hop, leap, jump, slide, strike, dribble, catch, kick, throw, and roll) in the school’s gymnasium at a convenient time for them. The motor skill assessment will take about 15-30 minutes for your child to complete. Participants will be videotaped during motor skill testing to ensure the sessions follow all the guidelines of the study so their safety is always maintained. In addition, participants will be asked to wear an accelerometer, which is a small pedometer-like device that measures time, duration and frequency of physical activity. The accelerometer will be worn using an elastic belt around the waist for approximately one-week of study.

**Duration**

It is expected that the study will take approximately one to two weeks or until participants’ motor skills and physical activity information has been collected. Your child may leave the study at any time. If you or your child decides to stop participation in the study, there will be no penalty and neither you nor your child will lose any benefits to which you are otherwise entitled. Your decision will not affect your future relationship with Texas School for the Blind and Visually Impaired or Texas State University.

**Risks and Benefits**

Nothing bad will happen to your child as a result of participating in the study. Neither the motor skills assessment instrument nor the activity monitor will harm your child in any way. The anticipate benefits of the research study is that it may provide valuable information on whether motor skill development may be an important factor in enabling children with visual impairments to be more physically active. Results may allow teachers to design programs that address motor skills at early stages so children with visual impairments can engage in adequate physical activity leading to improved quality of life.

**Confidentiality**

Efforts will be made to keep your child’s study-related information confidential. However, there may be circumstances where this information must be released. For example, personal information regarding your child’s participation in this study may be disclosed if required by state law. Also, your child’s records may be reviewed by the following groups (as applicable to the research): (a) Office of Research and Federal Relations at Texas State University or other federal, state, or international regulatory agencies; (b) Texas State University Institutional Review Board; and (c) The sponsor, if any, or agency supporting the study.

**Incentives:** There are no monetary incentives for participating in the study.

# **Participant Rights:**

* You or your child may refuse to participate in this study without penalty or loss of benefits to which you are otherwise entitled. If you or your child is a student or employee at Texas State University, your decision will not affect your grades or employment status.
* If you and your child choose to participate in the study, you may discontinue participation at any time without penalty or loss of benefits. By signing this form, you do not give up any personal legal rights your child may have as a participant in this study.
* An Institutional Review Board (IRB) responsible for human subjects’ research at Texas State University reviewed this research project and found it to be acceptable, according to applicable state and federal regulations and University policies designed to protect the rights and welfare of participants in research.

# **Contacts and Questions:**

# For questions, concerns, or complaints about the study you may contact **Dr. Carlos M. Cervantes** at (512) 245-9691 or via email at [cc85@txstate.edu](mailto:cc85@txstate.edu). To discuss other study-related questions with someone who is not part of the research team, you may contact Dr. Jon Lasser, IRB Chair, at (512) 245-3413 or Ms. Becky Northcut in the Office of Responsible Compliance at (512) 245-2102.

# **Signing the Parental Permission Form:**

I have read (or someone has read to me) this form and I am aware that I am being asked to provide permission for my child to participate in this study. I have had the opportunity to ask questions and have had them answered to my satisfaction. I voluntarily agree to permit my child to participate in this study. I am not giving up any legal rights by signing this form. I will be given a copy of this form**.**

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|  |  |  | |
| **Printed name of child** |  |  | |
|  |  |  | |
|  |  |  | |
| **Printed name of person authorized to provide permission for child** |  | **Signature of person authorized to provide permission for child** | |
|  |  |  | **AM/PM** |
| **Relationship to the child** |  | **Date and time** |  |

**Video Consent Acknowledgement:**

I hereby give permission for use of videos of my son or daughter for use in data analysis, educational training, professional presentations, and professional publications. I understand that no explicit identifying information will accompany the presentation of videos, though the use of my child’s image may lead to recognition of my child as a study participant.

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**Printed name of child** **Date**

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**Signature of parent(s) or legal guardian** **Date**

**Investigator/Research Staff**

I have explained the research to the participant or his/her representative before requesting the signature(s) above. There are no blanks in this document. A copy of this form has been given to the participant or his/her representative.

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| **Printed name of person obtaining consent** |  | **Signature of person obtaining consent** | |
|  |  |  | **AM/PM** |
|  |  | **Date and time** |  |

**Appendix B**

**Parent Cover Letter**

Dear Parent or Legal Guardian:

I am requesting permission for your child to participate in a research study evaluating the influence of motor skills (such as run, jump, kick, and throw) on physical activity participation among children with visual impairments attending the Texas School for the Blind and Visually Impaired. This research study has been approved by the Texas School for the Blind and Visually Impaired and the Texas State University-San Marcos Institutional Review Board, whose purpose is to assure we conduct a responsible research.

As part of the study, participants will be assessed on 12 motor skills, including: run, jump, gallop, skip, leap, and slide. In addition, participants will wear a pedometer-like activity monitor known as accelerometer. Accelerometers will allow us to track your child’s day-to-day physical activity levels in a non-invasive manner. That is, accelerometers will be attached using a neoprene belt and worn by your child (waist-level, at right hip) for an entire week, both at home and at school. Accelerometers are water resistant, but not waterproof so your child will not wear monitor when bathing or swimming.

Your child’s participation in this study is completely voluntary. In addition to your permission, your child will also be asked if he or she would like to take part in this project. Only those children who have parental permission and who want to participate will do so, and any child may stop taking part at any time. You are free to withdraw your permission for your child’s participation at any time and for any reason without penalty. Your decision whether to allow your child to participate will not affect the services normally provided to your child by the school and your child will not lose benefits to which he or she is otherwise entitled. We do not anticipate any risks to your child from participating in this study. After the study is complete, we would be happy to share our findings with parents and the schools’ superintendent. We hope to use what we learn from the study to help children with visual impairments attain skills that would enable them to participate and maintain a physically active lifestyle, leading to improved overall quality of life.

Enclosed you will find the parental consent form, which also includes detailed information about the study. If you consent to your child’s participation in the study, please complete and return the enclosed consent form to us as soon as possible. You can send the completed form with your child to school (we will collect it personally) or you can use the stamped envelope enclosed in this letter and send it via mail. You may also fax the form to us. You may keep this letter for your records. We look forward to working with your child. We think this project will be enjoyable for your child. Should you have any questions or desire further information, please feel free to contact any of the researchers.

Sincerely,   
  
  
  
Carlos M. Cervantes, Ph.D., CAPE Ting Liu, Ph.D.

Assistant Professor Assistant Professor

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**Appendix C**

**Children Assent to Participate in Research**

**Study Title:** Effects of Physical Activity on Children with Visual Impairments: Relationship between Motor Skill Development and Physical Activity

**Researcher:** Carlos M. Cervantes, Ph.D. and Ting Liu, Ph.D.

**Sponsor:** Research Enhancement Program (REP).

* You are being asked to be in a research study. A research study is a way to find better ways to treat people or to understand things better.
* Your parents and the school principal know we are going to ask you to participate in this research study.
* This form will tell you about the study to help you decide whether or not you want to participate.
* You should ask any questions you have before making up your mind. You can think about it and discuss it with your family or friends before you decide.
* It is okay to say “No” if you don’t want to be in the study. If you say “Yes” you can change your mind and quit being in the study at any time without getting in trouble.
* If you decide you want to be in the study, an adult (usually a parent) will also need to give permission for you to be in the study.

**1. What is this study about?**

The purpose of this study is to see how your motor skills such as running, hopping, kicking, and throwing may affect how much physical activity you engage when you are not in class. You are being asked to participate in this study because physical activity is very important to your health and we want to see if motor skills may play an important part in helping children with visual impairments become more physically active.

**2. What will I need to do if I am in this study?**

You will be asked to complete a set of 12 motor skills in the school’s gymnasium at a convenient time for you. It will take about 15-30 minutes to complete those motor skills. In addition, you will be asked to wear an accelerometer (which measures the time you spend in physical activity and how hard you are working) for a week of the study. The accelerometer is a small device you will wear using an elastic belt around your waist. You will be videotaped during the study, but this is only to make sure the sessions follow all the guidelines of the study so your safety is always maintained.

**3. How long will I be in the study?**

You will be in this study for a period of one to two weeks or until your motor skills and physical activity information have been collected.

**4. Can I stop being in the study?**

You may stop being in the study at any time. If you decide you do not want to be in this study or if you do not want to wear the accelerometer, you will not be penalized.

**5. What bad things might happen to me if I am in the study?**

Nothing bad will happen to you as a result of this study.

**6. Will I be given anything for being in this study?**

There will be no rewards or incentives for participating in this study. Your participation is totally voluntary.

# **7. Who can I talk to about the study?**

For questions about the study you may contact Dr. Carlos M. Cervantes at (512) 245-9691 or via email at [cc85@txstate.edu](mailto:cc85@txstate.edu). You can also reach Dr. Cervantes via Mr. Joe Paschall at the school.

# **Signing the Assent Form**

I have read (or someone has read to me) this form. I have had a chance to ask questions before making up my mind. I want to be in this research study.

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|  |  |  | **AM/PM** |
| **Signature or printed name of participant** |  | **Date and time** |  |

**Investigator/Research Staff**

I have explained the research to the participant before requesting the signature above. There are no blanks in this document. A copy of this form has been given to the participant or his/her representative.

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  | |
| **Printed name of person obtaining assent** |  | **Signature of person obtaining assent** | |
|  |  |  | **AM/PM** |
|  |  | **Date and time** |  |

This form must be accompanied by an IRB approved parental consent form signed by a parent/guardian.