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# SPHERE

SPORT HEALING REHABILITATION

## EVALUATION & DEVELOPMENT

# Evaluation and Development

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# Evaluation and Development of SPHERE Guidelines[1]

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[1] This document provides further detail on this part of the overall SPHERE Scientific Protocol, therefore please refer to the protocol document for a full explanation of the methods undertaken in the SPHERE project


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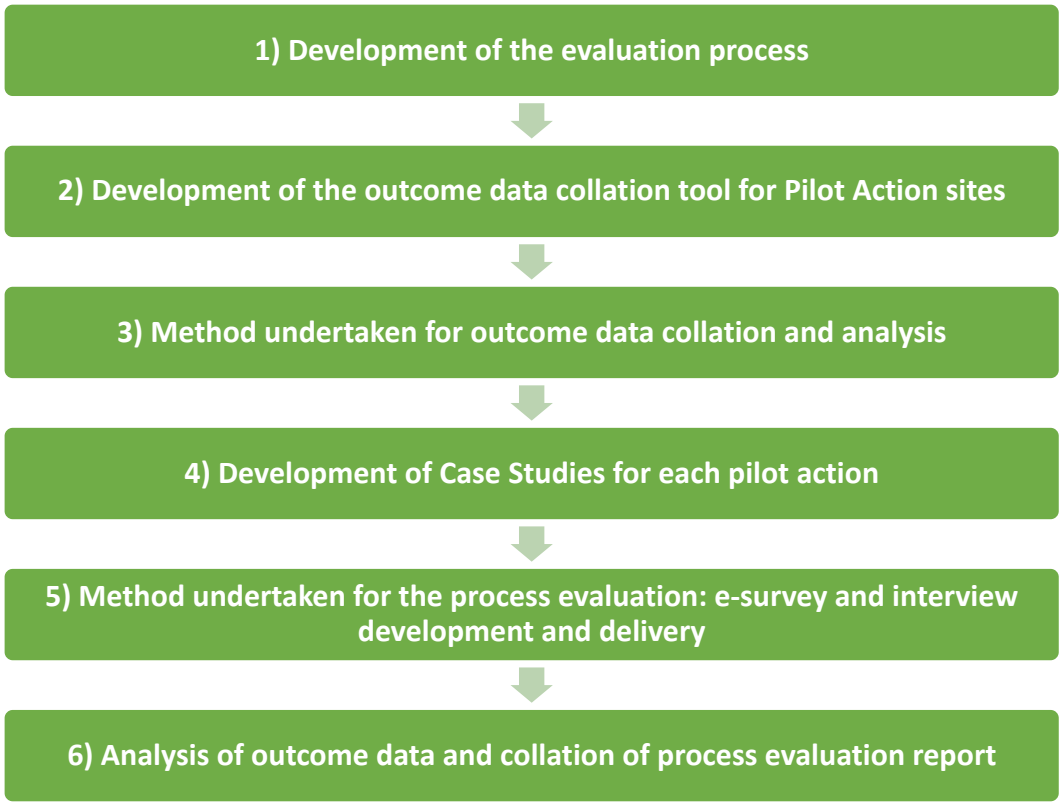
## Introduction

As part of the SPHERE Scientific Protocol an evaluation of the initial version of the SPHERE Guidelines (created in 2019) was conducted. The evaluation followed a rigorous 6 stage process which aimed to assess the effectiveness of the SPHERE Guidelines in facilitating physical activity, exercise, and sport interventions for people with mental health problems. The result of this evaluation of the initial version of the SPHERE Guidelines were amendments based upon the findings, which resulted in the final version of Guidelines. The specific methods used, results, and explanation of the amendments made to the SPHERE Guidelines are explained in detail below[2].

## 6 stage SPHERE Guidelines evaluation and development:




[2] The evaluation and development of the guidelines fell within the remit of the Scientific Committee work package of the SPHERE project.

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## 1) Development of the evaluation process

a) An iterative plan for the evaluation process of the SPHERE Guidelines was created. The iterative nature allowed for reviewing and feedback from the Scientific Committee and the Pilot Action sites throughout the process.
b) The evaluation process included (i) outcome measures - to assess the guidelines effectiveness, and (ii) process evaluation - to capture perspectives of the use of the guidelines by those that applied them.
c) Scientific committee reviewed the evaluation process which included the allocation of roles and responsibilities related to the evaluation and development of the guidelines, and timelines for review in the Scientific Committee meeting schedule.
d) The evaluation process was subsequently agreed by the Scientific Committee and implemented between October 2019 and November 2020.

## 2) Development of the outcome data collation tool for Pilot Action sites

a) The Scientific Committee reviewed key literature to assess what data needed to be collected during the Pilot Actions in order to assess the effectiveness of the SPHERE Guidelines. Outcome data included: Demographic information; Participation, attendance, completion, and physical activity levels; Overall Wellbeing; Psychological measure; Physical measure.
b) A variety of relevant measures were identified as appropriate, reliable, globally used, and practical for the sites (see Table 1). However, as the Pilot Action sites all differed in their type of setting and nature of participants, a selection of measures was suggested which could be chosen, dependent upon appropriateness for the specific setting in each of the four country sites.
c) Data collection documents and a workshop was prepared to support the Pilot Sites in the development of their Pilot Actions. This took place in October 2019.

## 3) Method undertaken for outcome data collation and analysis

a) All Pilot Sites took part in a workshop to develop their Pilot Actions using the initial SPHERE Guidelines. During the workshop sites were supported in deciding the selected outcome measures which best suited their setting and participants.
b) Following the workshop pilot sites provided their final Pilot Actions Plan which included (i) how they would use the SPHERE Guidelines, and (ii) how they would evaluate their Pilot Action using a combination of the suggested measures. The Pilot Action Plans were then reviewed and agreed, prior to commencing.
c) Data collation – data was collected for the outcome measures at each of the Pilot Action sites, by the staff who delivered the Actions. To support Pilot Site partners with the collation and analysis of this data Pilot Sites were provided with an evaluation protocol guidance document, one-to-one support on what and how to collect the data, and Excel spreadsheets on which to record the data.

*Table 1: Outcome measures that could be used at pilot action sites*[3]

| Demographic information | Participation, attendance, completion, and physical activity levels | Physical activity (pre and post) | Overall wellbeing measure and psychological measures (pre and post) | Physical measure (pre and post) |
|---|---|---|---|---|
| • Gender %<br>• Age mean<br>• Age range<br>• Reason for client referral | • Total Participant number<br>• % completion rates<br>• Average attendance per session (number and/or %) | • IPAQ | • WEMWBS<br>• Eating Disorder Inventory 3<br>• State Trait Anger Scale<br>• State Trait Anxiety Inventory<br>• Symptom Check List. 90 R<br>• CGI (Clinical Global Impression)<br>• WHO QoL<br>• THOMAS (Theory of Mind Assessment Scale); Ham-A, Ham-D | • Illinois agility run<br>• Sport Medicine Controls<br>• Running (time and distance)<br>• Jumping (distance)<br>• Throwing (distance)<br>• Body Fitness Test<br>• Global Physical Activity Questionnaire (GPAQ2) |

## 4) Development of Case Studies for each pilot action[4]

a) Once Pilot Action sites had completed the delivery of their programme and the final outcome data collection, each Pilot Site was sent a Case Study Template to input the results of the outcome evaluation from their Pilot Actions.

b) Where required, Pilot Site leads were supported to ensure that the Case Study template was completed correctly and to ensure there was sufficient information to be able to produce the Case Studies from the SPHERE project.

c) The templates were then used to create the final Case studies from each site which can be accessed here.

[3] Not all the measures were used at each site. Sites selected a measure which best suited their context (see 2.b. for further detail).

[4] Due to COVID 19 there was a delay to the Pilot Action implementation at some sites therefore the evaluation process took longer than anticipated.

## 5) Method undertaken for the process evaluation: e-survey and interview development and delivery

a) To investigate the practical use and implementation of the initial SPHERE Guidelines, following the completion of the Pilot Actions all partner leads and the practitioners who were involved in the delivery of the programmes i.e. sports coach, exercise leader, from each site, were invited to complete an online e-survey. A sub-sample of those that completed the online e-survey were also invited to take part in a follow-up interview. Both the e-survey and follow-up interview sought views on the use of the guidelines and their practical application in 'real life' settings.

b) This approach provided participants with the opportunity to share their overall experience of the SPHERE Guidelines and views on how the SPHERE Guidelines could be improved for future dissemination.

### E-Survey

- The e-survey sought information on the use of the 17 guidelines. It asked respondents to identify which guidelines they had used to inform their pilot study and how they had used the specific guideline, or if they had not, the reasons why they had not used it. This was sought via an open question (i.e. a free text response was required).
- An example of an e-survey questions is below:

| Guideline | **Question:** Did you use the guideline? *YES or NO* |
|---|---|
| The sport and physical activity program encourages parallel medical, psychological and social enhancement. | *YES* – Specifically, how did you use this guideline? And how useful was the guideline?<br><br>(Please provide example(s) were appropriate |
| | *NO* – Why didn't you use this guideline? |

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### Interview

The online interview included questions on the following topics:

- Experiences of using the guidelines (i.e., the actual process of using them). Example question from the interview schedule: *In general, how useful were the guidelines in supporting your planning and preparation for your practices?*;
- Effectiveness of the guidelines, (i.e., the outcomes from using them). Example question from the interview schedule: *In general, how effective were the guidelines in supporting the promotion of mental health through the use of physical activity?;*
- Practical use of the guidelines in other sport and physical activity settings. Example question from the interview schedule: *What advice would you give to someone who may use the guidelines?;*
- Potential improvements and any other comments. Example question from the interview schedule: *Finally, we just wanted to offer an opportunity for you to mention any addition ideas or thought which you may have about the guidelines?.*

## 6) Analysis of data and collation of process evaluation report

a) Statistical analysis of Pilot Actions pre and post scores took place and four case studies were created. The four different pilot actions are detailed briefly below:

- Football Therapy – Everton in the Community – UK: The 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 pyscho-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.

- Good Mind Sports – Hämeen Liikunta ja Urheilu ry and Ylöjärvi Municipality – Finland: The pilot projectwill support participants social, physical and mental health by building individual levels of resilience and self-esteem to combat social isolation and aid their on-going rehabilitation.

- Horses and Butterflies - ASD Gruppo Italiana Paraequestre / CR FISE Umbria – Italy: Aim of the project is improve the body image in patients with Anorexia Nervosa using the horse and the sport of Equestrian Vaulting as a "mean" to help interpersonal relationships and communication, to manage anxiety states and to work on body image, Identity and self-consciousness. At the beginning and the end of the projects a series of specific test have been submitted, together with a psychological structured observation and the evaluation of specific motor abilities connected with the selected sport.

- Athletic Therapy – Rijeka Sports Association for Persons with Disabilities – Croatia: Athletic therapy' pilot project, is using the athletic disciplines as a therapeutic tool to positively address mental illness. The pilot supports participants by social,

physical and mental health by individual approach. This makes 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

b) Data from the e-surveys and interviews were reviewed and findings taken to the Scientific Committee for discussion.
c) Scientific Committee met and discussed the findings from the evaluation of the Guidelines and some edits were made as a result of the evaluation and based upon new research available since the initial development in 2019.
d) Changes made to the initial guidelines which then formed the final version of the guidelines were recorded in a table to demonstrate changes made to the initial SPHERE Guidelines used for Pilot Actions, and the updated final SPHERE Guidelines – see below.

*Table 2: Development of the SPHERE Guidelines from initial guidelines to finalised version*

| Original SPHERE Guidelines used at each pilot site | Brief explanation for any alterations to aspects of the SPHERE guidelines following the evaluation process | Updated SPHERE guidelines following the evaluation process |
|---|---|---|
| 1. The sport and physical activity programme encourages parallel medical, psychological and social enhancement. | The term 'sport and physical activity' was removed as is was deemed repetitive and the document has been clear to state (in the title and brief introduction) that the programme sport and physical activity.<br><br>An additional sentence was included to incorporate the potential for prescription of physical activity/exercise referrals from medical professionals. | 1) The programme encourages holistic clinical, psychological and social improvement.<br>*For example: clinical–symptom management; psychological–improved wellbeing; social–improved social interaction and confidence. Where appropriate, prescription and follow up from a medical practitioner is recommended.* |
| 2. Attendance to the programme is voluntary. | | 16) Attendance to the programme is voluntary. |
| 3. Where possible, sessions or training take place at least three times per week. | Inclusion of 'independent activity' was deemed appropriate to encourage continued physical activity when appropriate. | 10) Sessions ideally take place at least three times per week.<br>*If 3 times a week is not possible then programmes should aim for 1 or 2 times a week, while encouraging independent activity.* |
| 4. Sessions are designed for a duration of at least 30 min, and at most, 2 hours. This duration should be dependent on ability, fitness level, and availability. | It was felt that the terms 'ability', 'fitness level', and 'availability' were not an exhaustive list of reasons for adjusting the duration of practice, as such the term 'participant circumstances' was viewed to be more appropriate while the previous terms were offered as examples. Additionally, a focus on the nature of the activity (not just the participant's circumstances) was deemed important to include in the point. | 9) Sessions are designed to include between 30 minutes and up to 2 hours of activity.<br>*The duration should be dependent on individual participant circumstance (e.g., ability, fitness level, concentration levels, and availability), and nature of the activity (e.g. intensity levels, rest periods during activity, complexity).* |
| 5. Training sessions end at least 2 hours before sleep time. | The term 'training' was removed as the language did not fit with all forms of physical activity.<br><br>The inclusion of 'normally' aided with the flow of the point, while participants sleep times may not be set and sleep patterns can potentially fluctuate. | 12) Sessions ideally finish at least 2 hours before participants normally go to sleep. |

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| 6. The intervention or programme is designed for a minimal duration of 3 weeks, but longer duration is preferable. Shorter interventions require more sessions per week. | After further reviews of literature, it was suggested that an optimal duration of 8 weeks or more was found. Additionally, the inclusion of an optimal 8 weeks or more was aimed to help programmes aspire to greater numbers of weeks than just the minimum of 3. | 8) The programme has a minimum duration of 3 weeks, and optimally a duration of 8 weeks or longer.<br>*If 3 weeks (or more) is not possible, then a higher number of sessions per week is recommended.* |
| 7. The activity is in groups, in an aim to develop social integration and social confidence, with an optimal group size between 5 and 15 people per 1 trainer. | Point 7 was split into two points one concerning the development of participants (point 7) and the other logistical group size (point 6).<br><br>Regarding the development of participants, peer to peer support was emphasised as important during the evaluation.<br><br>Additionally, the promotion of enjoyment was included to promote participant motivation and opportunities for continued engagement and retention in programmes. | 7) Time should be designated for social interaction during and/or after sessions, while instructors should facilitate both peer to peer support and a sense of enjoyment during the programme.<br>*When working in groups instructors should aim to develop participants' social integration and social confidence.*<br><br>6) The programme promotes group activities with an optimal group size between 5 and 15 people per 1 instructor.<br>*Instructors should adjust group size depending upon circumstance (e.g., group's ability, levels of concentration, fitness).* |
| 8. Ideally, training to take place before mid-day. | The term training was removed and replaced with activities to be inclusive of all physical activity. | 11) Activities take place optimally before mid-day. |
| 9. Where possible, sessions should incorporate activity in open air or natural environments. | | 14) The programme should seek to incorporate activities in the open air and natural environments. |

| | | |
|---|---|---|
| 10. Training activities are supervised by an instructor, who should provide motivation and support for the participant and adjust the programme accordingly to their needs on a weekly basis. | The term 'training' was removed to promote all different types of physical activity.<br><br>Technical guidance was included to promote development and learning of skills.<br><br>Regarding the adjustments to programmes, rather than 'weekly' it was deemed that 'session by session' was more appropriate due to the different timescales of programmes. | 3) Activities are supervised by an instructor/coach, who should provide technical guidance, motivation and support.<br>*Instructors should adjust the programme accordingly to individual needs on a session by session basis.* |
| 11. The training or programme involves the setting of individualized goals to gradually increase the participant's fitness, confidence and skills. | The point now includes an overall term to describe improvement and development, rather than being specific to 'fitness, confidence and skills'. An example has been included using previous text. | 4) The programme should involve setting individualised goals for participants, to support gradual improvement and development.<br>*For example: goals focussed on improving skills, attendance, participation, interaction with others, team working.* |
| 12. The intensity of physical exercise should aim towards a moderate level according to the participant's capability and fitness level. | The term 'activities' has replaced 'physical exercise' to be more inclusive of all physical activity types.<br><br>Suggestions for using low and high intensity activities have also been added to support programmes which may feel this as being appropriate. While a note of caution has been included for high intensity. | 15) The intensity of activities should preferably aim towards a moderate level.<br>*Participants' capability must always be considered and prioritised. Where moderate activity is not possible due to capability or capacity, low intensity is recommended. High intensity exercise should only be used with caution, where appropriate, under close supervision and by appropriately trained staff.* |
| 13. Sessions should be designed in order to develop mastery of skills, facilitating cognitive stimulation in the form of skill learning (e.g. concentration, coordination, memorization, competence, use of equipment, game strategy, etc.). | The term 'mastery' was replaced with 'improve' and a focus placed upon learning rather than specifically mastering a skill. | 2) The programme is designed to develop and improve skills, facilitating cognitive stimulation through the learning process.<br>*For example: improved concentration, coordination, memorisation, use of equipment, and game strategy.* |

| | | |
|---|---|---|
| 14. The participant's goal progression and personal experience are supervised through regular feedback. | Similar to point 13, the focus of this point moved towards learning and development. | 5) Participants' learning, development progression and personal experience are reviewed through regular discussion and feedback.<br>*For example: Weekly or daily plenary sessions and feedback alongside training.* |
| 15. The programme is flexible regarding participant involvement and attendance in each session, depending on the condition of the participant at the time of the session. | There was a slight adjustment to the language of the point. | 17) Programme attendance and involvement is flexible to accommodate for participants' individual current circumstance. |
| 16. The sport or physical activity takes place in a welcoming environment where people feel comfortable and a part of. | The promotion of safety and inclusivity was added to the point. | 13) The programme takes place in a safe and inclusive environment in which people feel physically, psychologically, and socially comfortable, and a part of. |
| 17. The programme encourages the participant to continue taking part in sport and physical activity once the programme has finished. | A brief explanation was added to emphasise the importance of the role of the instructor in promoting future physical activity throughout the duration of the programme. This was seen as vital as to prevent the guidance only coming at the end of the programme or not at all. | 19) The programme promotes continued engagement in physical activity beyond the programme's duration.<br>*Throughout the programme, instructors should provide participants with support, guidance and information concerning opportunities for continued physical activity engagement.* |
| | A new point was included after the evaluation highlighted the need to incorporate a point which concerned the provision of prior information to potential participants, and the need for consent when appropriate. | 18) Prior to engaging in the programme, participants are made aware of what is involved, consent is sought, and ideally participants are engaged in their choice of activity.<br>*For example, during a personal interview, informational sessions or pamphlets/leaflets.* |

## Conclusion

This document presents an explanation of how the SPHERE Guidelines were evaluated and developed. The document provides further detail on this specific part of the SPHERE Scientific Protocol which can be accessed here. The final version of the guidelines can be access here but are also included below for ease of reference.



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## SPHERE Guidelines

Below are a set of guidelines developed to support the use of physical activity as part of psychiatric rehabilitation programmes. The recommendations are based on moderating factors that optimize the effectiveness of physical activity programmes for people with mental health problems. ***Before applying the guidelines, please consider your specific context, as certain aspects of the guidelines may not be appropriate for all circumstances. We advise to adopt as many of the guidelines as possible, when and where they are feasible for each unique setting.***

| # | SPHERE Guidelines |
|---|---|
| 1 | **The programme encourages holistic clinical, psychological and social improvement.**<br>*For example: clinical–symptom management; psychological–improved wellbeing; social–improved social interaction and confidence. Where appropriate, prescription and follow up from a medical practitioner is recommended.* |
| 2 | **The programme is designed to develop and improve skills, facilitating cognitive stimulation through the learning process.**<br>*For example: improved concentration, coordination, memorisation, use of equipment, and game strategy.* |
| 3 | **Activities are supervised by an instructor/coach, who should provide technical guidance, motivation and support.**<br>*Instructors should adjust the programme accordingly to individual needs on a session by session basis.* |
| 4 | **The programme should involve setting individualised goals for participants, to support gradual improvement and development.**<br>*For example: goals focussed on improving skills, attendance, participation, interaction with others, team working.* |
| 5 | **Participants' learning, development progression and personal experience are reviewed through regular discussion and feedback.**<br>*For example: Weekly or daily plenary sessions and feedback alongside training.* |
| 6 | **The programme promotes group activities with an optimal group size between 5 and 15 people per 1 instructor.**<br>*Instructors should adjust group size depending upon circumstance (e.g., group's ability, levels of concentration, fitness).* |
| 7 | **Time should be designated for social interaction during and/or after sessions, while instructors should facilitate both peer to peer support and a sense of enjoyment during the programme.**<br>*When working in groups instructors should aim to develop participants' social integration and social confidence.* |
| 8 | **The programme has a minimum duration of 3 weeks, and optimally a duration of 8 weeks or longer.**<br>*If 3 weeks (or more) is not possible, then a higher number of sessions per week is recommended.* |
| 9 | **Sessions are designed to include between 30 minutes and up to 2 hours of activity.**<br>*The duration should be dependent on individual participant circumstance (e.g., ability, fitness level, concentration levels, and availability), and nature of the activity (e.g. intensity levels, rest periods during activity, complexity).* |
| 10 | **Sessions ideally take place at least three times per week.**<br>*If 3 times a week is not possible then programmes should aim for 1 or 2 times a week, while encouraging independent activity.* |
| 11 | **Activities take place optimally before mid-day.** |
| 12 | **Sessions ideally finish at least 2 hours before participants normally go to sleep.** |
| 13 | **The programme takes place in a safe and inclusive environment in which people feel physically, psychologically, and socially comfortable, and a part of.** |
| 14 | **The programme should ideally seek to incorporate activities in the open air and natural environments.** |
| 15 | **The intensity of activities should preferably aim towards a moderate level.**<br>*Participants' capability must always be considered and prioritised. Where moderate activity is not possible due to capability or capacity, low intensity is recommended. High intensity exercise should only be used with caution, where appropriate, under close supervision and by appropriately trained staff.* |
| 16 | **Attendance to the programme is voluntary.** |
| 17 | **Programme attendance and involvement is flexible to accommodate for participants' individual current circumstance.** |
| 18 | **Prior to engaging in the programme, participants are made aware of what is involved, consent is sought, and ideally participants are engaged in their choice of activity.**<br>*For example, during a personal interview, informational sessions or pamphlets/leaflets.* |
| 19 | **The programme promotes continued engagement in physical activity beyond the programme's duration.**<br>*Throughout the programme, instructors should provide participants with support, guidance and information concerning opportunities for continued physical activity engagement.* |



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