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PILOT ACTIONS DATA REVIEW



Pilot Actions Data Review

Scientific Committee

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The SPHERE project has seven partners from six European countries, and includes third sector sport institutions and Universities. The project team includes the following organisations:

- European Culture and Sport Organization (Italy; Lead organisation)
- European Platform for Sport Innovation (Belgium)
- Everton in the Community (UK)
- Finnish Sport Federation Tampere Region (Finland)
- Rijeka Sports Association for Persons with Disabilities (Croatia)
- Cardiff Metropolitan University (UK)
- Technical University of Munich (Germany)



Contents

Introduction	1
Everton in the Community - Football therapy.....	2
Hämeen Liikunta ja Urheilu - Good mind sports	6
European Culture and Sport Organization - Horses & Butterflies.....	10
Rijeka Sports Association for Persons with Disabilities – Athletic Therapy	14
Overall Evaluation.....	19



Introduction

This document presents the 4 pilot site case studies from SPHERE and details the evaluation process and outcomes from each case study. The four case studies piloted the [SPHERE Guidelines](#) and as they were developed to be adaptable to different settings and participant characteristics, the case studies provide examples of physical activity programmes from four country locations each with diverse contexts, programmes and participants. The case studies are:

- Everton in the Community “Football Therapy” - UK
- Hämeen Liikunta ja Urheilu – “Good Mind Sports” - Finland
- European Culture and Sport Organization – “Horses & Butterflies” - Italy
- Rijeka Sports Association for Persons with Disabilities – “Athletic Therapy” - Croatia

To assess the outcomes of these SPHERE pilot actions, pre and post programme data was collected from participants. Each case study used their country version of the Short Form - 36 (SF-36), providing a common measure among all test-sites. The SF-36 is a standardized self-report questionnaire designed to evaluate medical outcomes in overall health, focusing on 8 domains that reflect mental and physical health. It is also available in all partner country languages. Results from the SF-36 from all sites were collated and presented as percentage of improvement in each health domain from pre-to-post programme. These were calculated via averages for all pilot sites.

Additionally, other measures were included in the evaluation protocol. Given the range of pilot settings, including clinical and community programmes, each partner chose the most appropriate evaluation tools for their setting and participants. For example, “Everton in the Community” evaluated improvements in mental well-being in participants with moderate anxiety and depression. Meanwhile, “Horses and Butterflies” evaluated reduction in psychiatric symptom severity in participants with an eating disorder diagnosis. Results of these tests are presented together with the psychological domains of the SF-36, as percentage of improvement in each of the measures, with percentages averaged together.

What is included in the document?

First, the description of each individual programme is presented, including the implementation method, participants, measurements and testimonies from each programme that applied the SPHERE guidelines. Finally, an overall evaluation of the outcomes of all programmes is presented to assess the consistency of the effects among all the sites that implemented the SPHERE guidelines.

PLEASE NOTE

The pilot action sites were developed to test and implement the SPHERE Guidelines. The current report is *not* an evaluation of each individual programme, rather an assessment of the suitability and utility of the SPHERE Guidelines. Therefore, the evaluation using these quantitative measures should be viewed in this context while also bearing in mind the varied contexts, participant characteristics and clinical diagnoses, and measurement techniques alongside the small sample sizes.

Everton in the Community - Football therapy



Organisation: Everton in the Community (EitC)

Country: United Kingdom

City: Liverpool

Sport: Football

Duration: November 2019 – February 2020

Overview of the Pilot Project: EitC's 'football therapy' pilot project, used the medium of football as a therapeutic tool to support individuals with a mental health condition. The pilot paired professional football coaching with psycho-educational '*football therapy*' workshops that utilised football as a metaphor for life to increase participants self- awareness and emotional literacy to help them develop self-care strategies to aid their on-going rehabilitation.

Participants: The pilot project engaged a total of n=20 participants (19 males, 1 female) with a mean age of 38 years and an age range of 19- 63 years old. Participants were clinically referred to the project with pre-existing mental health conditions, ranging from mild to moderate anxiety and depression to more severe and enduring psychotic disorders.

Attendance: The project had a 100% completion i.e. n=20 participants started and successfully completed the programme 20-week programme. There was an average attendance of n=14 participants at each session.

Method: The football therapy training sessions took place twice a week for two hours per session, at EitC's football facilities, over a period of 4 months, adhering to the following structure:

<p>1st half: 50 minutes:</p> <ul style="list-style-type: none"> - Welcome and introductions - Physical warm up - Technical football coaching - 1st half of football practice match 	<p>Half time: 20 minutes</p> <p>Half time psycho-educational 'team talk'</p>	<p>Second half: 45 minutes</p> <ul style="list-style-type: none"> - 2nd half practice match - Physical cool- down - Session de-brief - Group/ individual challenges
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Analysis: To evaluate the impact of this pilot the following measures were taken at 4 time points, at 5 weeks intervals; pre-programme week 0, 5, 10, 15 and post programme (week 20):

- SF-36 (Short Form Health Survey)
- WEMWBS (Warwick Edinburgh Mental Well Being Scale)
- Illinois Agility Run (football specific)
- IPAQ (International Physical Activity Questionnaire)

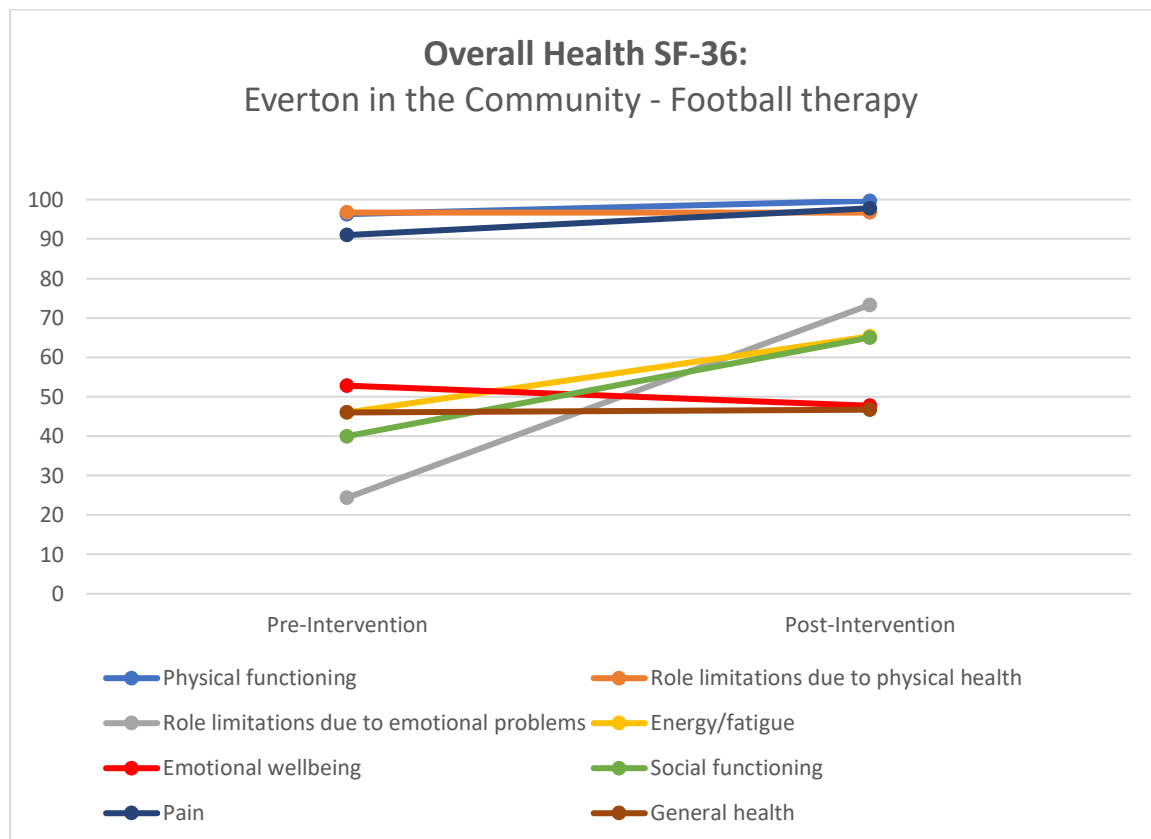
Support team: The group was supported by the following professional inter-disciplinary team:

- Professional football coach
- Wellbeing practitioner
- NHS support worker or Community Psychiatric nurse (CPN);
- SPHERE project researcher

Results: A total of 27, 2-hour football therapy training sessions were delivered, equating to 54 hours supervised and structured football coaching delivery. Upon reflection we would have liked to engage more females onto the project as the ration of 19:1 in favour of males wasn't ideal, however the single female we engaged didn't express any concerns related to this matter and actually spoke about the positive aspects of this balance in how she was able to push herself move to keep up with the men and how she felt the others looked out for her too; almost like big brothers.

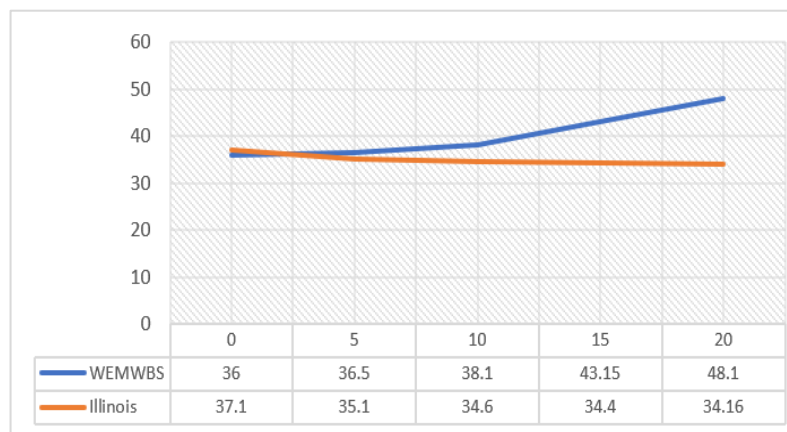
Demonstrated here: *"I've loved every minute of being part of the Everton football therapy programme. It came just at the right time for me as I had been struggling for a while, so it provided me with a really positive outlet to channel my energy and regain focus just when I needed it. I've loved meeting all the new people and now consider them all to be friends, which is amazing considering the such a short space of time we've known each other. I guess that's testament to the programme and how the staff made us all feel so welcome!"*.

The project has been demonstrated to have significantly benefitted participants social, physical and mental health and wellbeing whilst also helping to improve individuals' levels of personal resilience, self-efficacy and self-esteem.



Modulation of the scores in each domain of the SF-36 questionnaire for overall health.

What was measured	Measurement tool	Domain	Mean Pre	Mean Post	Change
Overall Health	SF36	Physical functioning	96.3	99.7	+3.4
		Role limitations due to physical health	96.7	96.7	Same
		Role limitations due to emotional problems	24.4	73.3	+48.9
		Energy/fatigue	46	65.3	+19.3
		Emotional wellbeing	52.8	47.7	-5.1
		Social functioning	40	65.0	+25
		Pain	91	97.8	+6.8
		General health	46	46.7	+0.7
Physical perf.	Illinois Agility Run		37.1 sec	34.6 sec	2.5 secs faster
Psychological	WEMWBS	Overall mental wellbeing	36	48.1	+12.1
Physical activity	IPAQ	Categorical scoring (low/moderate/high)	Low = 3 Moderate = 13 High = 4	Low = 2 Moderate = 13 High = 5	Low = -1 Moderate = Same High = +1
		Continuous scoring (MET-min per week = MET level x minutes of activity x events per week).	Overall mean MET-min per week: 1908.375	Overall mean MET-min per week: 1939.825	+31.45



Increments in mental wellbeing (WEMWBS) are displayed in parallel to reductions in lap time in a running agility test (Illinois) at each point of measurement every 5 weeks.

Additional benefits:**Competitive matches/ tournaments:**

- A total of 5, 4-hour competitive matches/ tournaments events were delivered, equating to 20 hours supervised and structured activity. These events involved representing EitC and external events and were shown to evoke feelings of *personal pride* and *excitement* within the group.

Volunteering and employment:

- 1 participant has taken up a volunteer position within EitC as a result of their experiences on the project.
- 1 participant has secured paid employment, confirmed post pilot actions.
- A number of participants from the programme has gone on to set up their own 5 a-side football team in a local mainstream adult football league.

Hämeen Liikunta ja Urheilu - Good mind sports



Organisation: Hämeen Liikunta ja Urheilu ry

Sport/Exercise/Physical Activity type: A variety of health-enhancing sports

Country: Finland **City:** Tampere

Duration: January 2020 – October 2020

Overview of the Pilot Project

‘Good mind sports’ pilot project used a range of different sport types as a therapeutic and social tool to support individuals with a mental health condition. The pilot project was implemented in cooperation with the Regional Sport Organization Häme (HLU) and local Club House (Näsinkulma). The main idea was to provide participants a possibility to explore different kinds of sports in different facilities and circumstances in order to support individuals’ self-confidence, social skills, physical activity and knowledge of how to find sport hobbies in their everyday environment to keep up with their mental rehabilitation process.

Participants: The pilot project engaged n=20 participants (adults – age range 25-55 years) both male and female (40% females and 60% males) with range of different psychiatric disorders and long-term unemployment periods. Participants were recruited via Näsinkulma Club House in Tampere and by Ylöjärvi Municipality Mental Health and Social Services.

Attendance: Attendance for weekly sport sessions was totally voluntary for the participants. Weekly attendance varied from 6 to 20 participants. Average participation rate during the one-year pilot was app. 60% out of 20 individuals. The attendance percentage was highest in “adventure sport” sessions like in trekking, stand-up paddle surfing (SUP) and the trampoline park. Ball game and swimming sessions were also popular.

Method: The good mind sports sessions took place once a week for 90 minutes per session in different (both public and private) sport facilities. The main idea was to provide the participants a possibility to explore different kinds of sports and get to know different sport facilities in their everyday surroundings. Every sport session was also an important part of their rehabilitation programme. The pilot period lasted for app. one year. We had a 2 month break in April-May because of COVID-19 restrictions.

Every sport session had the following format:

5-10 minutes: welcomes, introductions and familiarisation

15 minutes: physical warm up

45 - 60 minutes: Individual and group training in different sport disciplines (gym, Nordic walking, ball games, etc.)

10-15 minutes: de-brief and cool- down

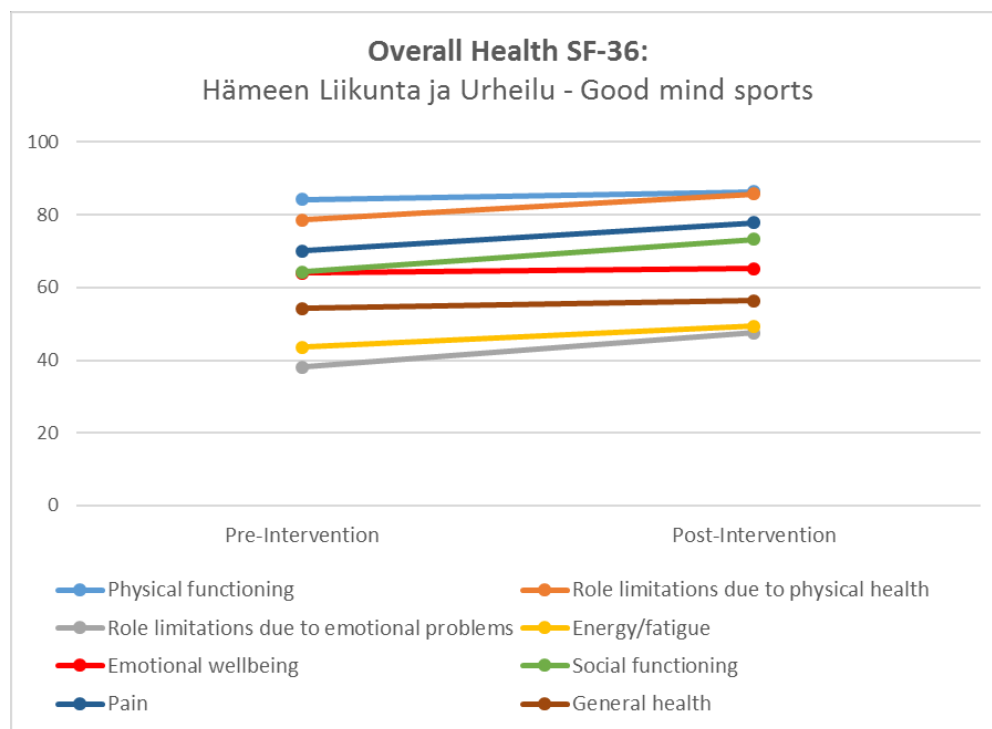
Evaluation: To evaluate the impact of this pilot the following measures were taken at 2 time points during the pilot (pre and post programme)

- SF-36 (Short Form Health Survey)
- IPAQ (International Physical Activity Questionnaire)
- Volunteer open interviews for participants and mental health tutors' experiences about the pilot programme
- Volunteer physical testing

Support team: The pilot group was supported by the following professional support team:

- Physical education Instructor by HLU
- 2 mental health tutors from the Näsinkulma Club House
- SPHERE project researcher

Results: One challenge with respect to SPHERE project plan was data collection. Participants were not that excited to answer (SF36, etc.) different questionnaires and take part for physical testing. Out of 20 participants in total we managed to collect this information from 10 persons. That`s why we decided to organize open interviews to collect subjective data from the participants and more objective data from club house tutors. So we cannot make any conclusions about pilot project`s impact for participants physical condition but via interviews. It can be observed however, that the pilot project has had a positive impact for participants' self-esteem and personal resilience, and that they have better tools and knowledge on how to make healthy choices in their everyday life in order to improve their physical and mental well-being.



Modulation of the scores in each domain of the SF-36 questionnaire for overall health.

Results Table:

What was measured	Measurement tool	Variable measured	Pre-score (Mean)	Post-score (Mean)	Change
Overall Health	SF36	Physical functioning	84,29	86,43	+2,14
		Role limitations due to physical health	78,57	85,71	+7,14
		Role limitations due to emotional problems	38,1	47,61	+9,51
		Energy/fatigue	43,57	49,29	+5,72
		Emotional wellbeing	64	65,14	+1,14
		Social functioning	64,29	73,21	+8,92
		Pain	70	77,86	+7,86
		General health	54,29	56,43	+2,14
Physical activity	IPAQ	Categorical scoring (low/moderate/high).	Low = 6 Moderate = 4 High = 0	Low= 4 Moderate= 5 High = 1	Low = -2 Moderate= +1 High = +1
		Continuous scoring (MET-min per week = MET level x minutes of activity x events per week).	Overall mean MET-min per week: 1338	Overall mean MET-min per week: 1526	+188

According to the feedback and interviews carried out for pilot participants and the local pilot support team, the Good Mind Sports project was successful. Most of the participants enjoyed weekly sport sessions and the participation motivated them to increase their physical activity in everyday life. The social aspect was also important. A major number of participants told us that it was important for their rehabilitation process that they had something fun and social happening weekly. A few participants also found themselves a new hobby because of the pilot project. Club House mentors noticed that conversations about physical activity and healthy lifestyle increased significantly among Club House members because of the pilot project. Club House mentors also learned how to bring up physical activity matters to the Club House members. As a result of the pilot project, Club House has now much more information about local sport facilities and possibilities, and how to benefit from those in their future actions.

One important result of the pilot project is that HLU and Näsinkulma Club House will continue and even expand co-operation in "Good Mind Sports". There will be new sport healing rehabilitation groups starting and a group of club house members (patients) will be educated as peer instructors for low threshold sports.

Additional benefits:

One important result of the pilot project is that HLU and Näsinkulma club house will continue and even expand co-operation in “good mind sports”. There will be new sport healing rehabilitation groups starting next year and a group of Club House members (patience) will be educated as peer instructors for low threshold sports.

“Good Mind Sports session was every time a highlight of my week. It was so much fun to explore new sports in secure and happy atmosphere!” Female participant 25 years

“I’m worried about my physical condition because I’m usually too tired and distressed to go out of my apartment during the week. Because of good mind sports I had a reason and companion to be active at least once a week!” Male participant 48 years

“This pilot project was a really good opportunity for us to provide something different and fun for our Club House members. I totally see the importance of physical activity as a part of mental health rehabilitation but the challenge for us is the lack of resources (both human resources and money) to execute this kind of programs. But our personnel in the Club House learned a lot during this pilot project and we will definitely continue to have sports in our weekly calendar for the club house members.”
Mental health tutor in Näsinkulma Club House

European Culture and Sport Organization - Horses & Butterflies



Organisation: European Culture and Sport Organization

Partners: ASD Gruppo Italiana Paraequestre, ASL Umbria 1, Istituto Superiore di Sanità, ASD Le Masse

Country: Italy

City: Perugia

Sport: Equestrian Vaulting

Duration: November 2019 – January 2020

Horses & Butterflies is a SPHERE pilot project aimed at enhancing the general wellbeing of young patients with eating disorders. Anorexia and bulimia are severe mental illnesses and the people affected have a disturbed relationship with their own body, weight and body image. They need a multifocal therapy and specific rehabilitation programs. Equestrian Vaulting is a motor activity based on body awareness together with an emphatic relationship with the horse. The horse walks while the patient on his back performs simple gym exercises with the sound of music.

Participants and attendance

Participants were n=8 girls (4 in the activity group and 4 in the control group) aged between 13-20 years recruited from the Eating Disorders Centres of the Health Agency Umbria 1. The activities took place once a week for 2 hours over 3 months. One girl dropped out after the 5th session. A final event was held on 27th June 2020 in front of around 40 people to show the participants' progress.

Method

The meetings included work sessions on the ground, on the fake horse, on the still and moving horse, carried out individually and in group, according to a series of programmed phases:

PHASE 1 – Approach to the Horse and Grooming (session 1)				
Tools	Setting	Activities	Duration	Modality
Horse, harness, grooming tools	Box and horse walker	Grooming, hand leading, observation	60-90 minutes	Group
PHASE 2 – Body Awareness (sessions 2-3)				
To the grooming work, that characterised each session, it was then added:				
Body awareness	Stable	Individual breathing exercises, orientation and extension, foot perception exercises	20 minutes	Group
Contact with the horse	Stable	Eye contact, tactile and vocal contact, hand leading	10 minutes	Individual
PHASE 3 – Training on the Horseback (sessions 4-10)				
All the previous activities were followed by the training on the horseback				
Approach to the horse and grooming	Stable	See phase 1	10 minutes	Group
Body awareness	Stable	See phase 2	15 minutes	Individual
On the horseback	Riding school	Ascent on the horse, motor exercises with vaulting harness, specific vaulting exercises	30-40 minutes	Group
PHASE 4 - Restitution (all sessions)				
On the horseback	Riding school	Descent from the horse and final grooming - Cool down and informal comments	10 minutes	Group

Analysis

At the beginning and at the end of the project, a team composed of psychiatrists and psychologists, together with the socio-medical workers who follow the patients, carried out evaluations based on:

CLINICAL AREA

- Demographic data
- Weight
- Height
- BMI
- Urine analysis to check cortisol, adrenaline, noradrenaline
- Bioimpedance analysis
- SF 36
- Eating disorder inventory 3 - body shape
- State Trait Anger Scale
- State Trait Anxiety Inventory
- Symptom Check List 90 r

MOTOR AREA

- Shoulder Mobility
- Straight Leg Raise
- Spinal Rotary Stability
- IPAQ - International Questionnaire on Physical Activity

PSYCHOLOGICAL AREA

- Psychological observation questionnaire related to:
- Posture
- Motor coordination
- Cognitive area
- Emotional-relational area (including the human-animal relationship)
- Socialization area
- Any changes that occurred during the project

All collected data were elaborated and evaluated by the Italian Superior Health Institute. Data from the SF-36 is used within the current document, while all other data will be presented in a future publication.

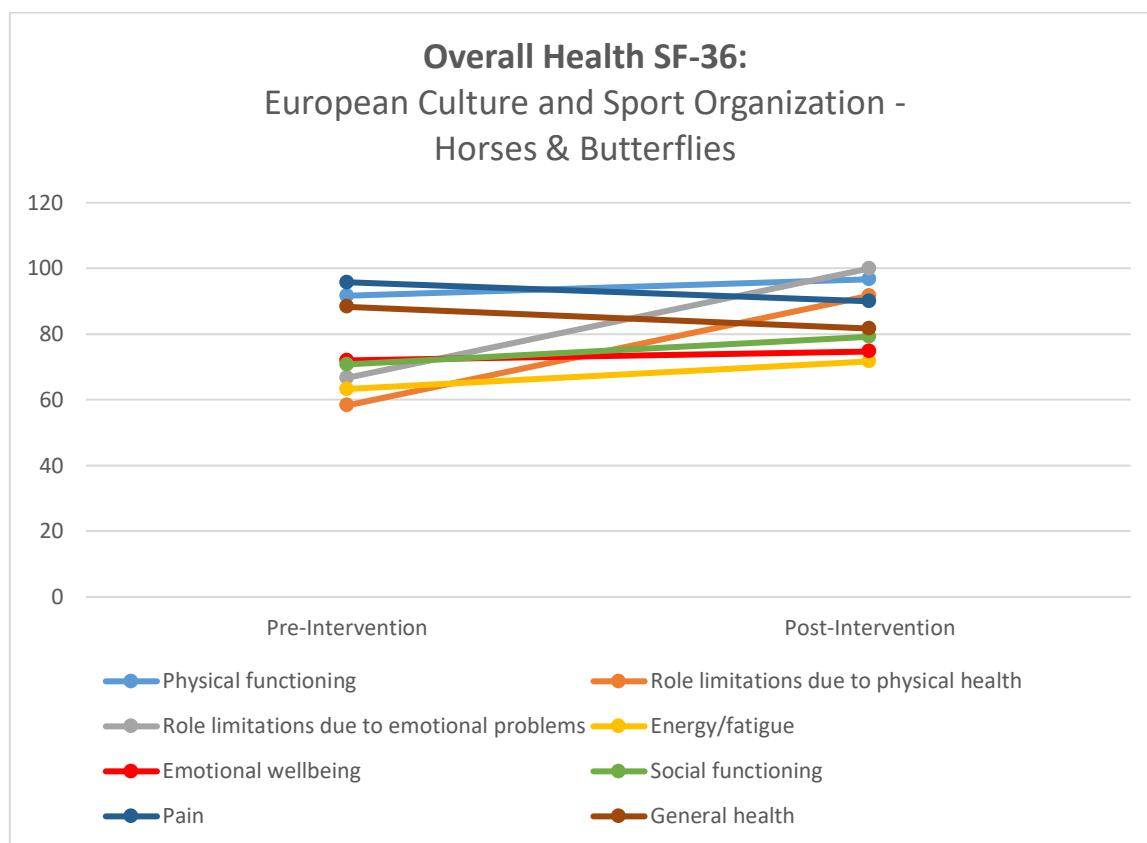
Support team

- Health Team DCA Umbertide Centre (psychiatrist, psychologist, nutritionist)
- Equestrian vaulting technicians with specific skills in the field of mental health and motor science
- Psychologist (field observations)
- Students of the Master's Degree Course in Motor Science
- Istituto Superiore di Sanità (Italian Superior Health Institute) for data processing and evaluation

Results

The project was highly appreciated by both users and family members. Despite the complexity of the sport technical gestures that characterized the programme, all the participants reached a good level of physical ability in the equestrian vaulting. In the final event, they managed to produce an individual programme to the sound of music based on exercises codified by the International Equestrian Federation.

The sample examined is unfortunately very small and this does not allow for a statistical analysis of the data. However, there was a moderate improvement in the relational area in general, while there was no decrease in body weight, and in 1 case there was a slight increase. It is significant that in the 4-month follow-up, two participants were still continuing the sporting path independently. The interest of the Sports Federation of reference, the Italian Federation of Equestrian Sports (FISE), should also be emphasized, which using its means of communication has given wide prominence to this project.



Modulation of the scores in each domain of the SF-36 questionnaire for overall health.

What was measured	Measurement tool	Variable measured	Pre-score (Mean)	Post-score (Mean)	Change
Overall Health	SF36	Physical functioning	91.7	96.7	+5
		Role limitations due to physical health	58.3	91.7	+33.4
		Role limitations due to emotional problems	66.7	100	+33.3
		Energy/fatigue	63.3	71.7	+8.4
		Emotional wellbeing	72	74.7	+2.7
		Social functioning	70.8	79.2	+8.4
		Pain	95.8	90	-5.8
		General health	88.3	81.7	-6.6

Rijeka Sports Association for Persons with Disabilities – Athletic Therapy



Organisation: Rijeka Sports Association for Persons with Disabilities

Sport/Exercise/Physical Activity type: Athletic Therapy for persons with disabilities

Country: Croatia

Duration: November 2019 – February 2020

Overview of the Pilot Project: The “Athletic Therapy” pilot project uses athletic disciplines as a therapeutic tool to positively address mental health problems. The pilot supports participants on social, physical and mental health through an individualized approach to make the most of their individual abilities. This kind of sports approach influences the improvement of their abilities, social and sports skills, confidence, independence as well as it has the impact of performance in rehabilitation

Participants: This pilot project engaged n=10 adults (18+) and n=5 under 18 years old (7 male and 8 female) with a range of different mental health issues (mild, moderate, severe intellectual disability and autism). They were recruited from across the city of Rijeka and the wider Primorsko-goranska region. All participants (adults and children) worked together in the group.

Attendance:

Participation completion rates: All participants have completed our activities. The average attendance per session (number and/or %) was 98%.

Method:

The team’s activities took place twice a week over a period of 4 months (32 sessions in total). Each session was 90 min in duration adhering to the following format:

- 1 minute: welcomes, introductions and familiarisation
- 9 minutes: physical warm up



- 20 minutes: technical athletic coaching in different disciplines
- 30 minutes: individual training in different athletic disciplines (running, jumping, throwing)
- 20 minutes: second half of individual training in different athletic disciplines (running, jumping, throwing), improving and correcting technical deficiencies
- 10 minutes: the final part of the training - stretching

Analysis:

The SF-36 and WHO QoL measures were taken pre and post programme. In addition the following were also measured:

Testing and measurements on the track for running, throwing, and jumping.

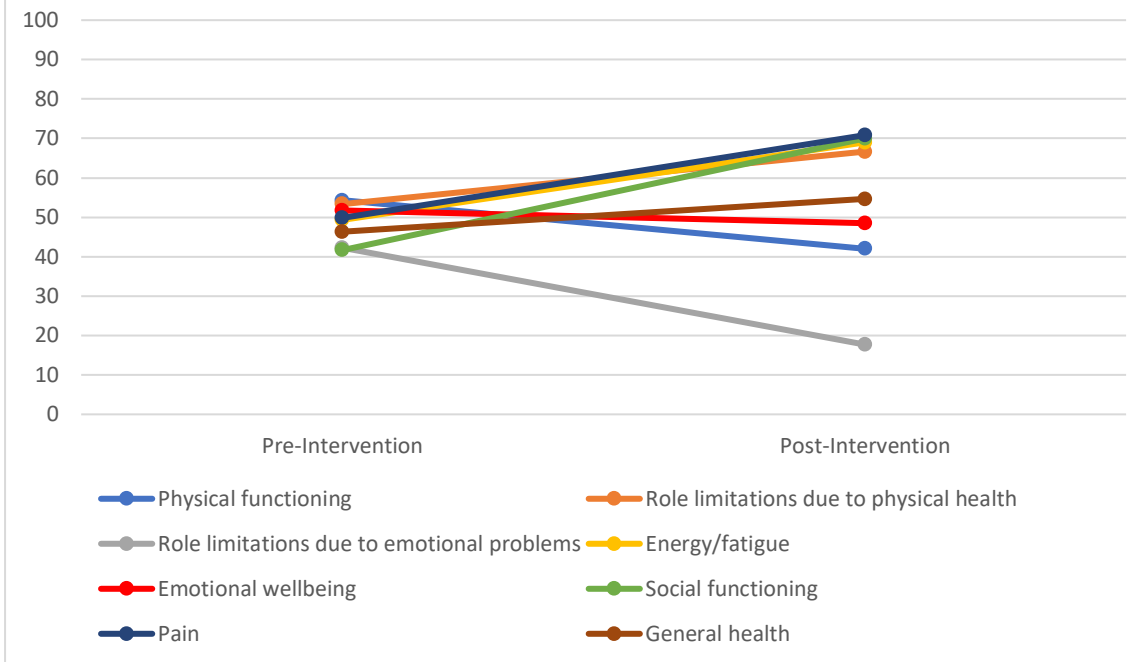
- **Running:** participants ran from a low start, a distance of 60 m at the whistle. They ran in 4 tracks, each in their own track. The run was conducted indoors - in the athletics hall. We used a stopwatch. Time was measured in seconds.
- **Throwing:** we have measured the distance of the thrown ball. Our participants threw a 1 kg ball into the distance, from a standing position, from a swing of the arm above the head. They had 3 attempts and out of 3 attempts, 1 best was chosen. A meter was used for measurement. The throwing was conducted indoors - in the athletics hall.
- **Jumping:** we have measured jump length expressed in cm. Our participants jumped into the distance, into the sand. They had 3 attempts. A measurement was performed after each attempt. The best result of these 3 attempts was chosen. A measuring meter was used. The jumping was conducted indoors - in the athletics hall.

Support team: The group was supported by the following professional support team:

- 2 professional athletic coaches
- SPHERE project researcher

Results: We concluded that sports activities - more precisely athletics are very important and necessary for the development of people with disabilities, for their psycho-physical development and socialization. After the implementation of athletic therapy, significant improvements were observed in terms of psycho-physical development (coordination, motor skills, and socialization).

Overall Health SF-36: Rijeka Sports Association for Persons with Disabilities – Athletic Therapy



Modulation of the scores in each domain of the SF-36 questionnaire for overall health.

Results Table:

What was measured	Measurement tool	Variable measured	Pre-score (Mean)	Post-score (Mean)	Change
Overall Health	SF36 (high score defines a more favourable health state; 0-100 range; Scores represent the percentage of total possible score achieved)	Physical functioning	54.33	42.00	- 12.33
		Role limitations due to physical health	53.33	66.66	+ 13.33
		Role limitations due to emotional problems	42.26	17.70	- 24.56
		Energy/fatigue	49.33	69.00	+ 19.67
		Emotional wellbeing	51.73	48.50	- 3.23
		Social functioning	41.66	70.00	+ 28.34
		Bodily Pain	49.83	70.83	+ 21.00
		General health	46.33	54.66	+ 8.33
Psychological	WHO QoL (higher scores as more desirable)	Domain 1: Physical health	16	20	+ 4
		Domain 2: Psychological health	12	12	0
		Domain 3: Social relationships	12	16	+ 4
		Domain 4: Environmental health	12	12	0
Physical performance		Running (60 metres)	12.1 seconds	11.6 seconds	0.5 seconds faster
		Throwing	5.86 metres	5.91 metres	+ 0.05 metres
		Jumping	137.6 cm	140.53 cm	+ 2.93 cm

Additional benefits:

- Participants improved their motor skills, coordination, general physical movement.– this was viewed by coaches.
- Brief quotes of positive benefits of being part of the project.
- All participants expressed their enthusiasm by participating in sports activities. Their laughter and smile is priceless.
- Brief positive stories of participants .

Participants were satisfied with participating in sports activities and they clearly expressed their enthusiasm. Some of their quotes are:

“I really like athletics.”

“I meet a lot of friends.”

“I am very happy.”

“I like to come to training.”

“My coach is great.”

“I have a lot of energy”.

“I sleep better”.

“I am less depressed”.

Overall Evaluation

Overall Health: SF-36 results

Generally, results showed a positive change from the pre to the post assessment in the different health domains assessed by the SF-36 at each of the pilot sites, with negative change only appearing occasionally. As seen in the table below, when averaging the percentage of improvement in each domain at all locations, positive results are observed for “role limitations due to emotional problems” (54%), “social functioning” (39%), “energy/fatigue” (27%), “role limitations due to physical health” (23%), “pain” (14%) and “general health” (4%). On the other hand, small negative results were observed for the domains “physical functioning” (-3%) and “emotional wellbeing” (-3%).

Overall Health: SF-36 % Improvement								
Pilot Site	Physical functioning	Role limitations (physical)	Role limitations (emotional)	Energy/fatigue	Emotional wellbeing	Social functioning	Pain	General health
England	4%	0%	200%	42%	-10%	63%	7%	2%
Finland	3%	9%	25%	13%	2%	14%	11%	4%
Italy	5%	57%	50%	13%	4%	12%	-6%	-7%
Croatia	-23%	25%	-58%	40%	-6%	68%	42%	18%
Average	-3%	23%	54%	27%	-3%	39%	14%	4%

In order to rank the effects, a measure of effect size was calculated, which takes into account the level of improvement in each health domain and the variability between the testing sites. Specifically, Hedge’s g_{rm}^1 was computed from the average SF-36 scores at each pilot site, adjusted for the 4 pilot sites. This enabled those domains with the greatest and most consistent effects between sites to be identified (results are presented in the table below).

Ranking of Overall Health Improvement	
SF-36 Domain	Effect Size (Hedge's g_{rm})
1. Energy/fatigue	1.40
2. Role limitations due to physical health	0.74
3. Social functioning	0.69
4. Role limitations due to emotional problems	0.57
5. Pain	0.27
6. General health	0.04
7. Physical functioning	0.01
8. Emotional wellbeing	-0.03

¹ Lakens, D. (2013). Calculating and reporting effect sizes to facilitate cumulative science: a practical primer for t-tests and ANOVAs. *Frontiers in Psychology*, 4(863). doi:10.3389/fpsyg.2013.00863



The domains with the greatest and most consistent improvements were “energy/fatigue”, “role limitations due to physical health” and “social functioning”, with positive results across all pilot sites, except for one null result in England for “role limitations due to physical health”. While there was a null result in England, the participants presented high scores at pre and post assessment.

“Role limitations due to emotional problems” shows a smaller effect size given its large variability, with a large improvement in England, mild improvements in Finland and Italy, and a mild decline in Croatia.

“Pain” follows with a mild improvement in Croatia, modest improvements in England and Finland, and a small decrease in Italy.

“General health” showed a very small effect size, with modest increments in all sites except in Italy, where it had a small decline.

“Physical functioning” showed a very small effect size due to a decrease in Croatia and modest increments in the other pilot sites.

“Emotional wellbeing” shows a very small negative effect size, given the positive results in Finland and Italy, but negative results in England and Croatia.

Interpretation: Considering the ranking of effect sizes in the SF-36 domains, the pilot action programmes developed using the SPHERE Guidelines consistently favoured a state of increased energy and better social adaptation, with less interference due to physical or emotional difficulties, favouring better adjustment in the process of overcoming mental health problems.

Psychological dimension

Psychological outcomes showed an average improvement of 31% across all test locations. As seen in the following table, results were positive for most of the psychological measurement tools utilized. Depending upon the specific case, these improvements include enhanced mental well-being, reduced psychiatric symptomatology, reduced anxiety and improved psychological functioning.

“Everton in the Community” in England showed an average improvement of 66% for the psychological outcomes for the participants suffering mostly from moderate anxiety and depression. “Good Mind Sports” in Finland showed an average 13% psychological improvement in participants with diverse mental health conditions. “Horses and Butterflies” in Italy, showed an average 31% psychological improvement in participants with eating disorders. “Athletic Therapy” in Croatia showed an average 13% psychological improvement in participants with autism and intellectual disability.

In England and Croatia, the positive results in most scales contrast with negative results in scales reflecting emotional status. This suggests that despite improvements in functioning, social adjustment and energy levels, some participants may still encounter moments of emotional distress.

Psychological Health Summary			
England - Everton in the Community			
Measurement Tool	Pre-Score	Post-Score	% improvement
WEMWBS (Mental Well-being)	36	48.1	34%
SF-36 (Role limitation emotional)	24.4	73.3	200%
SF-36 (Energy/fatigue)	46	65.3	42%
SF-36 (Emotional well-being)	52.8	47.7	-10%
SF-36 (Social Functioning)	40	65	63%
Average Psychological Improvement:			66%
Finland - Good Mind Sports			
Measurement Tool	Pre-Score	Post-Score	% improvement
SF-36 (Role limitation emotional)	38.1	47.61	25%
SF-36 (Energy/fatigue)	43.57	49.29	13%
SF-36 (Emotional well-being)	64	65.14	2%
SF-36 (Social Functioning)	64.29	73.21	14%
Average Psychological Improvement:			13%
Italy - Horses and Butterflies			
Measurement Tool	Pre-Score	Post-Score	% improvement
STAI State (State Anxiety)	64	17.2	73%
STAI Trait (Trait Anxiety)	49.6	27.6	44%
SCL (Global Severity Index)	0.7	0.5	29%
SF-36 (Role limitation emotional)	66.7	100	50%
SF-36 (Energy/fatigue)	63.3	71.7	13%
SF-36 (Emotional well-being)	72	74.7	4%
SF-36 (Social Functioning)	70.8	79.2	12%
Average Psychological Improvement:			32%
Croatia - Athletic Therapy			
Measurement Tool	Pre-Score	Post-Score	% improvement
WHOQoL: Physical health	16	20	25%
WHOQoL: Psychological health	12	12	0%
WHOQoL: Social Relationships	12	16	33%
WHOQoL: Environmental health	12	12	0%
SF-36 (Role limitation emotional)	42.26	17.7	-58%
SF-36 (Energy/fatigue)	49.33	69	40%
SF-36 (Emotional well-being)	51.73	48.5	-6%
SF-36 (Social Functioning)	41.66	70	68%
Average Psychological Improvement:			13%
Average psychological improvement across all pilot cites			31%

Interpretation: Psychological assessment tools revealed that programmes demonstrated an overall psychological health improvement in participants, which is reflected in the process of improved mental well-being, symptom reduction and adaptability to the environment, while some participants may still experience moments of emotional distress.

Conclusion from the quantitative data: Generally, pilot site programmes developed using the SPHERE guidelines resulted in an improvement in participant mental and physical health, demonstrating greater levels of social functioning, energy and adaptability. Specifically, findings at each site should be considered in the context in which they are situated while it should be emphasised that the pilot action programmes were principally developed to assess the utility of the SPHERE Guidelines.



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