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The Effect of Therapeutic Horseback Riding on Balance and Self-Efficacy in Children with Developmental Disabilities

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- 1. In the initial section of your proposal, describe what you intend to do. Describe the project's purpose, design, methodology, and limitations. Be specific.**
- 2. Next, address such questions as these: What do you expect to learn from doing this project? What will be accomplished by the completion of this project? What makes it worth doing? What will be the benefits of the project for people other than yourself?**
- 3. In a third section, describe the final presentation of the project. What will be the written product of your work on this project? If the project is to be performed or presented, what will be the occasion and the audience?**

1. The prevalence of developmental disabilities in children in the United States is a serious problem. Since children with developmental disabilities often show decreased self-efficacy and balance, researchers have studied the effects of interventions in this population. The purpose of this study is to determine the effect of a 10-week THR session on balance and task-specific self-efficacy in children with physical disabilities ages 6 to 18 years old. This is a quantitative quasi-experimental study that will use a pretest-posttest design featuring one group. Enrollment in the study requires parental consent (see Appendix B) followed by assent (see Appendix C) from each participant to proceed. The research team will first receive permission from the owners of the THR riding sites to conduct the onsite study. In order to share information and receive approval, the research team will provide an informational meeting onsite to owners and staff to explain the study. After obtaining approval from program owners, another meeting will be held onsite to ask for participation in the study by parents and children. At that time, those who are willing to participate in the study will be asked to fill out an informed consent (parents) and assent (children) to be officially considered as part of the study.

Data collection will begin prior to the first riding session of the season. This is to determine a true pre-test value. Data will be collected by a modified Bandura's task-specific self-efficacy test and a pediatric version of the Berg balance scale. The information will be gathered through printed surveys and quantitative assignments. In case the children have difficulty answering or filling out the questions, the research team and other unbiased student volunteers will be at their disposal for help, so that they may obtain the most accurate information possible. The research team will meet with and instruct all student volunteers to promote inter-rater reliability and internal study validity. Completed surveys will be stored in a locked cabinet file of the sponsor's locked university office; the only individuals who will have access to the information will be the co-investigators and sponsors of the study. At the end of the study, all of printed surveys will be destroyed, except for signed consent and assent forms, which will be kept for five years. Also, surveys will be de-identified, and each participant will be assigned a number to connect pre- and post-test data for analysis.

Demographics of the study include; age in number of years, gender in male or female, type of disability, severity of disability, prior experience in therapeutic horseback riding, and participation location. Limitations that the study may face include: severity and type of disability, prior riding experience, and small sampling size.

2. The research team expects to learn about how therapeutic riding programs are run and how they impact disabled children. By completing this project the research team expects to be able to understand the correlation between therapeutic horseback riding and the impact it has on self-efficacy and balance. There are many studies available on the subject of THR (therapeutic horseback riding) and its benefits, but a gap in the knowledge occurs in the information that we

wish to explore. Gross motor functioning, emotional functioning, and social functioning are looked at frequently; however we want to look directly at balance and task-specific self-efficacy. We hope that this information will provide parents of disabled children other options for therapy in the future. THR is gaining popularity however the hope is that these results may help others realize that there are other therapeutic options other than the traditional options most commonly given.

3. The co-investigators will enter data into a statistical analysis software program, SPSS 22. Outliers and missing data will be identified, and decisions will be made about how to deal with both. Descriptive statistics will be used to determine the description of the sample, balance, and self-efficacy with percentages used for nominal and categorical data and means with standard deviations used for integer and ratio level data. A written summary of the data will be made after the conclusion of the study. Additionally, the research team plans to do a UASIS poster presentation. The project will be presented to a variety of people, and the hope is that by speaking to/with a diverse audience the results of the study will reach many groups of people.