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The Impact of Virtual Programming in Expanding Boundaries

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Background

The benefits of community participation and exercise have been well documented in the literature. This is equally true for persons with disabilities. Benefits can include improved fitness, self-esteem, improved social engagement, and reduced pain. However, the literature also is abundant in articles describing the barriers people with disabilities have in accessing fitness programs and activities.

Multiple measures have been taken over the years to address this inequity including the enactment of the American with Disabilities Act in 1991 and the development of the Convention of the Rights of Persons with Disabilities by the United Nations in 2008. There have also been multiple action plans globally to develop and encourage adoption, development, and support for sports activities for persons with disabilities.

Despite all these advances, there remains a large disparity in access to fitness globally by persons with disability. Barriers include social perception, stigma, negative attitudes, lack of knowledge, fitness center inaccessibility, non-adjustable equipment, lack of support, and transportation.

During the COVID pandemic, many programs had to rethink how to continue providing services to people and one medium that was popularized during this time period was virtual programming.

Virtual formatting has the potential for a multitude of benefits including decreasing barriers in accessing fitness activities across the globe with the primary requirement of internet access.

Research Objectives

The purpose of this study is to retrospectively compare the degree of enrollment in pre-pandemic, live, in person fitness programming with the Great Lakes Adaptive Sports Association (GLASA) with the degree of enrollment in virtual programming with GLASA after virtual programming was introduced and implemented using registration data.

Methods

Registration data was pulled from the database at the Great Lakes Adaptive Sports Association (GLASA) between the time period of 1/2019- 12/2021.

Geographical location and number of participants of in person classes from 1/2019- 3/2020 was compared to geographical location and number of participants of virtual classes from after 3/2020.

Table 1. Diagnosis Types of Participants

Diagnosis	In person, Pre-COVID n=90	Virtual n=218	In person, Post-COVID n=172
Able Bodied	0	37	9
Amputee	8	14	13
Cerebral Palsy/ Traumatic Brain Injury	22	37	19
Muscular Dystrophy	4	3	4
Multiple Sclerosis	1	1	0
Orthopedic	2	11	6
Other	5	25	20
Spina Bifida	11	39	18
Spinal Cord Injury	2	26	28
Stroke	4	4	3
Vision	1	3	10
None listed	30	18	42
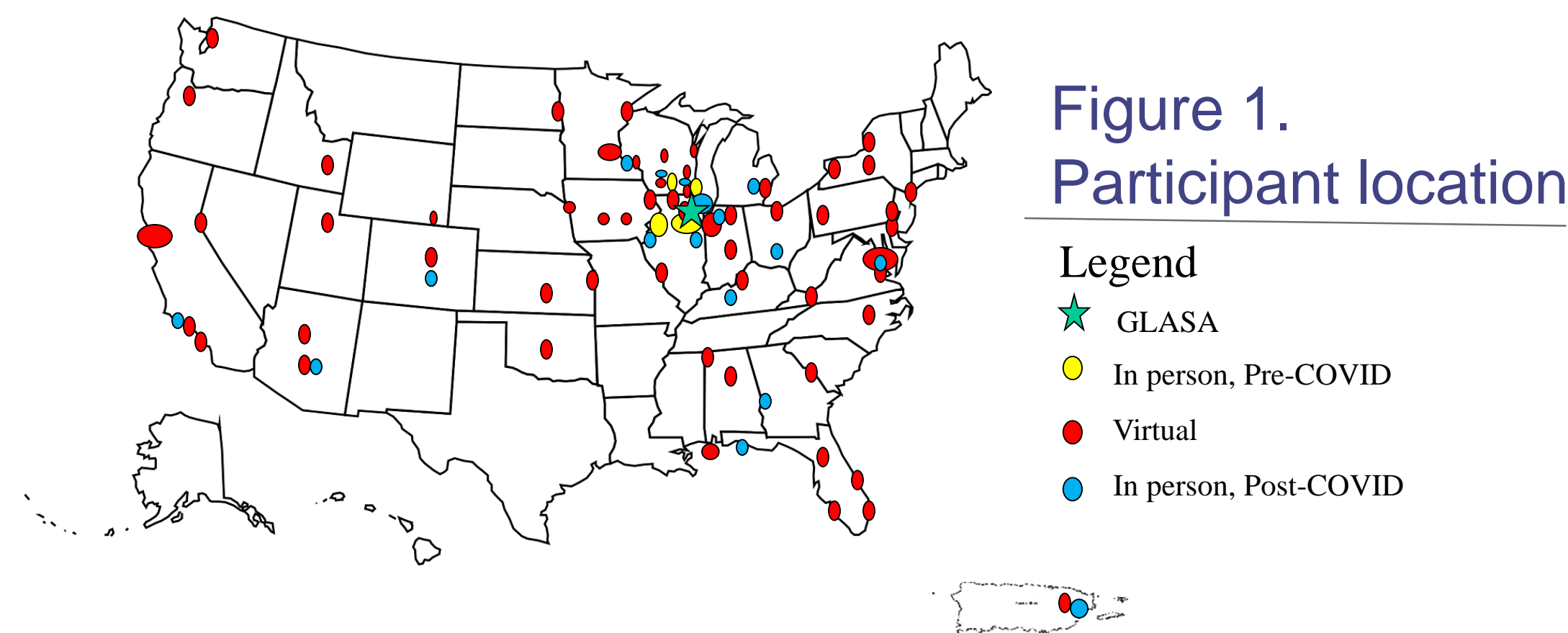
Figure 1. Participant location

Legend
- ★ GLASA
- ● In person, Pre-COVID
- ● Virtual
- ● In person, Post-COVID

Table 2. Distance traveled

Distance (Miles)	In person, Pre COVID	Virtual	In person, Post- COVID
Range	0-194	0-2182	3-2094
Median	23	205	38.2
Mean	35	557	134

Geographic location in the form of cities of residence of participants were evaluated in relation to the city of the main site at the Great Lakes Adaptive Sports Association (in miles).

Results

- There was a substantial increase in both number of participants and distance of participants from programming site following introduction of virtual programming
- Registration in programming improved by 128 people with virtual programming, a 142% improvement.
- Registration in post-COVID in-person programming improved by 82 people, 91% improvement.
- Furthest distance from participant to main site increased by 1,988 miles from pre-pandemic in person classes to virtual classes

Limitations

- This study was done using information from a single private Midwestern organization
- Participation in virtual programming requires internet access as well as the space to perform directed activities.
- Attendance rate at the events/classes was not measured
- Participant satisfaction was not directly measured

Conclusions

- One of the most cited barriers to community participation and fitness globally in persons with physical disabilities is access to services.
- Virtual programming at its minimum requires only internet access.
- Over 3.4 billion people worldwide use the internet, and hundreds of thousands of people access the internet for the first time daily.
- Extrapolating the data from this study, there is a high interest in virtual fitness programming.
- Virtual programming is a promising medium to provide easy access to fitness classes regardless of a person's geographical location and transportation barriers across the globe.
- Virtual programming allows for the unique organizations who offer programming specialized to persons with physical disabilities the ability to reach a greater global audience, including possible expansion to resource limited areas.

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