Ballet Moves: A Community Collaboration with the Cincinnati Ballet Company for Individuals with Down Syndrome

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Background

Down Syndrome (DS) is the most frequently occurring chromosomal disorder, affecting approximately 1 in every 700 live births (Parker SE 2010). Children and young adults with DS experience lower levels of physical activity and participation in meaningful community activities due in part to environmental barriers such as a lack of appropriate community-based services. Parents report social interaction as the primary motivator for their children to participate in physical activities. Further, they report that without social interaction their children would prefer sedentary activities (Menes K 2007).

The World Health Organization’s International Classification of Functioning, Disability and Health (ICF) framework reflects the dynamic interaction between person and environment (Becker E 2003). Such models as the syndrome has been shown to be successfully included in a community environment conducive to the activity of interest. Furthermore, with appropriate modifications and a good fit between child and program, a child with Down syndrome has been shown to be successfully included in a community program (Hunter KGJ 2004).

Previous studies have demonstrated that there is a valuable role for pediatric physical therapists to offer their expertise to community providers regarding physical, social, behavioral, system, and other parameters related to participation (Hunter KGJ 2004). Futhermore, with appropriate modifications and a good fit between child and program, a child with Down syndrome has been shown to be successfully included in a community program (Hunter KGJ 2004). Despite this knowledge, supporting therapeutic goals in the child’s natural environment is an under utilized approach (Hunter KGJ 2004). New models of care delivery are needed to transcend the limitations of traditional models of care delivery and engage the child in an environment conducive to the activity of interest. Such models as the syndrome has been shown to be successfully included in a community environment conducive to the activity of interest.

The purpose of this demonstration poster is to describe the process for creating a successful collaboration between Cincinnati Children’s Hospital Medical Center (CCHMC) and a community organization in order to develop a new model of service delivery that enhances socialization and participation for individuals with Down syndrome.

Objectives

The program was advertised through CCHMC’s The Jane and Richard Thomas Center for Down Syndrome, outpatient therapists, and by word of mouth.

The Division of Occupational Therapy and Physical Therapy, and Therapy related professionals (OTPT) partnered with The Cincinnati Ballet Company (CBC) director of education and faculty members to offer Ballet Moves, a program of ballet classes for children and young adults with Down syndrome. All classes took place at the CBC studios and were led by qualified CBC faculty members. Experienced physical therapists, each of whom has a passion for dance and special interest in people with Down syndrome, provided consultative services for program planning, assessments before and after the 20-weeks of classes, and direct services during the ballet classes.

The OTPTT Business Director and CCHMC Legal Department worked with CBC to craft a contract describing services and fees for services provided. CBC faculty obtained private funding in order to support initial start up costs for the program, including physical therapist salary for an average of four hours per week over 22 weeks. Tuition for the class was the same as that of other 20-week sessions at the ballet company for the same age group. Scholarships were available for those in need. All dancers were provided with dance attire.

Two dance classes were offered for children with Down syndrome, with the first class serving ages 4 to 7 and the second class serving ages 8 to 12. The classes were each one hour in length and consisted of 20 weekly sessions running from July through December of 2014. The last class was a demonstration class for those interested in observing.During classes, one to two physical therapists provided support to ensure proper body mechanics and adaptive techniques for the participants, as well as education for instructors and family. Community volunteers provided assistance to help participants in completing class activities and keep them motivated and engaged throughout the session.

Program Description and Assessments

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Goals of the program were to promote:

- Enhanced self-esteem and self-confidence
- Attending to and following directions
- Cooperation with and encouraging others
- Awake and engaged
- Distinguishing right and left
- Increased focus
- Improved coordination and balance
-Dancing
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Significance

Building collaborations to enhance participation of those with developmental disabilities such as Down syndrome requires expertise from clinicians, families, business directors and community partners. This presentation demonstrates how each expert contributes to the overall success of a community partnership. Ballet Moves has been well accepted by the dancers, their families and our community. In the first year of the program 13 children successfully participated.

Dance classes during the 2014 program were most successful when one-on-one volunteers were available. Therefore, planning for future classes will include emphasis on recruiting volunteers, with a focus on physical therapy programs at local universities. With increased volunteer support, physical therapy support during classes will also be reduced to one physical therapist in order to reduce overall costs and improve the sustainability of the program.

Based on the success of this initial program, enrollment will be expanded in the future, including offering more classes and extending the age limits. A more concentrated effort will also be made for recruitment of participants, with participants once again being recruited through The Jane and Richard Thomas Center for Down Syndrome, but also through the Down Syndrome Association of Greater Cincinnati (DSAGC) and local schools.

Funding has been obtained from the Jack H. Rubenstein Foundation for the 2015-2016 season and will be utilized to continue developing and promoting the program. Furthermore, outcomes from the 2014 program will be analyzed and reported in future work.

Typical class activities included:

- Running forward and backward
- Heat and low steps
- Body isolations
- Clapping to various rhythms
- Plie, releve, and tendus
- Port de bras
- Chasse and skipping
- Jumping activities
- Balance activities
- Activities using props such as tambourines, hula hoops and scarves
- Creative dance to different styles of music

Researchers in the division of OTPT assisted in development of a research pilot infrastructure in order to study the effects of the program based on the International Classification of Function (ICF). This included assistance with protocol writing, IRB management, and mentoring for data collection and storage.

Measures collected at baseline and after participation included:

- Canadian Occupational Performance Measure (COPM)
- Dimensions D and E of the Gross Motor Function Measure (GMFM-88)
- Mobility and Social-Cognitive Domains of the Pediatric Evaluation of Disability Inventory – Computer Adapted Testing (PEDI-CAT)
- Postural sway using a ground reaction force plate
- Gait parameters using the Gaitline walkway
- Qualitative data regarding program effect obtained via written parent feedback at the end of the program

Analysis of these measures is currently underway.

References

1. Beiser S, Zou Z. Participation is possible: a case report of integration into a community performing arts program. Physiotherapy Theory and Practice.

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