EVALUATION OF A FAMILY FITNESS PROGRAM: THE FIT FAM PROGRAM

By

Steven Childs

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Committee Membership

Dr. Jill Pawlowski, Committee Chair

Dr. Chris Hopper, Committee Member

Dr. David Adams, Committee Member

Dr. Taylor Bloedon, Program Graduate Coordinator

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Abstract

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Background: One method to increase physical activity levels and overall health of children with disabilities is to involve entire families in physical activity programs. Purpose: The purpose of this study was to evaluate the seven-week self-directed fitness program, the Fit Fam program. Methods: Six parents of children aged six to 20 with intellectual and developmental disabilities (IDD) participated in a one week in-person educational fitness program prior to participating in a seven-week self-directed family fitness program in which participants utilized skills learned and a provided, individuallytailored physical activity program for their family and tracked each family members physical activity on a weekly basis. Parents completed an evaluation survey following the in-person educational portion of the program and a focus group at the conclusion of the full program. Results: The focus group discussion was transcribed and analyzed and the following themes were found: improved self-esteem of children with disabilities, the benefits of having a fully inclusive program for the whole family, barriers to engaging in physical activity as a family outside of the program, and program feedback. Discussion/Conclusion: Participants reported that their children experienced improved self-esteem and an increased desire to engage in physical activity following the in-person portion of the program, which is consistent with other studies involving similar programs. Only one family tracked their physical activity levels throughout the self-directed portion of Fit Fam. Although the intended outcomes of increased physical activity levels and improved physical ability were not achieved, adult participants reported an improved outlook on engaging in physical activity as a family and participating in inclusive programs.

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Chapter I: Introduction

Obesity rates among children with disabilities (CWDs) have been reported at 21.7% (Chen, Kim, Houtrow & Newacheck, 2013) and are significantly higher than their typically developing peers (i.e., 18.5%; Hales, Carroll, Fryar & Ogden, 2017). A contributing factor to this high obesity rate is low levels of physical activity among CWDs in North America (Collins & Staples, 2017). The World Health Organization defines physical activity as "any bodily movement produced by skeletal muscles that requires energy expenditure".

Wakely and Rae (2017) reported CWDs in rural areas do not engage in daily physical activity and face more barriers to physical activity participation than those in more populated. These barriers include: financial costs, lack of access to facilities, the time required to travel to those facilities, negative attitudes towards inclusion, a lack of knowledge about their child's abilities, and unsupportive programs (Wakely, Johnston, Langham & Rae, 2017).

According to Gallaway and Hongu (2015), physical activity is beneficial to CWDs health in that it burns calories and benefits almost every system of the body (e.g., cardiovascular, digestive, endocrine, and immune system). Engaging in physical activity has also been shown to benefit children with various disabilities. For example, children with autism spectrum disorder (ASD) demonstrated improved attention span up to 40 minutes after engaging in physical activity. Benefits, such as fitness levels and problem solving skills were also reported (Menear & Neumeier, 2015). Physical activity benefits for children with other disabilities include: individuals with cerebral palsy benefiting from weight-bearing programs where they gain muscular strength and endurance which is associated with increased bone mass, a decrease in injury from falls, and the ability to complete activities of daily living (Murphy & Carbone, 2008). The same study found that children with Down syndrome showed increased exercise endurance and work capacity after participating in a specialized aerobic training program. Physical activity can also benefit CWDs' overall happiness and reduce anxiety, depression, and sleep issues (Lu & Montague, 2015).

Family structure and activity levels play an integral role in whether or not CWDs engage in physical activity. Karakas and Yaman (2014) reported that 72.1% of children whose parents play sports also engaged in sports and physical activities, while only 51.5% of children whose parents did not play sports engaged in physical activity on their own (Karakas & Yaman, 2014). As CWDs grow into adolescence their physical activity levels can be heavily influenced by siblings and peers, and if a child's friends or siblings do not engage in physical activity they are less likely to be active themselves (Allison, Dwyer, Fein, Yoshida & Boutilier, 2005). Parents also face barriers to participating in physical activity and facilitating physical activity for their children (Goodwin & Ebert, 2018). When recruiting parents for a family-centered, multidisciplinary program for obese children and their families, researchers reported that 34 eligible families declined to participate due to busy schedules, distance from the program, and lack of motivation (Panagiotopoulus et al., 2011). Parents are more likely to participate and be successful in these types of programs when they are provided with personalized resources which included an individualized fitness plan, locations in the area that provide opportunities for physical activity, and ideas of how to facilitate physical activity for children with disabilities. Lieberman and Robinson (2008) found that when parents of children with visual impairments were provided with a resource guide for facilitating physical activity their children's physical activity levels increased significantly. A different study found that families who participated in a family fitness and nutrition program were found to have significantly higher knowledge of nutrition and health than families who did not participate in the program (Hopper, Munoz, Gruber & Nguyen, 2005). These results suggest, that low burden family centered physical activity programs can be successful in increasing physical activity levels of children with disabilities and their families.

Purpose

The purpose of this study was to evaluate a family fitness program, the Fit Fam program, designed for families with a child with a disability.

Review of Literature

Physical Activity

According to the National Center for Health Statistics Data Brief 2017, obesity rates in the United States are high in both adults (i.e., 39.8%) and youth (i.e., 18.5%). Moreover, children with disabilities have a higher rate of obesity (i.e.,22%) than children without disabilities (CDC, 2017) The Physical Activity Guidelines for Americans (NCHS, 2017) recommends that youth aged six through 17 years, including those with disabilities should engage in 60 minutes or more of moderate-to-vigorous physical activity daily and adults are recommended to engage in 150 to 300 minutes of moderateintensity physical activity or 75 to 150 minutes of vigorous-intensity physical activity.

Benefits

Children with disabilities experience physical, cognitive, and psychosocial benefits from engaging in regular physical activity (Piercy, Troiano, & Ballard, 2018). Physical activity levels in youth are primarily affected by psychological, cognitive, and behavioral factors, other influencers of physical activity levels include: environmental factors, parental influence, preference for physical activity, desire to attain skill mastery, and self-perceived athletic competence (Li et al., 2016). With the prevalence of obesity in children with disabilities being as high as it currently is, engaging in physical activity is crucial for improved physical and mental health.

Family and Community Based Physical Activity

There are many known benefits associated with participation in physical activity, one of which is that participation in activities that provide individuals with a sense of accomplishment and enjoyment during childhood fosters positive development into adulthood. Enjoyment of physical activity during childhood has also been shown to be an indicator of overall health and well being throughout one's life (Bedell et al., 2013). CWDs weight levels and physical activity habits are heavily influenced by their caregivers (Pluta et al., 2017). Children who have a primary caregiver who is overweight or obese have increased odds of being overweight or obese themselves (Haegele, Healy & Zhu, 2018), which further shows the importance of engaging in physical activity as a family unit. Pluta et al. (2017) examined the effects of a 15-week, family-centered physical activity program on participants' physical activity levels and found that participants had increased physical activity levels and reduced sedentary time after completing the program. Child participants of Pluta (2017) reported that they participated in more physical activity because they enjoyed it or found it stimulating. Families who participated in a similar 20-week intervention that involved teachers, parents, and thirdgrade students and promoted exercise and nutrition improved their knowledge of nutrition and physical activity significantly (Hopper, Munoz, Gruber & Nguyen, 2005). While participants' knowledge improved there were no significant improvements found in weight, MBI, or 1-mile run time. It was reported that "physical activity and fitness improvements as measured by traditional assessments are resistant to change". Smith et

al. (2013) conducted a seven-week community based intervention program for children considered overweight or obese between five and seven years of age and their parents consisting of weekly in-person small group sessions (eight-15 families) held in the community. During each session, parents participated in interactive workshops and discussions focused on nutrition, activity, and behavior changes. The child participants completed 60 minutes of structured physical activity. Upon completion of the program, participants reported physical, behavioral, and psychological benefits. Children with complete data sets showed a significant reduction in BMI z-score of -0.20 after 10 weeks. Parents also reported that their children has reduced sedentary time by approximately four hours and increased physical activity levels by approximately three hours per week. Parents also reported that their children had improved emotional wellbeing and parents themselves felt an increase in self-efficacy in relation to their role as a parent (Smith et al., 2013).

Barriers to Physical Activity

Parents who participated in focus group discussions reported that simple inclusion can require immense effort due to the unique needs of their children and what daily care of someone with a disability can entail such as: developing communication, toileting, nutrition, emotional regulation routines (Goodwin & Ebert, 2018). Parents also felt that their children were judged by facilitators solely on their impairments and what they could not do rather than focusing on their potential and ability to succeed in the proper environment. Another factor discussed was the guilt felt by parents when they choose stay home because they feel that going out is not worth the effort. One parent explained that the stress and rigor of everyday life for a parent of a child who has a disability often leaves little energy or motivation to get out and engage in physical activity, "after developing communication skills, toilet routines, sleeping patterns, dressing, and nutrition...going to soccer is not on your list". This group also expressed frustration with the lack of support and training of individuals who facilitate activities and provide support for their children in physical activity opportunities. The need for ongoing education and increased inclusion was a major point made by parents of children with disabilities (Goodwin & Ebert, 2017). These results suggest that for a family centered physical activity program to be successful the following characteristics must be present: low burden, family centered physical activity programming with in-person educational sessions and personalized resources. Families often view physical activity as structured exercise that requires planning time, special equipment, and facilities (Yun & Beamer, 2018), "physical activity is not a synonym for exercise or health-related physical fitness, but rather an umbrella term that includes exercise, household tasks, sports, leisure-time physical activity, and dance." Helping families struggling to find time to for physical activity understand this can open up a plethora of opportunities for them to facilitate physical activity as a family unit.

Chapter II: Methods

Participants

A total of 12 parents were initially recruited through a summer activity program (i.e, HSU Fit) on Humboldt State University campus in Northern California. Of these 12 participants six did not complete the focus group, therefore, results from this study were based on the responses from six parents who have children with disabilities six to 20. All participants spoke English.

Procedures

Participants took part in a seven-week, self-directed family fitness program following a five-day, in-person physical activity education program. During the in-person program child participants engaged in three hours of physical activity and games while parents participated in a 30-minute long education session each day which focused on building the knowledge and skills necessary to facilitate physical activity opportunities for their children. On the first day of the in-person session, children were assessed using the Fitnessgram (Plowman & Meredith, 2013). The results of the Fitnessgram were used to inform individualized materials that were provided to parents upon completion of the educational sessions. The remaining days of the in-person program consisted of a variety of physical activities (e.g., icebreakers, team building games, walking, soccer, basketball, and Olympic themed events). Child participants rated activities by responding to a modified Likert scale (see Appendix A). Adult participants completed a survey (see Appendix B), to evaluate the parent educational portion of the program, the information they felt was going to be useful and information they did not feel would be useful in facilitating physical activity for their families, and topics that they would have liked to be covered during the in-person program.

During the seven-week self-directed family fitness program, parents facilitated physical activity for their children and families based on the activity plans provided during the in-person program. Each week, parents reported the physical activities of their families with a daily activity log. Weekly notifications were sent to parents via email reminding them to log their physical activity. Upon completion of the seven-week program six parents participated in a focus group discussion in order to gain in-depth information on their perceptions of the program. The focus group was recorded, transcribed and analyzed so that discussion themes could be determined.

Instruments

The Fit Fam Parent Education Program Evaluation Form. The Fit Fam Parent Education Program Evaluation Form was created by two researchers based on the content of the program, and was used to obtain adult participant ratings, suggestions and opinions for the parent education component of the in-person portion of the Fit Fam program.

Fit Fam Child Participant Evaluation Form. The Fit Fam Child Participant Evaluation Form (Appendix A; Chan, 2016) was used to evaluate the child participant

ratings for how much they enjoyed each day of the week long in-person physical activity portion of the program.

Focus Group Script. The focus group script (Appendix C) was created using *Designing and Conducting Focus Group Interviews* (Krueger, 2002) as a reference. The script was used to evaluate the self-directed family fitness program in a focus group discussion which was held after the conclusion of the seven-week, self-directed portion of the program.

Analysis

Data collected from parent and child surveys after the initial weeklong Fit Fam camp and parent education component was used to evaluate the in-person portion of the program. Themes were defined from the focus group transcription using triangulation. Two separate researchers read through the transcripts and grouped responses into themes. Once the researchers defined the themes, they met together and discussed their coding schemes. If the researchers had differences in their coding schemes, the researchers discussed the reasoning behind their coding and came to an agreement on the appropriate coding scheme. These themes were then organized into meta themes that represent the feedback from program participants.

Limitations

The limitations of this study included the potential for interviewer bias during the focus group discussion and lack of communication skills in child participants.

Delimitations

Participants in this study were six parents who live in a rural area with children ages six to 20 with a disability.

Assumptions

Assumptions for this study were that participants would engaged in the full program throughout the seven weeks and give honest responses when responding to surveys or focus groups.

Chapter III: Results

The Fit Fam Parent Education Program Evaluation

Table 1 shows the parent education program evaluation survey results. Eight adult participants completed surveys answering questions by rating them on a Likert scale with scores ranging from one (very poor/strongly disagree) to five (excellent/strongly agree). Survey questions addressed the overall quality of parent education component of the inperson portion of the program and the effect that it had on finding physical activity opportunities, increasing levels of physical activity, and views on physical activity Table 1

Question	Mean	Standard Deviation
Overall, how would you rate the quality of the parent portion of the Fit Fam program?	4.75	.46
Do you feel that the discussion on providing physical activity opportunities will be helpful in finding physical activity opportunities for your child through the summer?	4.63	.52
Do you feel that the discussion on providing physical activity opportunities will increase the physical activity levels of your child over the summer?	4.13	.64
Do you feel that the discussion on providing physical activity opportunities will increase physical activity levels of your family over the summer?	4.13	.64
Did engaging in the Fit Fam program change the way you view physical activity?	3.88	.83

Fit Fam Parent Education Program Survey Results

Participants had positive responses to all five of the survey questions answered by ratings on a Likert scale. The only question that had a mean response score below four was "did engaging in the Fit Fam program change the way you view physical activity?" which received a mean score of 3.88 out of 5. When responding to what topics or activities were most beneficial one parent said "I enjoyed connecting to parents regarding discussion of barriers. I also enjoyed hearing some ways other families are active together. Two adult participants reported that local activities and opportunities for family fitness were the most beneficial topics covered. When asked to provide topics or activities they would like to have included in future programs parent responses included:

nutrition for kids, resources to help pay for equipment (bikes, pumpcars, etc.), and having local Special Olympics do a presentation on the opportunities they have available in Humboldt County.

Fit Fam Child Participant Evaluation

Child participants were asked to rate each day of the in-person portion of the program using a modified Likert scale (Appendix A). Responses were inconsistent and participants appeared to be giving ratings based on their current emotional state or because they believed a higher rating to be the "correct answer". For these reasons it was determined that the child participant responses are not valid and will not be used to evaluate the program.

Evaluation of The Self-directed Family Fitness Program

Themes identified in focus group participant responses include: improved selfesteem of children with disabilities, the benefits of having a fully inclusive program for the whole family, barriers to engaging in physical activity as a family outside of the program, and program feedback. Multiple focus group participants expressed that they saw increased confidence in their children after participating in the in-person portion of the program. One parent said "I don't know that we really experienced health changes but you know we are talking a lot about self-confidence and mindsets and things like that...(my son) has been really inspired too, he's doing pushups and all these things, he's just very motivated to be sporty". Another parent spoke about the inclusive aspect of the program "It's a load off for him, you know, because he feels really comfortable knowing that people don't have unrealistic expectations of him and he can, he can just kind of participate at his level without feeling intimidated".

Almost all of the families who participated in the Fit Fam program and contributed to the post program focus group encountered barriers that prevented them from consistently engaging in physical activity. Parents discussed busy work schedules that at times conflict with those of their partner or spouse. Other common barriers encountered by participants were family vacations, family outings, and summer camps. One parent felt that since they have a busy family schedule the physical activity plan provided through Fit Fam was not a high priority for them, "I mean, we do so much and I feel like in turn, they are then getting physical (activity) but the specific program we didn't implement and reasons were more because of time". Work schedules and partner lifestyles were also addressed by one of the participants "Just probably what they said...busy schedule. Yeah, and I think just in my household, I'm the physically activity one, I'm married to someone with a physical disability so it's, I just get tired of being the cheerleader like 'let's go, let's go' because it's always me, you know what I mean...a lot of it can, again, be your partners' buy in to how important physical activities are, or their ability to them or not do them".

Of the six adult participants that contributed to the focus group discussion only one reported that they received weekly reminders to track their physical activity. They said that if it weren't for the reminders they would not have been tracking their activity. Other participants said that if they had received reminders they would have tracked their activity, even if they were not utilizing their personalized fitness plans.

When asked if there were any aspects of the program that they think should be changed in the future the consensus of the focus group was that they wanted a longer in person portion of the program. "For (my son)...he's been coming to HSU long enough that he can kind of fall into what it is but for some kids you finally get to day 4 and then they are (comfortable) but then there is only one more day. And then it's done." Said a focus group participant. Another participant suggested having two in person sessions, each one week long, "Or two of them, two separate time frames, like for one week but two times". Participants also spoke about the lack of options for CWDs and their families when it comes to fitness and summer camps in general "because our kids our the minority in the sense that we don't really have options, or we have to create it which is exhausting and lord knows I've tried and it's just hard, so getting, I don't know, just having something like this would just, I think, change a lot of parents lives and the kids".

Chapter IV: Discussion

Barriers and stressors experienced by Fit Fam participants during the self-directed portion of the program align with previously identified barriers that parents of CWDs associate with participating in physical activity as a family (Goodwin & Ebert, 2018). Fit Fam participants discussed having a fear of working with untrained facilitators and worrying about their children being judged unfairly by facilitators and typically developing child participants. One parent expressed that they were initially skeptical of the facilitators and saw them as "typical football jocks". This parent was pleasantly surprised to find her child formed a strong bond with a former football player who helped facilitate the program. Multiple parents also reported that working directly with athletic facilitators inspired their children to become more "sporty". The sentiment that having a child with a disability included in any activity is immensely effortful for parents brought up by Goodwin and Ebert (2018) was also felt by Fit Fam participants: "I mean, we do so much and I feel like in turn, they are then getting physical (activity) but the specific program we didn't implement and reasons were more because of time". Some parents reported having positive physical activity habits themselves makes it easier to engage in physical activity as a family, this is consistent with the findings of Karakas and Yaman (2014) which showed children with parents who are active have higher physical activity levels than children whose parents are not active.

Parents expressed gratitude for the opportunity that Fit Fam provided them, and survey results show that they are well aware of the benefits of physical activity; however this program did not have the type of participant "buy in" that Hopper et al. (2005) and Smith et al. (2013) experienced with their respective fitness programs. Factors that may have contributed to the difference in participant engagement and follow through include: program length, program tie-in with schools, level of planning, and consistency in facilitation and implementation. Hopper and Smith had continued program support after the initial in-person portions of their programs whether it was through schools or monthly in-person education and physical activity sessions. Fit Fam failed to maintain participation throughout the self-directed portion of the program due to a lack of communication and follow-ups between facilitators and participants. It is likely that the timing of the Fit Fam program was the biggest deterrent to participant fulfillment. Since the program was held in the summer, the in-person portion was held the week after local schools let out for summer vacation, and participating families were then asked to follow an individualized fitness plan and track their activity throughout the summer. Many families reported that their vacations and other summer plans got in the way of utilizing their fitness plans and tracking physical activity.

Conclusion

The positive outcomes of the Fit Fam program included increased confidence and self-esteem in child participants. The focus group discussion illuminated flaws within the program implementation such as the failure to deliver weekly reminders to track physical activity. One of the main factors that prevented participants from utilizing their personalized fitness plans were barriers such as: busy or conflicting work schedules, pre-existing vacation plans, and a lack of opportunities or locations to engage in physical activity locally. As a whole the Fit Fam program had a positive impact on participants and families were thankful for the opportunities that were provided to them. The intended outcomes of the Fit Fam program (increased physical activity levels and physical performance of child participants) were not met due to factors such as family vacations, busy work schedules, and issues with communication between program facilitators and program participants.

In conclusion, the in-person portion of the Fit Fam program was successful and all families that gave feedback reported positive experiences. Future programs may have increased longitudinal success if parents had a better understanding of the self-directed program that followed and the importance of tracking physical activity. Participant suggestions on how to improve the program included: increasing the length of the program and having more than one in-person portion. Adult participants expressed their desire for a program that ran longer and had multiple in person meetings e.g. meeting in-person twice a week for three months. Another possible scheduling change would be a four-month program with three in-person sessions scheduled intermittently throughout the four months. These in-person sessions would cover: initial assessment and education, follow up and parent feedback, and final assessments and evaluations.

References

- Allison, K. R., Dwyer, J. M., Goldenberg, E., Fein, A., Yoshida, K. K., & Boutilier, M. (2005). Male adolescents' reasons for participating in physical activity, barriers to participation, and suggestions for increasing participation. Adolescence San Diego, 40(157), 155-170.
- Bedell, G., Coster, W., Law, M., Liljenquist, K., Kao, YC., Teplicky, R., Anaby, D., &
 Khetani, MA. (2013). Community Participation, Supports, and Barriers of SchoolAge Children With and Without Disabilities. Archives of Physical Medicine and
 Rehabilitation, 94, 315-323.
- Bronikowski, M., Bronikowska, M., Pluta, B., Maciaszek, T., Tomczak, M., & Glapa, A.
 (2017). Positive Impact on Physical Activity and Health Behaviour Changes of a 15-Week Family Focused Intervention Program: "Juniors for Seniors". *Biomedical Human Kinetics*, 9, 165-174.
- Burdette, H., Whitaker, R. (2005). Resurrecting free play in young children looking beyond fitness and fatness to attention, affiliation, and affect. *Pediatrics & Adolescent Medicine*, 159(1), 46–50.

Chan, B., et al. (2016). ReConsiderate [Digital image]. Retrieved May 12, 2018 from https://camo.githubusercontent.com/7de52feb7bf10b6891c3b3b6d6a75e9bc2323a
c2/687474703a2f2f696d616765732e666c6174776f726c646b6e6f776c656467652
e636f6d2f7772656e63686f7267636f6d6d2d32373131352f7772656e63686f72676
36f6d6d2d32373131352d6669673039342e6a7067

- Chen, A. Y., Kim, S. E., Houtrow, A. J., & Newacheck, P. W. (2010). Prevalence of obesity among children with chronic conditions. *Obesity (19307381)*, 18(1), 210-213.
- Collins, K., & Staples, K. (2017). The role of physical activity in improving physical fitness in children with intellectual and developmental disabilities. *Research in Developmental Disabilities*, *69*(1), 49-60.
- Gallaway, P., & Hongu, N. (2015). Physical activity: A tool for improving health (part 1—biological health benefits). *The Journal of Extension*, *53*(6).
- Hales, CM., Carroll, MD., Fryar, CD., & Ogden, CL. (2017) Prevalence of Obesity Among Adults and Youth: United States, 2015-2016. *NCHS Data Brief*, 288.
- Haegele, JA., Healy, H., Zhu, X. (2018). Physical activity and obesity among nine-yearold children with and without chronic health problems, illness, or disabilities in Ireland. *Disability and Health Journal*, *11*(1), 143-148,
- Hill, A., Zuckerman, K., & Fombonne, E. (2015). Obesity and Autism. *The Official Journal of the American Academy of Pediatricts*, 131(6), 1051-1061.
- Hopper, C. A., Munoz, K. D., Gruber, M. B., & Nguyen, K. (2005). The effects of a family fitness program on the physical activity and nutrition behaviors of thirdgrade children. *Research Quarterly For Exercise & Sport*, 76(2), 130-139.
- Krueger, R.A. (2002). Designing and Conducting Focus Group Interviews. University of Minnesota 1-18.

- Karakas, G., & Yaman, C. (2014). The role of family in motivating the children with disabilities to do sport. *Procedia - Social and Behavioral Sciences*, 152(7), 426-429.
- Li, R., Sit, C., Yu, JJ., Duan, J., Fan, T., McKenzie, TL., & Wong, S. (2016). Correlates of physical activity in children and adolescents with physical disabilities: A systematic review. *Preventative Medicine*, 89, 184-193.
- Lu, C., & Montague, B. (2016). Move to learn, learn to move: Prioritizing physical activity in early childhood education programming. *Early Childhood Education Journal*, 44(5), 409-417.
- Menear, K. S., & Neumeier, W. H. (2015). Promoting physical activity for students with autism spectrum disorder: Barriers, benefits, and strategies for success. *JOPERD: The Journal of Physical Education, Recreation & Dance*, 86(3), 43-48.
- Murphy, N. & Carbone, P. (2008). Promoting the participation of children with disabilities in sports, recreation, and physical activities. *American Academy of Pediatrics*, 151(5), 1057-1061.
- Panagiotopoulus, C., Ronsley, R., Al-Dubayee, M., Brant, R., Kuzeljevic, B., Rurak, E., Cristall, A., Marks, G., Sneddon, P., Hinchliffe, M., Chanoine, J. P., & Masse, L. (2011). The Centre for healthy weights-shapedown BC: A family-centered, multidisciplinary program that reduces weight gain in obese children over the short-term. *International Journal of Environmental Research and Public Health*, 8(12), 4662-78.

- Papas, M. A., Trabulsi, J. C., Axe, M., & Rimmer, J. H. (2016). Predictors of obesity in a US sample of high school adolescents with and without disabilities. *Journal of School Health*, 86(11), 803-812.
- Piercy KL., Troiano RP., Ballard RM., et al. (2018). The Physical Activity Guidelines for Americans. *Journal of the American Medical Association*. Published online November 12, 2018. doi:10.1001/jama.2018.14854
- Plowman, S.A. & Meredith, M.D. (Eds.). (2013). Fitnessgram/Activitygram Reference Guide (4th Edition). Dallas, TX: The Cooper Institute.
- Robinson, B. L. & Lieberman, L. J. (2007). Influence of a parent resource manual on physical activity levels of children with visual impairments. *RE: View: Rehabilitation Education For Blindness And Visual Impairment*, 39(3), 129-140.
- Smith, LR., Chadwick, P., Radley, D., Kolotourou, M., Gammon, CS., Rosborough, J., & Sacher, PM. (2013). Assessing the short-term outcomes of a community-based intervention for overweight and obese children: The MEND 5-7 programme. *British Medical Journal Open, 2013*; **3**:e002607. doi: 10.1136/bmjopen-2013-002607
- Wakely, L., Johnston, C., Langham, J., & Rae, K. (2018) Physical activity of rurally residing children with a disability: A survey of parents and care givers. *Disability* and Health Journal, 11(1), 31-35.
- Yun, K. & Beamer, J. (2018). Promoting Physical Activity in Adapted PhysicalEducation. *Journal of Physical Education, Recreation & Dance, 84(4)*, 7-13.

Appendices

Appendix A

Fit Fam Child Participant Evaluation Form

How did you feel about today's activities?

Appendix B

Fit Fam Parent Education Program Evaluation

Overall, how would you rate the quality of the parent portion of the Fit Fam program?

1	2	3	4	5
Very Poor	Poor	Fair	Good	Excellent

Do you feel that the skills you learned for providing physical activity opportunities were helpful?

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree

Do you feel that the skills you learned for providing physical activity opportunities increased physical activity levels of your child?

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree or	Agree	Strongly Agree
		Disagree		

Do you feel that the skills you learned for providing physical activity opportunities increased physical activity levels of your family?

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree or	Agree	Strongly Agree
		Disagree		

Do you feel that the skills you learned for providing physical activity opportunities increased your physical activity levels?

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree or	Agree	Strongly Agree
		Disagree		

Did engaging in the FitFam program change the way you view physical activity?

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree

Do you feel the knowledge you gained about nutrition in the FitFam program was helpful?

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree

Do you feel the knowledge you gained about nutrition in the FitFam program changed the way your child eats?

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree

Do you feel the knowledge you gained about nutrition in the FitFam program changed the way your family eats?

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree

Do you feel the knowledge you gained about nutrition in the FitFam program changed the way you eat?

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
		Disugree		

Which specific lessons, skills, or activities that were covered did you find most beneficial? Please give a brief explanation.

What topics, skills, or activities would you like to be addressed in future programs?

Please provide any additional comments here:

Appendix C

Focus Group Interview Script

Welcome & Introductions

Good morning/afternoon/evening, welcome to our first discussion on the Fit Fam program that you all participated in for the past 10 weeks. My name is Steve Childs, as you may know I am a part of the Kinesiology Master's program at Humboldt State University. Thank you for joining us today, we appreciate your participation and input. Let's take a minute to introduce ourselves to each other. (Participants introduce themselves to the group)

Overview & Ground Rules

We are here to gather information on your perceptions of the Fit Fam program and how we may be able to improve it in the future. This session is being recorded and will later be transcribed in order to be used in our study. Names will be removed from the transcription as to maintain confidentiality. There are no wrong answers in this discussion, please feel free to share your thoughts even if they differ from what others have said, remember our goal here is to gather your perceptions of the program and find ways to improve it in the future. If at any time you feel that you no longer wish to participate in the discussion you may choose to do so. Everything said during this discussion will be kept confidential, if any quotes are used in the study names will not be used. Would anyone like to add any other ground rules at this time?

Questions

- 1. What was one positive experience that you had while participating in the selfdirected portion of the Fit Fam program?
- 2. Coming into the program what were some of your expectations? Do you feel that those expectations were met?
- 3. What were some of your favorite activities that you participated in during the program?
- 4. What types of barriers to physical activity arose during the program?
- 5. Did participating in the program change your child's, families, or your physical activity behaviors?
- 6. Did participating in the program change your child's, families, or your eating behaviors?
- 7. What overall health changes did your child, your family, or you experience from engaging in the program?
- 8. Did you find the weekly reminder helpful?
 - a. Why or why not?
 - b. Is there another way you would like to be reminded to participate in the program?
- 9. Are there any aspects of the program that you would change in the future?
 - a. If so, what would you change and how?
- 10. Did you and your family experience any changes in the way you communicated with each other because of participating in the program?

a. If so, how?

- 11. Did any members of your family change the way they view any other members of the family after having participate in the program?
 - a. If so, who and how?
- 12. Is there anything else that you would like to share with us about your experience in the program?

If there is nothing else that anyone wants to say, that wraps up our focus group. Thank you again for participating in the FitFam program and in our program evaluation, your input is critical for us to make improvements to our program and we greatly appreciate your time and input.