



SUPPORTING SERVING AND FORMER  
MEMBERS OF THE ARMED FORCES,  
EMERGENCY SERVICES AND FAMILIES



# Evaluation Report

## The Surf Action Civilian and Armed Forces Community Children's Mental Health Project

(Armed Forces Covenant Number: CF15B-SW-611)

## An Integration Project Supporting the Mental Health and Wellbeing of Children in Families of Former and Serving Military Personnel

May 2016 – October 2016



"We're delighted to have received Armed Forces Covenant funding. By introducing service and civilian families to surfing and water sports, our aim is to bring families together by building physical, psychological and emotional resilience."

**Armed Forces and Civilian Community  
Children's Mental Health Promotion  
Project**

Surf Action Team,  
Cornwall & Southern England

#ForOurForces



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# SURF ACTION

Surf Action was established in Cornwall in 2009 and is now a registered Charity (number 1140191). An award winning and pioneering project, Surf Action aims to promote and protect the physical and psychological wellbeing of serving and former serving members of the armed forces and the blue-light emergency services and their families who are living with physical and/or psychological difficulties as a result of their service and to assist them into making the transition into civilian life, in particular but not exclusively, by:

- Introducing them to surfing, high intensity water sports and involving them in peer group activities.
- Providing access to support, guidance, signposting and education.
- Providing access to information and peer support relationships for their families.
- Engaging them in various projects within communities.

By making use of the stunning coastal environment and offering holistic support which takes into account the practical, social and psychological difficulties which some service-users can experience, we do not seek to replicate the valuable work carried out by existing military and civilian organisations and charities, but to complement, signpost to, and work with them to fill the gaps identified by the service-users who come to us. Published PhD research recently carried out with Loughborough University has lent support to the Surf Action model and significantly extended previous knowledge on physical activity, military veterans and Post Traumatic Stress Disorder (PTSD) by highlighting how nature-based physical activity, encapsulated in the conceptual notion of the “Blue and Green Gyms” can significantly promote well-being among military veterans and other service-users.

**Surf Action is the only organisation providing evidence-based ocean therapy to support the mental health and wellbeing of serving military, veterans and their families in the UK.**

Since being founded Surf Action has also championed **social inclusion** and **cohesion** between the **military, veteran and civilian communities**. It has sought to help individuals, families and communities by providing educational information as a tool with which to empower them to make positive changes in their lives and communities.

## Project Background

The 2009 Royal Navy and Royal Marines Children Fund report ‘Overlooked Casualties of Conflict’ highlighted the significant psychological and emotional problems which many service children suffer when a parent is deployed. It stated “there has been much well-deserved attention given to the challenges experienced by our Service Personnel, but how often do people think of the children back at home? We are calling on everyone to give greater consideration, help and awareness to the stresses on Service children. All too often we have to step in where others have failed to look after those who have gone into harm’s way for our nation’s interests, and it is their families who are making sacrifices to look after them when things go wrong. Hopefully the issues raised in this report will help illuminate the challenges frequently being faced by Service children. Disadvantaging them at that stage casts a life-long



blight on their development and their ability to achieve their full potential. Service children cannot remain the overlooked casualties of conflict any longer.”

It highlighted behavioural changes including changes in school performance, lashing out in anger, worrying, hiding emotions, disrespecting parents, confusion over parental roles and authority figures, feeling a sense of loss, and symptoms consistent with depression.

The 2015 NHS England ‘Future in Mind’ report ‘Promoting, Protecting and Improving our Children and Young People’s Health and Wellbeing, having reviewed the latest evidence, estimated;

- 9.6% or nearly 850,000 children and young people aged between 5-16 years have a mental disorder
- 7.7% or nearly 340,000 children aged 5-10 years have a mental disorder
- 11.5% or about 510,000 young people aged between 11-16 years have a mental disorder
- **This means in an average school class of 30 schoolchildren, 3 will suffer from a diagnosable mental health disorder.**

The most common diagnostic categories were stress, anxiety and depression. Through our years of work with families from a wide range of backgrounds, this worry has been raised many times and adults who have gone through our regime believe it would also be highly beneficial to young people. Family Surf Days certainly seem to back this up and after consultation we now wish to carry the project forward and formalise the delivery and measure outcomes.

Through its work with the serving and veteran communities Surf Action has continued to develop its Ocean Therapy course with the Universities of Loughborough, Exeter, Plymouth, East Anglia and Anglia Ruskin University so it is now a validated occupational therapy based intervention with measurable outcomes of psychological wellbeing and emotional resilience. In recognition we are now sitting on the steering board of the Veterans in Transition project with the University of Massachusetts (Boston USA), Exeter University and Anglia Ruskin Universities.

In December 2015 Surf Action successfully submitted a funding application through the Armed Forces Covenant Community Integration strand for a project to help address some of the problems referred to above.

## The Project

Conflict related parental deployments can be one of the most stressful events of a service child’s life and this often results in behavioural changes and in referral to the already very busy and underfunded ‘Children and Adolescent Mental Health Services’ (CAMHS) in Cornwall. Strong family relationships and good community integration can help minimise these effects. The government has also made supporting children’s mental health a national priority. Cornwall is home to several very large bases and at the time of writing some local squadrons are changing from ‘planned deployed’ to ‘short notice deployments with 24/48 hours notice’. This is likely to have a significant impact on affected families and local schools have already been warned through the service welfare system to be on the look-out for any changes in the service children’s behaviour.



The Surf Action health promotion project aimed;

1. To explore and evidence the benefits of early and non-stigmatising intervention to support the mental and physical health and well-being of children and their families by involving them in healthy outdoor activities.
2. To help to reduce the demands on the services of the CAMHS by:
  - a. Supporting the physical and psychological wellbeing of the participants.
  - b. Encouraging participants to make friends, reduce isolation, build self esteem, and build self-confidence and self-reliance.
  - c. Provide families with the opportunity to take part in surfing and beach activities thus developing and strengthening family ties.
  - d. To build emotional resilience in the participants and make them better able to deal with the stresses of their day to day lives.
3. To encourage conversations between the parents of the participants so as to strengthen contacts within the armed forces and civilian communities thus enhancing the support available to all.
4. By engaging families in a healthy, demanding and fun activity such as surfing, something which most will not have tried before, to encourage parents to take the time to re-assess their family dynamics and the way they interact with their children and to see the considerable benefits healthy outdoor activities can bring.

## Methodology

### 1. Participants

The participants came from 4 sources:

1. RAF St Mawgan families ( by liaison with the station Welfare Committee)
2. RNAS Culdrose families (by liaison with the station Welfare Committee)
3. Local cluster schools (including those in the HMS Heroes scheme)
4. Veteran families known to Surf Action

The project was advertised through social media relevant to each source and through the Family and Welfare organisations of the military establishments and local education facilities. The interest was immediate and the various courses available were rapidly filled.



Covenant Project Gender and Age Distribution

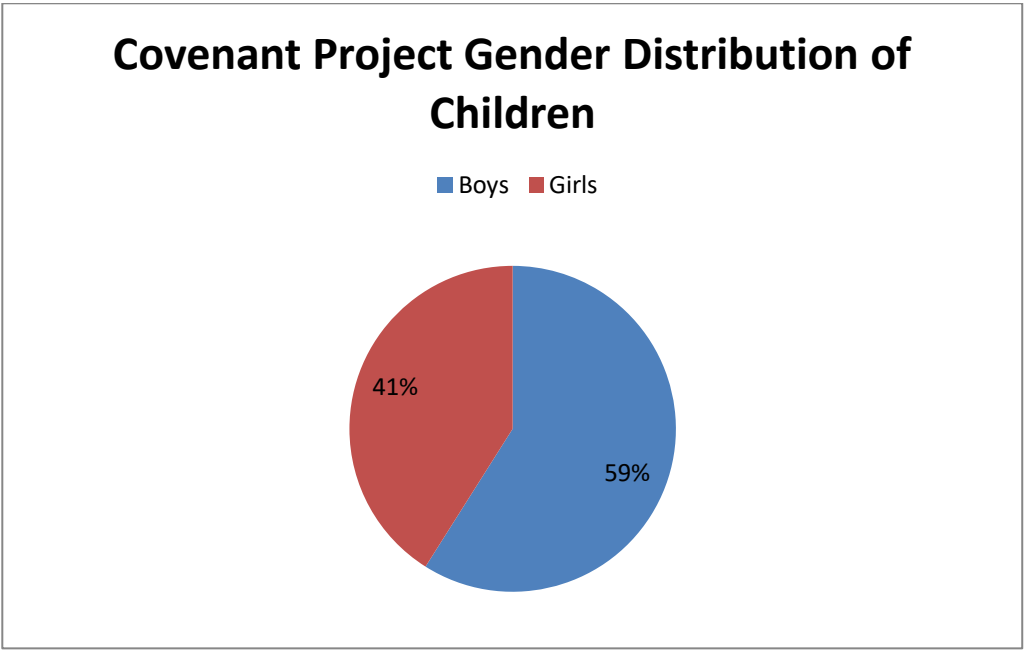


Figure 1

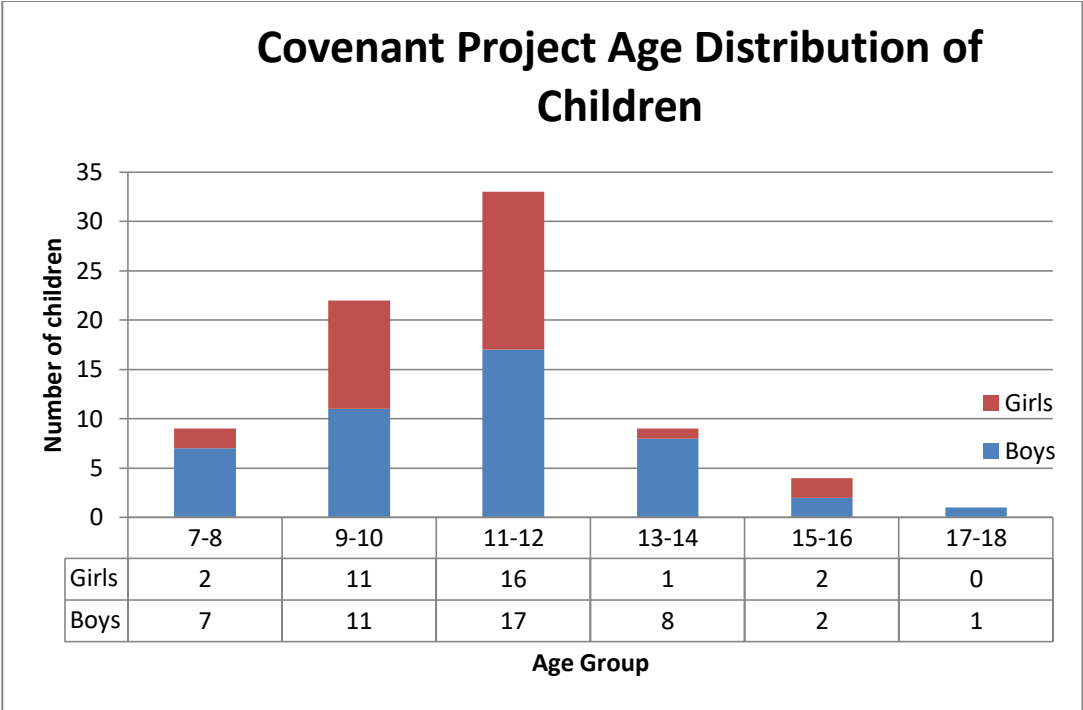


Figure 2



The range of ages was 10 years overall, 10 years for the boys and 7 years for the girls. The mean and median ages were 11 years. A total of 78 children/young people participated. There were more boys than girls however, considering the physicality of the activities; the number of girls was nonetheless pleasing.

## 2. Client Ethnicity

Due to the ethnic make-up of Cornwall all the youngsters but one was white. This is consistent with the demographic of the county as a whole in which 98.7% of the population define themselves as white (ONS 2008).

## 3. Activities

The activities were based around the ethos and learning from Surf Action's Ocean Therapy Course.

Surf Action's standard 8-week Ocean Therapy Course is based on developments of the research of Carly M. Rogers, OTD, OTR/L at the University of Southern California.

- Rogers C, Mallinson T, Peppers D (2014), 'High-Intensity Sports for Posttraumatic Stress Disorder and Depression: Feasibility Study of Ocean Therapy With Veterans of Operation Enduring Freedom and Operation Iraqi Freedom', *American Journal of Occupational Therapy* 68, 395-404.

Qualitatively and quantitatively evaluated at Surf Action and published by Dr Nick Caddick of 'The Peter Harrison Centre for Disability Sport', School of Sport, Exercise and Life-sciences at Loughborough University:

- Caddick, N., Smith, B., & Phoenix, C. (2015). The effects of surfing and the natural environment on the well-being of combat veterans. *Qualitative Health Research*, 25, 76-86.
- Caddick N & Smith B (2014), 'The impact of sport and physical activity on the well-being of combat veterans; A systematic review.' *Psychology of Sport and Exercise* 15, 9-18.
- Caddick N<sup>1,2</sup>, Smith B<sup>2</sup>. & Phoenix C<sup>1</sup>. (2015) Collective stories and well-being: Using a dialogical narrative approach to understand peer relationships among combat veterans experiencing posttraumatic stress disorder (*Journal of Health Psychology* 2015, Vol. 20(3) 286–299) (<sup>1</sup> European Centre for Environment and Human Health, University of Exeter Medical School. <sup>2</sup> Peter Harrison Centre for Disability Sport, University of Loughborough)
- Caddick N.<sup>1,2</sup>, Smith B<sup>2</sup>. & Phoenix C<sup>1</sup>. (2015) Male Combat Veterans' Narratives of PTSD, Masculinity and Health. (*Sociology of Health and Illness*, 2015). (<sup>1</sup> European Centre for Environment and Human Health, University of Exeter Medical School. <sup>2</sup> Peter Harrison Centre for Disability Sport, University of Loughborough)

PTSD and depression frequently co-occur and both are associated with functional and social disruption, including weakened interpersonal relationships and diminished psychological resilience and self-efficacy,



limited activity engagement and role function and increased risk-taking behaviour. Returning Iraq and Afghanistan veterans have reported specific occupational performance needs in leisure (social relationships), self-care (physical health, driving, sleep), and productivity. Some veterans engage in high-risk behaviour such as speeding, substance abuse, or aggressive acts to satisfy feelings of “invincibility” or sensations of “adrenaline rush”

High-intensity sports such as surfing, kayaking, windsurfing, snowboarding, and rock climbing provide a socially acceptable alternative to risk-taking behaviours such as speeding and substance abuse. In addition, high-intensity sports may be an attractive treatment alternative for veterans who need support for reengagement in civilian life because such sports reflect the military culture of athleticism and patterns of engagement that involve physical, psychological, and environmental challenges. Participants in high-intensity sports describe them as transformative, creating new perspectives, and promoting courage through “balancing the natural state of fear with knowledge based on personal capabilities and technical expertise”. Additionally, high-intensity sports that produce an adrenaline rush and that are more in line with military culture might be beneficial as an adjunct to evidence-based treatments for PTSD such as exposure-based cognitive-behavioural therapies and medication management.

Surf Action’s community-based, sports-oriented occupational therapy course (Ocean Therapy) uses the high-intensity sport of surfing in an experiential, skills-based experience specifically adapted for military personnel and veterans seeking mental health services. Consistent with conceptualizations of the transformative nature of engagement in meaningful occupations and the dynamic influence of environment on a person’s performance this course combines surfing performance, focused group processing, and social participation to create opportunities for veterans to examine ways in which their individual values, abilities, and experiences can support successful transition to civilian life.

### **The Ocean Therapy Components:**

Ocean Therapy is based on principles of occupational science and occupational therapy in which participation in meaningful activities within the natural environment (e.g., surfing) is both part of the therapeutic process and a desired outcome.

- One intention of the intervention is for participants to develop sufficient skills that they are confident and competent to paddle out, catch a wave, and ride it in to shore safely.
- The intervention is also designed to provide a supportive setting in which participants can reflect on the process and experience of acquiring new skills in a safe but unpredictable environment such as the ocean. For example, examining participants’ responses to situational challenges on the beach, such as getting along with others or dealing with frustration if good waves do not come along, may provide lessons for successful transition to civilian life.
- Resiliency: Surf Action defines Resiliency as: A person’s ability to apply successful coping strategies in response to stressful life situations to resume usual activity, engagement and social relationships. Resiliency in response to traumatic events can be facilitated by enhancing positive beliefs and attitudes and supporting creative processes (Ahmed 2007). Five themes of resiliency are used to conceptually frame the Ocean Therapy across the 8 week course;



1. **Role Identity.** Many veterans have reported finding that their military service, skills, or leadership positions do not necessarily translate into civilian life, which can lead to frustration and a diminished sense of purpose. The content of this module is designed to guide participants in identifying their own positive traits and reflecting on the ways in which these traits are strengthened while learning to surf.
2. **Leadership and Trust.** To address this theme, participants make connections between the leadership skills learned in military training and how they can use those skills in civilian life. Participants also consider how these same skills are manifest in learning to surf (e.g., how their instructors led in the water, how trust was built with their instructor).
3. **Community Building.** The analogy of the “surfing family” is used to explore ways to build community or “brotherhood” (an important concept in military culture) among civilians. For example, participants reflect on the friendships made while surfing and the way their sense of community strengthened over the 8 weeks. Participants also reflect on lessons learned in surfing etiquette and how aspects of surf culture facilitate communication skills such as self-advocacy and conflict resolution.
4. **Problem Solving.** Many veterans have reported difficulty navigating what they perceive to be the less disciplined nature of civilian life in contrast with the order and stability to which they were accustomed in the military. In addressing this theme, participants are assisted to identify the particular approaches to problem solving they used during the surfing lesson and how those skills can also be used in negotiating daily life challenges. Working with their surf instructor to stay calm in a novel environment is an example of a tangible problem-solving skill applicable to assuming the role of college student or new employee.
5. **Transition.** In the last session, participants discuss their surfing progress achieved throughout the eight sessions and describe the ways they have begun to use the resiliency themes in their daily lives.

#### Key Process Elements:

Experience gained in engaging many veterans with surfing has indicated that four key process elements may enhance the therapeutic experience of this occupational therapy intervention by connecting participants’ surfing experiences to their previous military identity and current challenges:

1. **Relating Surfing Culture to Military Culture** - Concepts used to describe military culture include masculinity, attention to the physical body, discipline, adrenaline, and a mission-centred brotherhood (Greene, Buckman, Dandeker, & Greenberg, 2010). Returning veterans may have difficulty finding a similar culture in civilian life. The surfing culture is defined by many of the same dynamics as military culture: It is a male-dominated sport in which fitness is required to manage in vigorous ocean conditions, and the “mission” of riding a wave can be an intense challenge pairing one’s actions with an unpredictable environment (Fuchs & Schomer, 2007). At its core, surfing is a sport associated with feeling a “rush” or adrenaline surge by dropping down the face of the wave (Diehm & Armatas, 2004). As a veteran participant commented, “In combat, you wait and you wait, and then you engage in an intense adrenaline rush fighting for your life. In surfing, you wait and wait; then you engage in a natural adrenaline rush riding a wave.” Both surfing and military cultures have created specific languages that have many similarities. Surfers use various terms to define the intense and uncontrollable experiences of the sport, including “wiping out,”





“blown up,” “demo’d” (demolished), “feeling stoked” and “what a rush.” Military personnel use similar phrases to describe the violent, uncontrolled experience of combat.

2. **Creating a New Kind of Brotherhood:** We ensure that we integrate surf instructors and veterans into the program. The designated surf instructors have an extensive background in surfing, surfing instruction, and ocean safety. The Volunteers come from a variety of professions, social and ethnic backgrounds, and military service appointments. Both program participants and surf instructors have reported developing a sense of kinship or brotherhood with one another over the course of the sessions. Trust is built in the water, where participants rely on the surf instructor to support their skill acquisition and safety in a novel and variable environment. Trust is simultaneously built among participants when they begin to support one another both in the water and on the beach; some eventually make plans to surf together outside of the program. As a sense of belonging or community develops, participants identify with one another and with the sport.
3. **Storytelling and Storymaking:** Making sense of experiences in ways that create connections with others. Surf instructors have described the emergence of storytelling in the water as veterans begin to recount aspects of their injury and service in the military. This concept of storytelling is common in surf culture; surfers often spend time in the line-up waiting for waves, “talking story” about past surf adventures, or discussing personal issues at home or at work (Ford & Brown, 2006). Veterans have reported a similar experience while on deployment, during which much of their time is spent waiting or recovering from combat, and storytelling emerges as a way to process traumatic events (Adler, Castro, & McGurk, 2009). The use of narrative as a therapeutic tool in processing traumatic events is well documented; narrative functions to re-create a new life history or build an understanding and acceptance of illness or injury (Carless & Douglas, 2008; Mattingly, 1998). In one discussion session, a veteran shared, “I’ve never shared this openly, but my drinking is affecting my daily life. I don’t go outside. Now I look forward to surfing.” During the program, storytelling merges into storymaking (Clark et al., 1996), in which participants, veterans and surf instructors extend their life stories by “riding waves” in the present, providing the content for future narratives.
4. **Re-framing the Mission:** Promoting competence and self-efficacy. Veterans, who are trained to be effective in an environment in which actions are guided by orders and interactions are governed by rank, may experience disrupted self-efficacy when faced with unstructured and unpredictable civilian environments (Pietrzak et al., 2009). For example, when enrolling in a class at college, directions or procedures may be unclear; the order of actions may not be clearly defined; and the behaviours of other students and staff may appear erratic. Individuals with a high sense of self-efficacy believe in their capability to successfully perform the tasks required to accomplish life goals (Benight & Bandura, 2004). In acquiring surfing skills and witnessing their personal achievement in a novel but supportive environment, program participants are able to renew their belief in their ability to achieve goals and obtain a productive role in civilian life (Kielhofner, 2008). With direction from the Staff and Volunteers, the intervention may support self-efficacy by creating opportunities for autonomy and self-reflection and by fostering trust between participants and instructors. One veteran stated, “I didn’t think I would stand up [on the board], and I did. I wonder what else I can do!”



## Ocean Therapy Session Structure:

The program comprises eight 3-hour sessions occurring weekly for 8 consecutive weeks. The sessions combine the active experience of surfing with focused group-processing and collaborative social participation among civilian volunteers and fellow veterans. Each group consists of a maximum of 10 participants, who are supported throughout by the qualified and SurfingGB registered Surf Instructor and the volunteers. All group members, including participants, volunteers, and staff, engage in the discussions to enhance group partnership and trust, key elements that support the success of the surf lesson and foster transition skills.

| SURF ACTION 8 WEEK OCEAN THERAPY COURSE STRUCTURE AND CONTENT |  |                              |                                  |                               |                    |                      |                                |  |
|---|--|------------------------------|----------------------------------|-------------------------------|--------------------|----------------------|--------------------------------|--|
| Session   | One  | Two                          | Three                            | Four                          | Five               | Six                  | Seven                          | Eight  |
| Surfing Theme   | Surf Safety, Parts of the Board  | Paddling Out and Standing Up | The importance of Wave Selection | Ocean Currents and Conditions | Surfing Etiquette  | Turning on the Board | Improve your Surfing Technique | Improve your Surfing Technique                   |
| Resiliency Theme  | Intro to Surf Action and the course  | Trauma and the brain         | Role Identity                    | Leadership and Trust          | Community Building | Problem Solving      | Transition                     | Do you feel different now compared to the start? |
| Key Process Elements  |  The elements evolve and intertwine across each session of the Course<br>“Adrenalin-Rush” “A New Kind of Brotherhood” “Story-Telling and Story-Making” “Reframing the Mission”   |                              |                                  |                               |                    |                      |                                |  |
| WEMWBS Monitoring   | ✓  |                              |                                  | ✓                             |                    |                      |                                | ✓  |
| Notes   | Each session is broken down into:<br>A 30 minute Presentation – Setting the framework and Resiliency theme for the week and addresses pragmatic concerns such as the schedule for the day, safety information and introductions.<br>A 15 minute Stretching and Warm Up Session preparing the body for the physical demands of surfing.<br>A 20 minute on-beach instruction and practice session on the surfing theme of the day (Each of the techniques required to successfully paddle out, stand up, and ride a wave in are taught in the first lesson but are specifically strengthened and developed across the eight sessions).<br>A 90 minute Surf Lesson supported by the Instructor, volunteers and staff.<br>A 35 minute Focused Group Session in which participants share the sensations and emotions evoked by the experience of surfing and describe how this experience relates to the resiliency theme being addressed during that particular session. Consecutively, surf instructors reinforce participant experiences by providing candid observations of the participants’ accomplishments and challenges during the surf lesson. Participants then identify a surfing skill they can improve on for |                              |                                  |                               |                    |                      |                                |  |



|  |  |
|--|--|
|  | <p>the next session. Over a cup of tea and some refreshments the group reflect on how the process of learning new surfing skills and experiences while interacting with other veterans and civilians in a somewhat unpredictable environment can be applied to their current life situations.</p> <p>All wetsuits, boards and other equipment are provided by Surf Action but if participants wish to use their own it is generally allowed provided it is all in good condition. All participants need to provide their own towels etc.</p> <p>Warwick Edinburgh Mental Wellbeing Scale (WEMWBS) is a positively worded 14 area measure developed by Warwick and Edinburgh Universities in 2006 in conjunction with NHS Scotland, measuring emotional and psychological wellbeing.</p> <p>The Surf Instructor is Emergency 1<sup>st</sup> Aid trained and a 1<sup>st</sup> Aid Kit is available at all times.</p> <p>Participants with any specific medical conditions such as asthma which may impact on their involvement must make sure that the Surf Action staff and Surf Instructor are informed.</p> <p>All activities and venues are fully risk assessed.</p> |
|--|--|

Although primarily designed for serving military and veterans the Surf Action Ocean Therapy Course easily translates to other uniformed services such as the Blue Light Emergency Services which also have a rank structure, valued ethos, sense of identity and strong workforce camaraderie and which work in a stressful environment.

#### The Physiological Benefits of Ocean Therapy

- Thomson Koon, J. Boddy, K. Stein, K. Whear, R. Barton, J. and Depledge, M.H. 2011. Does Participating in Physical Activity in Outdoor Natural Environments Have a Greater Effect on Physical and Mental Well-being than Physical Activity Indoors? A Systematic Review. Environmental Science and Technology DOI: 10.1021/es102947t
- HM Government "No Health without Mental Health", A Cross Government Mental Health Outcomes Strategy for people of all ages. (2011)
- MIND Report "Ecotherapy for Mental Wellbeing, Resilience and Recovery" (2013) (endorsed by Public Health England)
- House of Commons Health Select Committee Report "Impact of Physical Activity on Diet and Health" (March 2015) (The Chair of the Committee, said "The extraordinary benefits of exercise in improving physical and mental health should be made clear and accessible to everyone, whatever their current level of fitness. The committee calls on the NHS, Local Authorities and the government to work together to prioritise prevention and public health and we have set out achievable recommendations for action which could help to transform people's lives and wellbeing.")



There is overwhelming scientific evidence that being physically active leads to a healthier and happier life. Taking care of our body and getting fit can also boost self-esteem and self-confidence. The 'Blue Gym' is the concept of using our stunning natural ocean, coastal and beach environments as a resource for pursuing human health and wellbeing through surfing and other strenuous water based activities.

Surf Action's Ocean Therapy Course uses the concept of the 'Blue Gym' and offers the opportunity to those who engage to experience the outdoor classroom environment and an exhilarating physical, emotional and social experience which can act as the foundation for improvement in health and wellbeing.

- Taking exercise, especially vigorous exercise like surfing, in good natural light has long been known to be beneficial. When we exercise, hormones called ENDORPHINS are released by the PITUITARY GLAND, creating a sense of well-being.
- Exercise also increases the flow of oxygen throughout the body, stimulates the nervous system and affects levels of brain chemicals such as SEROTONIN which in turn relieve tension, induce calm and make it easier to handle anxiety and stress. SEROTONIN is a neurotransmitter linked to feelings of well-being and levels of it are artificially raised by some anti-depressants. Indeed research suggests that the benefits of regular exercise can be very powerful and comparable to those of an anti-depressant for mild to moderate depression.
- MELATONIN is a hormone closely associated with regulating our sleep. In prescribed form it is used as a sleeping aid. When dusk falls, SEROTONIN naturally converts into MELATONIN, allowing us to drop off to sleep more easily. If we have built up a good supply of SEROTONIN during daylight hours by taking vigorous exercise such as surfing, this conversion can take place more efficiently.
- PTSD is all about the fight/flight response and high states of emotional arousal. When our body prepares for fight or flight or is in a high state of emotional arousal it is preparing for vigorous physical activity and a whole host of stress-related hormones like ADRENALIN and CORTISOL are produced. The constant high arousal that is a symptom of PTSD and the unpleasant symptoms of extreme anxiety and panic attacks are caused when hormones such as ADRENALIN and CORTISOL are not used up by fighting or fleeing. Vigorous physical activity like surfing uses up the ADRENALIN and CORTISOL thus allowing the system to calm down.
- Surfing is a very social activity and laughter boosts the immune system by decreasing stress hormones and speeding up the rate of flow through the lymphatic system by up to a factor of 15 thus increasing immune cell production and infection fighting antibodies. Like strenuous exercise, laughter triggers the release of endorphins, the body's natural feel-good chemicals. The endorphins can also temporarily relieve pain.



## **ADAPTATION OF OCEAN THERAPY**

All the basics of the Ocean Therapy course should remain relevant beyond the armed forces and blue light services communities. Surf Action had already started to adapt it for use by children from the armed forces and blue-light services communities by providing individual support in the water for each child, preferably from one or both of their parents, to help build confidence. By adding extra fun challenges and games in the water we hoped that it would have similar beneficial effects on the children as well as their parents. When not in the water with the children, the parents would also have the opportunity to talk confidentially either singly and/or together with an Occupational Therapist/Counsellor or to other parents from the wider community for a couple of hours and to discuss a wide range of common issues etc. in a very welcoming atmosphere and environment. This was already demonstrating some excellent outcomes so its use in the wider community seemed appropriate.

All equipment such as wetsuits, boots, gloves and surf boards were provided by Surf Action. Fully trained Surf Action surf instructors and lifeguards were in attendance at all times.

### **Project Format**

Initially the intention was to run a series of 8 back to back 8 week (1/2 a day/week for 8 weeks) Ocean Therapy courses, 4 at Newquay and 4 at Praa Sands with 10 children per course, aged between 7 and 16, 80 children in total. Some service users however asked if there could be a wider range of watersports included such as kayaking etc. In response to this we replaced 3 of the surf courses with 2 back to back 8 week British Canoe Union Paddle Power Kayaking courses and 2 back to back 8 week RYA stage 1 Windsurfing/Paddleboarding courses at Stithians Lake (Southwest Lakes Trust). These courses could accommodate 8 persons per course. The parents/carers of were encouraged throughout to participate in every course with their child/children. Those who did not go into the water with their children were asked to remain on site and thus had the opportunity to socialise, chat and network with other participants.

## **4. Evaluation Measures**

An important part of the project was evaluating whether the sessions had a positive effect on the participants.

Psychological well-being is now largely accepted as covering two perspectives: (1) the subjective experience of happiness (affect) and life satisfaction (the hedonic perspective); and (2) positive psychological functioning, good relationships with others and self realization (the eudaimonic perspective). The latter includes the capacity for self development, positive relations with others, autonomy, self acceptance and competence. Thus we wanted to use an easy but psychometrically robust, validated wellbeing scale which would reflect both the hedonic and eudaimonic perspective.

Our preference was for the Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS) with its respondent 1 – 5 Likert Scale.

The Warwick-Edinburgh Mental Well-being Scale was funded by the Scottish Government National Programme for Improving Mental Health and Well-being, commissioned by NHS Health Scotland,



developed by the University of Warwick and the University of Edinburgh, and is jointly owned by NHS Health Scotland, the University of Warwick and the University of Edinburgh.

It is a positively worded scale measuring emotional and psychological wellbeing, validated with children aged 8 upwards.

We asked the children to complete a simple questionnaire that used this scale to measure their self-esteem, self-confidence, relationships and achievements.

The WEMWBS questionnaire consists of 14 positively worded statements:

- |   |  |
|---|--|
| 1. I've been feeling optimistic about the future  | 8. I've been feeling good about myself                 |
| 2. I've been feeling useful                       | 9. I've been feeling close to other people             |
| 3. I've been feeling relaxed                      | 10. I've been feeling confident                        |
| 4. I feel been feeling interested in other people | 11. I've been able to make up my own mind about things |
| 5. I've had energy to spare                       | 12. I've been feeling loved                            |
| 6. I've been dealing with problems well           | 13. I've been interested in new things                 |
| 7. I've been thinking clearly                     | 14. I've been feeling cheerful                         |

There were 5 possible responses to each statement:

- |   |  |
|---|--|
| <ul style="list-style-type: none"><li>• All of the time (scoring 5 points)</li><li>• Often (4 points)</li></ul> | <ul style="list-style-type: none"><li>• Some of the time (3 points)</li><li>• Rarely (2 points)</li><li>• Not at all (1 point)</li></ul> |
|---|--|

**The minimum score possible on each form was 14 (a score of 1, meaning 'not at all', for each of the 14 questions) and the maximum score possible was 70 (a score of 5, meaning 'all of the time', for each of the 14 questions).** Volunteers and parents were also on hand to help, explain and contextualise, but not prompt them during the form filling if required.

The WEMWBS form was completed at weeks 1, 4 and 8 during each course. Success was determined on measurable self-reported improvements in mental health and self-confidence, but also included qualitative feedback e.g. enjoyment of learning a new skill, meeting new people and being part of a community and improved family relationships. Any participant who was absent at week 1 or failed to complete the week 1 WEMBWS report was asked to repeat it at week 2 so that good base-line data was achieved. The week 4 WEMWBS reporting score was used if a participant missed the final reporting cycle at week 8 and thus it gave us a sufficiently robust intervention data set. Qualitative data was also collected from the adults by way of conversations and social interactions. At the same time Surf Action was able to gain a good awareness of current and looming problems amongst the families/communities.

Gender based means and group means for each of the 14 questions were then calculated (falling between 1 and 5) and the data analysed. By virtue of the questions being positively worded the lower the WEMWBS score the more stressors are indicated in the participant's life. Means and standard deviations were extensively calculated for each individual, gender and the overall group so that progress could be



tracked. An improvement in wellbeing would be indicated if there was an increase in the mean at the end of each course and a narrowing of the standard deviation thus indicating more consistent grouping around the improved mean. This could then be validly interpreted as an improvement in wellbeing. Before and after total WEMWBS scores were also calculated for each individual, gender and population. By knowing the background of all participants we could eliminate population bias at the outset.







## Results and Findings

### 1. Attendance

| Covenant Project: Youngsters Attendance |     |
|---|-----|
| 46 Boys                                 | 88% |
| 32 Girls                                | 87% |
| 78 Total                                | 88% |

Figure 3

The overall attendance figures were very high and this was indicative of how enjoyable the participants found their course. Considering that courses were run through the late spring, summer and then well into the autumn with the attendant common problems such as bad weather, illness, school commitments and family holidays etc, this was most gratifying.



## 2. Full Data Set;

### a) Boys

| Participants |     | Initial WEMWBS Scores                         |                          |                           |  |                          |                                      |                            |                                     |   |                             |   |                         |                                    |                            |                            |                           |                            | Intervention WEMWBS Scores |   |                          |                           |  |                          |                                      |                            |                                     |   |                             |   |                         |                                    |                            |                                 |                                |                                 |                       |      |      |
|--------------|-----|---|--------------------------|---------------------------|--|--------------------------|--------------------------------------|----------------------------|-------------------------------------|---|-----------------------------|---|-------------------------|------------------------------------|----------------------------|----------------------------|---------------------------|----------------------------|----------------------------|---|--------------------------|---------------------------|--|--------------------------|--------------------------------------|----------------------------|-------------------------------------|---|-----------------------------|---|-------------------------|------------------------------------|----------------------------|---------------------------------|--------------------------------|---------------------------------|-----------------------|------|------|
| Gender       | Age | I've been feeling optimistic about the future | I've been feeling useful | I've been feeling relaxed | I've been feeling interested in other people | I've had energy to spare | I've been dealing with problems well | I've been thinking clearly | I've been feeling good about myself | I've been feeling close to other people | I've been feeling confident | I've been able to make up my own minds about things | I've been feeling loved | I've been interested in new things | I've been feeling cheerful | Total Initial WEMWBS Score | Initial Mean WEMWBS Score | Initial Standard Deviation | Initial Variance           | I've been feeling optimistic about the future | I've been feeling useful | I've been feeling relaxed | I've been feeling interested in other people | I've had energy to spare | I've been dealing with problems well | I've been thinking clearly | I've been feeling good about myself | I've been feeling close to other people | I've been feeling confident | I've been able to make up my own minds about things | I've been feeling loved | I've been interested in new things | I've been feeling cheerful | Total Intervention WEMWBS Score | Mean Intervention WEMWBS Score | Intervention Standard Deviation | Intervention Variance |      |      |
|              |     |   |                          |                           |  |                          |                                      |                            |                                     |   |                             |   |                         |                                    |                            |                            |                           |                            |                            |   |                          |                           |  |                          |                                      |                            |                                     |   |                             |   |                         |                                    |                            |                                 |                                |                                 |                       |      |      |
| 46 Boys      | 13  | 2   | 3                        | 3                         | 2  | 3                        | 3                                    | 3                          | 3                                   | 3                                       | 4                           | 3   | 4                       | 2                                  | 4                          | 42                         | 3.00                      | 0.68                       | 0.46                       | 3   | 3                        | 3                         | 3  | 3                        | 3                                    | 3                          | 4                                   | 4                                       | 5                           | 3   | 5                       | 4                                  | 4                          | 50                              | 3.57                           | 0.76                            | 0.57                  |      |      |
|              | 9   | 5   | 4                        | 5                         | 5  | 5                        | 4                                    | 4                          | 5                                   | 5                                       | 3                           | 4   | 5                       | 5                                  | 5                          | 64                         | 4.57                      | 0.65                       | 0.42                       | 4   | 4                        | 4                         | 5  | 4                        | 4                                    | 5                          | 5                                   | 5                                       | 5                           | 5   | 5                       | 5                                  | 5                          | 65                              | 4.64                           | 0.50                            | 0.25                  |      |      |
|              | 11  | 3   | 4                        | 4                         | 3  | 4                        | 3                                    | 3                          | 4                                   | 4                                       | 5                           | 4   | 5                       | 5                                  | 5                          | 56                         | 4.00                      | 0.78                       | 0.62                       | 4   | 5                        | 3                         | 3  | 2                        | 4                                    | 4                          | 5                                   | 5                                       | 5                           | 5   | 5                       | 5                                  | 5                          | 59                              | 4.21                           | 0.97                            | 0.95                  |      |      |
|              | 14  | 3   | 4                        | 4                         | 3  | 4                        | 3                                    | 4                          | 4                                   | 4                                       | 4                           | 4   | 4                       | 3                                  | 4                          | 52                         | 3.71                      | 0.47                       | 0.22                       | 3   | 4                        | 4                         | 3  | 3                        | 4                                    | 4                          | 4                                   | 3                                       | 4                           | 4   | 4                       | 3                                  | 4                          | 51                              | 3.64                           | 0.50                            | 0.25                  |      |      |
|              | 9   | 4   | 5                        | 3                         | 4  | 2                        | 4                                    | 3                          | 5                                   | 5                                       | 4                           | 4   | 5                       | 4                                  | 5                          | 57                         | 4.07                      | 0.92                       | 0.84                       | 4   | 4                        | 5                         | 4  | 4                        | 4                                    | 4                          | 4                                   | 4                                       | 4                           | 4   | 4                       | 5                                  | 5                          | 60                              | 4.29                           | 0.47                            | 0.22                  |      |      |
|              | 11  | 3   | 3                        | 4                         | 3  | 5                        | 3                                    | 4                          | 3                                   | 2                                       | 4                           | 4   | 3                       | 4                                  | 4                          | 49                         | 3.50                      | 0.76                       | 0.58                       | 4   | 3                        | 4                         | 5  | 4                        | 4                                    | 5                          | 5                                   | 5                                       | 5                           | 5   | 4                       | 3                                  | 4                          | 4                               | 59                             | 4.21                            | 0.70                  | 0.49 |      |
|              | 12  | 3   | 4                        | 2                         | 5  | 5                        | 3                                    | 3                          | 5                                   | 5                                       | 4                           | 3   | 5                       | 3                                  | 4                          | 54                         | 3.86                      | 1.03                       | 1.05                       | 3   | 4                        | 4                         | 3  | 5                        | 4                                    | 3                          | 4                                   | 5                                       | 4                           | 4   | 5                       | 3                                  | 4                          | 55                              | 3.93                           | 0.73                            | 0.53                  |      |      |
|              | 15  | 3   | 3                        | 4                         | 3  | 5                        | 3                                    | 3                          | 4                                   | 4                                       | 3                           | 4   | 5                       | 3                                  | 4                          | 51                         | 3.64                      | 0.74                       | 0.55                       | 3   | 3                        | 4                         | 5  | 3                        | 4                                    | 3                          | 4                                   | 4                                       | 4                           | 4   | 3                       | 5                                  | 3                          | 4                               | 52                             | 3.71                            | 0.73                  | 0.53 |      |
|              | 9   | 4   | 3                        | 5                         | 3  | 4                        | 3                                    | 5                          | 5                                   | 1                                       | 3                           | 4   | 5                       | 5                                  | 5                          | 55                         | 3.93                      | 1.21                       | 1.46                       | 5   | 5                        | 3                         | 4  | 2                        | 3                                    | 5                          | 5                                   | 4                                       | 5                           | 5   | 5                       | 4                                  | 5                          | 5                               | 60                             | 4.29                            | 0.99                  | 0.99 |      |
|              | 11  | 4   | 4                        | 3                         | 4  | 3                        | 3                                    | 4                          | 4                                   | 4                                       | 3                           | 4   | 4                       | 4                                  | 4                          | 52                         | 3.71                      | 0.47                       | 0.22                       | 5   | 5                        | 5                         | 5  | 5                        | 5                                    | 4                          | 5                                   | 5                                       | 5                           | 5   | 5                       | 5                                  | 5                          | 5                               | 69                             | 4.93                            | 0.27                  | 0.07 |      |
|              | 14  | 2   | 4                        | 4                         | 2  | 3                        | 5                                    | 4                          | 4                                   | 3                                       | 5                           | 4   | 1                       | 4                                  | 3                          | 48                         | 3.43                      | 1.16                       | 1.34                       | 5   | 5                        | 5                         | 5  | 5                        | 5                                    | 4                          | 5                                   | 5                                       | 4                           | 5   | 4                       | 4                                  | 5                          | 5                               | 66                             | 4.71                            | 0.47                  | 0.22 |      |
|              | 8   | 3   | 4                        | 4                         | 3  | 3                        | 4                                    | 4                          | 3                                   | 2                                       | 3                           | 4   | 4                       | 3                                  | 4                          | 48                         | 3.43                      | 0.65                       | 0.42                       | 4   | 5                        | 5                         | 5  | 5                        | 4                                    | 4                          | 4                                   | 5                                       | 5                           | 5   | 5                       | 5                                  | 5                          | 5                               | 66                             | 4.71                            | 0.47                  | 0.22 |      |
|              | 8   | 2   | 4                        | 5                         | 4  | 4                        | 3                                    | 5                          | 4                                   | 5                                       | 5                           | 4   | 5                       | 4                                  | 2                          | 56                         | 4.00                      | 1.04                       | 1.08                       | 5   | 4                        | 5                         | 4  | 5                        | 4                                    | 4                          | 5                                   | 4                                       | 5                           | 5   | 5                       | 4                                  | 4                          | 5                               | 63                             | 4.50                            | 0.52                  | 0.27 |      |
|              | 14  | 3   | 2                        | 3                         | 2  | 2                        | 2                                    | 2                          | 2                                   | 3                                       | 3                           | 3   | 3                       | 3                                  | 2                          | 35                         | 2.50                      | 0.52                       | 0.27                       | 4   | 3                        | 4                         | 3  | 4                        | 3                                    | 3                          | 4                                   | 3                                       | 3                           | 3   | 3                       | 3                                  | 4                          | 3                               | 4                              | 48                              | 3.43                  | 0.51 | 0.26 |
|              | 13  | 3   | 2                        | 2                         | 2  | 2                        | 2                                    | 2                          | 2                                   | 2                                       | 2                           | 2   | 2                       | 2                                  | 2                          | 30                         | 2.14                      | 0.36                       | 0.13                       | 3   | 3                        | 3                         | 3  | 4                        | 3                                    | 3                          | 3                                   | 3                                       | 3                           | 3   | 3                       | 3                                  | 3                          | 3                               | 43                             | 3.07                            | 0.27                  | 0.07 |      |
|              | 12  | 4   | 4                        | 3                         | 3  | 5                        | 3                                    | 3                          | 4                                   | 3                                       | 4                           | 4   | 5                       | 4                                  | 3                          | 52                         | 3.71                      | 0.73                       | 0.53                       | 4   | 5                        | 4                         | 4  | 5                        | 5                                    | 4                          | 5                                   | 5                                       | 5                           | 5   | 5                       | 4                                  | 5                          | 5                               | 64                             | 4.57                            | 0.51                  | 0.26 |      |
|              | 12  | 4   | 4                        | 4                         | 3  | 5                        | 4                                    | 4                          | 4                                   | 4                                       | 3                           | 4   | 4                       | 2                                  | 5                          | 3                          | 53                        | 3.79                       | 0.80                       | 0.64  | 4                        | 5                         | 5  | 4                        | 5                                    | 4                          | 4                                   | 4                                       | 4                           | 4   | 4                       | 5                                  | 4                          | 5                               | 5                              | 62                              | 4.43                  | 0.51 | 0.26 |
|              | 11  | 3   | 3                        | 2                         | 3  | 4                        | 3                                    | 3                          | 2                                   | 3                                       | 3                           | 3   | 4                       | 3                                  | 3                          | 42                         | 3.00                      | 0.55                       | 0.31                       | 3   | 4                        | 3                         | 3  | 4                        | 4                                    | 4                          | 3                                   | 4                                       | 3                           | 4   | 3                       | 4                                  | 4                          | 51                              | 3.64                           | 0.50                            | 0.25                  |      |      |
|              | 7   | 3   | 2                        | 3                         | 3  | 3                        | 2                                    | 2                          | 2                                   | 2                                       | 2                           | 2   | 3                       | 2                                  | 2                          | 33                         | 2.36                      | 0.50                       | 0.25                       | 3   | 2                        | 3                         | 2  | 4                        | 3                                    | 3                          | 3                                   | 3                                       | 3                           | 2   | 3                       | 3                                  | 3                          | 3                               | 40                             | 2.86                            | 0.53                  | 0.29 |      |
|              | 17  | 4   | 3                        | 3                         | 4  | 2                        | 4                                    | 4                          | 5                                   | 4                                       | 5                           | 5   | 5                       | 5                                  | 5                          | 4                          | 57                        | 4.07                       | 0.92                       | 0.84  | 4                        | 4                         | 4  | 4                        | 3                                    | 4                          | 4                                   | 5                                       | 4                           | 5   | 5                       | 4                                  | 5                          | 4                               | 59                             | 4.21                            | 0.58                  | 0.34 |      |
|              | 12  | 4   | 3                        | 4                         | 4  | 3                        | 3                                    | 4                          | 4                                   | 4                                       | 3                           | 4   | 4                       | 4                                  | 3                          | 3                          | 50                        | 3.57                       | 0.51                       | 0.26  | 4                        | 5                         | 5  | 4                        | 5                                    | 4                          | 4                                   | 5                                       | 4                           | 5   | 5                       | 4                                  | 4                          | 4                               | 62                             | 4.43                            | 0.51                  | 0.26 |      |
|              | 7   | 5   | 5                        | 4                         | 5  | 5                        | 4                                    | 5                          | 5                                   | 5                                       | 5                           | 5   | 5                       | 5                                  | 5                          | 5                          | 68                        | 4.86                       | 0.36                       | 0.13  | 5                        | 5                         | 3  | 5                        | 5                                    | 5                          | 5                                   | 5                                       | 5                           | 5   | 5                       | 5                                  | 5                          | 5                               | 5                              | 68                              | 4.86                  | 0.53 | 0.29 |
|              | 11  | 5   | 3                        | 4                         | 3  | 5                        | 4                                    | 4                          | 5                                   | 4                                       | 5                           | 4   | 5                       | 4                                  | 5                          | 60                         | 4.29                      | 0.73                       | 0.53                       | 4   | 5                        | 5                         | 4  | 5                        | 5                                    | 5                          | 4                                   | 5                                       | 5                           | 5   | 5                       | 5                                  | 5                          | 5                               | 67                             | 4.79                            | 0.43                  | 0.18 |      |
|              | 9   | 5   | 3                        | 4                         | 3  | 3                        | 4                                    | 4                          | 5                                   | 4                                       | 5                           | 5   | 5                       | 4                                  | 4                          | 58                         | 4.14                      | 0.77                       | 0.59                       | 5   | 5                        | 5                         | 5  | 5                        | 5                                    | 4                          | 5                                   | 5                                       | 5                           | 5   | 5                       | 5                                  | 5                          | 5                               | 68                             | 4.86                            | 0.36                  | 0.13 |      |
|              | 9   | 4   | 5                        | 3                         | 4  | 2                        | 4                                    | 3                          | 5                                   | 5                                       | 4                           | 4   | 5                       | 4                                  | 5                          | 57                         | 4.07                      | 0.92                       | 0.84                       | 5   | 5                        | 3                         | 4  | 2                        | 3                                    | 5                          | 5                                   | 4                                       | 5                           | 5   | 4                       | 5                                  | 5                          | 5                               | 60                             | 4.29                            | 0.99                  | 0.99 |      |
|              | 11  | 3   | 3                        | 4                         | 3  | 5                        | 3                                    | 4                          | 3                                   | 2                                       | 4                           | 4   | 3                       | 4                                  | 4                          | 49                         | 3.50                      | 0.76                       | 0.58                       | 5   | 5                        | 5                         | 5  | 5                        | 5                                    | 4                          | 5                                   | 5                                       | 5                           | 5   | 5                       | 5                                  | 5                          | 5                               | 69                             | 4.93                            | 0.27                  | 0.07 |      |
|              | 12  | 3   | 4                        | 2                         | 5  | 5                        | 3                                    | 3                          | 5                                   | 5                                       | 4                           | 3   | 5                       | 3                                  | 4                          | 54                         | 3.86                      | 1.03                       | 1.05                       | 5   | 5                        | 5                         | 5  | 5                        | 4                                    | 5                          | 5                                   | 4                                       | 5                           | 5   | 4                       | 5                                  | 5                          | 5                               | 66                             | 4.71                            | 0.47                  | 0.22 |      |
|              | 8   | 3   | 3                        | 3                         | 4  | 3                        | 5                                    | 5                          | 4                                   | 5                                       | 3                           | 5   | 5                       | 4                                  | 4                          | 56                         | 4.00                      | 0.88                       | 0.77                       | 4   | 4                        | 4                         | 5  | 4                        | 5                                    | 5                          | 5                                   | 4                                       | 5                           | 4   | 5                       | 4                                  | 4                          | 62                              | 4.43                           | 0.51                            | 0.26                  |      |      |
|              | 12  | 5   | 4                        | 5                         | 4  | 5                        | 5                                    | 5                          | 5                                   | 5                                       | 4                           | 5   | 5                       | 5                                  | 3                          | 5                          | 65                        | 4.64                       | 0.63                       | 0.40  | 5                        | 5                         | 5  | 3                        | 3                                    | 5                          | 5                                   | 5                                       | 5                           | 5   | 5                       | 5                                  | 5                          | 5                               | 66                             | 4.71                            | 0.73                  | 0.53 |      |
|              | 9   | 3   | 4                        | 2                         | 4  | 4                        | 2                                    | 3                          | 3                                   | 5                                       | 4                           | 3   | 5                       | 4                                  | 4                          | 50                         | 3.57                      | 0.94                       | 0.88                       | 4   | 5                        | 4                         | 4  | 5                        | 4                                    | 3                          | 4                                   | 5                                       | 5                           | 4   | 5                       | 4                                  | 5                          | 61                              | 4.36                           | 0.63                            | 0.40                  |      |      |
|              | 13  | 2   | 3                        | 3                         | 2  | 3                        | 3                                    | 3                          | 3                                   | 3                                       | 4                           | 3   | 4                       | 2                                  | 4                          | 42                         | 3.00                      | 0.68                       | 0.46                       | 3   | 3                        | 3                         | 3  | 3                        | 3                                    | 3                          | 4                                   | 4                                       | 4                           | 5   | 3                       | 5                                  | 4                          | 4                               | 50                             | 3.57                            | 0.76                  | 0.57 |      |
|              | 9   | 5   | 4                        | 5                         | 5  | 5                        | 4                                    | 4                          | 5                                   | 5                                       | 3                           | 4   | 5                       | 5                                  | 5                          | 5                          | 64                        | 4.57                       | 0.65                       | 0.42  | 4                        | 4                         | 4  | 5                        | 4                                    | 4                          | 5                                   | 5                                       | 5                           | 5   | 5                       | 5                                  | 5                          | 5                               | 65                             | 4.64                            | 0.50                  | 0.25 |      |
|              | 11  | 3   | 4                        | 4                         | 3  | 4                        | 3                                    | 3                          | 4                                   | 4                                       | 5                           | 4   | 5                       | 5                                  | 5                          | 5                          | 56                        | 4.00                       | 0.78                       | 0.62  | 4                        | 5                         | 3  | 3                        | 2                                    | 4                          | 4                                   | 5                                       | 5                           | 5   | 4                       | 5                                  | 5                          | 5                               | 59                             | 4.21                            | 0.97                  | 0.95 |      |
|              | 14  | 3   | 4                        | 4                         | 3  | 4                        | 3                                    | 4                          | 4                                   | 4                                       | 4                           | 4   | 4                       | 3                                  | 4                          | 52                         | 3.71                      | 0.47                       | 0.22                       | 3   | 4                        | 4                         | 3  | 3                        | 4                                    | 4                          | 4                                   | 3                                       | 4                           | 4   | 4                       | 3                                  | 4                          | 4                               | 51                             | 3.64                            | 0.50                  | 0.25 |      |
|              | 9   | 4   | 5                        | 3                         | 4  | 2                        | 4                                    | 3                          | 5                                   | 5                                       | 4                           | 4   | 5                       | 4                                  | 5                          | 57                         | 4.07                      | 0.92                       | 0.84                       | 4   | 4                        | 5                         | 4  | 4                        | 4                                    | 5                          | 4                                   | 4                                       | 4                           | 4   | 4                       | 4                                  | 4                          | 5                               | 60                             | 4.29                            | 0.47                  | 0.22 |      |
|              | 11  | 3   | 3                        | 4                         | 3  | 5                        | 3                                    | 4                          | 3                                   | 2                                       | 4                           | 4   | 3                       | 4                                  | 4                          | 49                         | 3.50                      | 0.76                       | 0.58                       | 4   | 3                        | 4                         | 5  | 4                        | 4                                    | 5                          | 5                                   | 5                                       | 4                           | 3   | 4                       | 4                                  | 4                          | 59                              | 4.21                           | 0.70                            | 0.49                  |      |      |
|              | 12  | 3   | 4                        | 2                         | 5  | 5                        | 3                                    | 3                          | 5                                   | 5                                       | 4                           | 3   | 5                       | 3                                  | 4                          | 54                         | 3.86                      | 1.03                       | 1.05                       | 3   | 4                        | 4                         | 3  | 5                        | 4                                    | 3                          | 4                                   | 5                                       | 4                           | 4   | 5                       | 3                                  | 4                          | 55                              | 3.93                           | 0.73                            | 0.53                  |      |      |
|              | 15  | 3   | 3                        | 4                         | 3  | 5                        | 3                                    | 3                          | 4                                   | 4                                       | 3                           | 4   | 5                       | 3                                  | 4                          | 51                         | 3.64                      | 0.74                       | 0.55                       | 3   | 3                        | 4                         | 5  | 3                        | 4                                    | 3                          | 4                                   | 4                                       | 4                           | 3   | 5                       | 3                                  | 4                          | 52                              | 3.71                           | 0.73                            | 0.53                  |      |      |
|              | 9   | 4   | 3                        | 5                         | 3  | 4                        | 3                                    | 5                          | 5                                   | 1                                       | 3                           | 4   | 5                       | 5                                  | 5                          | 5                          | 55                        | 3.93                       | 1.21                       | 1.46  | 5                        | 5                         | 3  | 4                        | 2                                    | 3                          | 5                                   | 5                                       | 4                           | 5   | 5                       | 4                                  | 5                          | 5                               | 60                             | 4.29                            | 0.99                  | 0.99 |      |
|              | 12  | 3   | 4                        | 4                         | 5  | 3                        | 4                                    | 3                          | 4                                   | 5                                       | 3                           | 3   | 4                       | 4                                  | 4                          | 53                         | 3.79                      | 0.70                       | 0.49                       | 4   | 4                        | 5                         | 5  | 5                        | 5                                    | 4                          | 5                                   | 4                                       | 5                           | 5   | 4                       | 5                                  | 5                          |                                 |                                |                                 |                       |      |      |



## b) Girls

| Participants |       | Initial WEMWBS Scores                         |                          |                           |  |                          |                                      |                            |                                     |   |                             |   |                         |                                    |                            |                            |                           |                            | Intervention WEMWBS Scores |   |                          |                           |  |                          |                                      |                            |                                     |   |                             |   |                         |                                    |                            |                                 |                                |                                 |                       |      |
|--------------|-------|---|--------------------------|---------------------------|--|--------------------------|--------------------------------------|----------------------------|-------------------------------------|---|-----------------------------|---|-------------------------|------------------------------------|----------------------------|----------------------------|---------------------------|----------------------------|----------------------------|---|--------------------------|---------------------------|--|--------------------------|--------------------------------------|----------------------------|-------------------------------------|---|-----------------------------|---|-------------------------|------------------------------------|----------------------------|---------------------------------|--------------------------------|---------------------------------|-----------------------|------|
| Gender       | Age   | I've been feeling optimistic about the future | I've been feeling useful | I've been feeling relaxed | I've been feeling interested in other people | I've had energy to spare | I've been dealing with problems well | I've been thinking clearly | I've been feeling good about myself | I've been feeling close to other people | I've been feeling confident | I've been able to make up my own minds about things | I've been feeling loved | I've been interested in new things | I've been feeling cheerful | Total Initial WEMWBS Score | Initial Mean WEMWBS Score | Initial Standard Deviation | Initial Variance           | I've been feeling optimistic about the future | I've been feeling useful | I've been feeling relaxed | I've been feeling interested in other people | I've had energy to spare | I've been dealing with problems well | I've been thinking clearly | I've been feeling good about myself | I've been feeling close to other people | I've been feeling confident | I've been able to make up my own minds about things | I've been feeling loved | I've been interested in new things | I've been feeling cheerful | Total Intervention WEMWBS Score | Mean Intervention WEMWBS Score | Intervention Standard Deviation | Intervention Variance |      |
| 32 Girls     | 12    | 3   | 4                        | 2                         | 2  | 2                        | 5                                    | 4                          | 4                                   | 3                                       | 5                           | 4   | 2                       | 4                                  | 3                          | 47                         | 3.36                      | 1.08                       | 1.17                       | 4   | 4                        | 5                         | 5  | 5                        | 5                                    | 4                          | 5                                   | 4                                       | 5                           | 5   | 4                       | 5                                  | 5                          | 65                              | 4.64                           | 0.50                            | 0.25                  |      |
|              | 12    | 4   | 3                        | 3                         | 2  | 5                        | 4                                    | 2                          | 4                                   | 2                                       | 4                           | 5   | 2                       | 2                                  | 3                          | 45                         | 3.21                      | 1.12                       | 1.26                       | 4   | 4                        | 4                         | 5  | 5                        | 4                                    | 4                          | 4                                   | 4                                       | 5                           | 5   | 5                       | 4                                  | 5                          | 62                              | 4.43                           | 0.51                            | 0.26                  |      |
|              | 12    | 5   | 4                        | 3                         | 5  | 5                        | 4                                    | 4                          | 4                                   | 4                                       | 4                           | 4   | 4                       | 5                                  | 5                          | 60                         | 4.29                      | 0.61                       | 0.37                       | 5   | 5                        | 4                         | 5  | 5                        | 4                                    | 4                          | 5                                   | 5                                       | 5                           | 5   | 5                       | 5                                  | 5                          | 67                              | 4.79                           | 0.43                            | 0.18                  |      |
|              | 12    | 3   | 4                        | 4                         | 5  | 3                        | 4                                    | 3                          | 4                                   | 5                                       | 3                           | 3   | 4                       | 4                                  | 4                          | 53                         | 3.79                      | 0.70                       | 0.49                       | 4   | 4                        | 5                         | 5  | 5                        | 4                                    | 4                          | 5                                   | 5                                       | 5                           | 5   | 5                       | 4                                  | 4                          | 64                              | 4.57                           | 0.51                            | 0.26                  |      |
|              | 13    | 2   | 2                        | 3                         | 3  | 2                        | 3                                    | 2                          | 2                                   | 3                                       | 2                           | 3   | 4                       | 3                                  | 2                          | 36                         | 2.57                      | 0.65                       | 0.42                       | 4   | 3                        | 4                         | 4  | 4                        | 4                                    | 4                          | 3                                   | 4                                       | 4                           | 4   | 3                       | 5                                  | 4                          | 54                              | 3.86                           | 0.53                            | 0.29                  |      |
|              | 12    | 2   | 3                        | 4                         | 3  | 3                        | 3                                    | 4                          | 3                                   | 3                                       | 3                           | 3   | 4                       | 4                                  | 4                          | 47                         | 3.36                      | 0.63                       | 0.40                       | 4   | 3                        | 4                         | 4  | 4                        | 4                                    | 4                          | 3                                   | 3                                       | 4                           | 4   | 4                       | 5                                  | 5                          | 55                              | 3.93                           | 0.62                            | 0.38                  |      |
|              | 8     | 2   | 4                        | 5                         | 4  | 4                        | 3                                    | 5                          | 4                                   | 5                                       | 5                           | 4   | 5                       | 4                                  | 2                          | 56                         | 4.00                      | 1.04                       | 1.08                       | 5   | 4                        | 5                         | 4  | 5                        | 4                                    | 4                          | 5                                   | 4                                       | 5                           | 5   | 4                       | 4                                  | 5                          | 63                              | 4.50                           | 0.52                            | 0.27                  |      |
|              | 10    | 5   | 4                        | 5                         | 5  | 3                        | 5                                    | 4                          | 5                                   | 5                                       | 4                           | 3   | 5                       | 5                                  | 5                          | 63                         | 4.50                      | 0.76                       | 0.58                       | 5   | 4                        | 3                         | 5  | 4                        | 5                                    | 5                          | 5                                   | 5                                       | 5                           | 5   | 5                       | 5                                  | 5                          | 66                              | 4.71                           | 0.61                            | 0.37                  |      |
|              | 9     | 5   | 4                        | 5                         | 5  | 3                        | 4                                    | 5                          | 4                                   | 5                                       | 5                           | 5   | 4                       | 5                                  | 5                          | 64                         | 4.57                      | 0.65                       | 0.42                       | 5   | 4                        | 3                         | 5  | 4                        | 5                                    | 5                          | 5                                   | 5                                       | 5                           | 5   | 5                       | 5                                  | 5                          | 66                              | 4.71                           | 0.61                            | 0.37                  |      |
|              | 8     | 4   | 3                        | 4                         | 4  | 5                        | 4                                    | 3                          | 3                                   | 4                                       | 4                           | 4   | 3                       | 4                                  | 4                          | 53                         | 3.79                      | 0.58                       | 0.34                       | 4   | 4                        | 4                         | 4  | 4                        | 5                                    | 5                          | 5                                   | 5                                       | 5                           | 5   | 4                       | 4                                  | 4                          | 5                               | 62                             | 4.43                            | 0.51                  | 0.26 |
|              | 15    | 3   | 3                        | 4                         | 3  | 3                        | 3                                    | 4                          | 4                                   | 4                                       | 4                           | 3   | 4                       | 3                                  | 4                          | 49                         | 3.50                      | 0.52                       | 0.27                       | 5   | 5                        | 4                         | 4  | 5                        | 5                                    | 5                          | 4                                   | 4                                       | 5                           | 5   | 5                       | 5                                  | 5                          | 5                               | 66                             | 4.71                            | 0.47                  | 0.22 |
|              | 9     | 4   | 3                        | 4                         | 3  | 5                        | 2                                    | 3                          | 4                                   | 3                                       | 3                           | 3   | 5                       | 4                                  | 4                          | 50                         | 3.57                      | 0.85                       | 0.73                       | 5   | 4                        | 4                         | 4  | 5                        | 5                                    | 5                          | 5                                   | 5                                       | 5                           | 4   | 5                       | 5                                  | 5                          | 66                              | 4.71                           | 0.47                            | 0.22                  |      |
|              | 11    | 4   | 5                        | 4                         | 5  | 5                        | 4                                    | 4                          | 5                                   | 4                                       | 4                           | 5   | 5                       | 4                                  | 4                          | 62                         | 4.43                      | 0.51                       | 0.26                       | 5   | 5                        | 4                         | 5  | 5                        | 5                                    | 4                          | 5                                   | 5                                       | 5                           | 5   | 5                       | 5                                  | 5                          | 5                               | 68                             | 4.86                            | 0.36                  | 0.13 |
|              | 9     | 3   | 3                        | 3                         | 3  | 3                        | 3                                    | 2                          | 3                                   | 4                                       | 4                           | 3   | 3                       | 2                                  | 3                          | 42                         | 3.00                      | 0.55                       | 0.31                       | 4   | 4                        | 4                         | 4  | 5                        | 4                                    | 5                          | 5                                   | 5                                       | 5                           | 5   | 5                       | 5                                  | 5                          | 65                              | 4.64                           | 0.50                            | 0.25                  |      |
|              | 9     | 4   | 5                        | 3                         | 4  | 2                        | 4                                    | 3                          | 5                                   | 5                                       | 4                           | 4   | 5                       | 4                                  | 5                          | 57                         | 4.07                      | 0.92                       | 0.84                       | 4   | 4                        | 5                         | 4  | 4                        | 4                                    | 5                          | 4                                   | 4                                       | 4                           | 4   | 4                       | 5                                  | 5                          | 60                              | 4.29                           | 0.47                            | 0.22                  |      |
|              | 11    | 5   | 4                        | 5                         | 3  | 5                        | 2                                    | 5                          | 5                                   | 5                                       | 5                           | 4   | 5                       | 5                                  | 4                          | 62                         | 4.43                      | 0.94                       | 0.88                       | 5   | 5                        | 5                         | 4  | 3                        | 5                                    | 5                          | 5                                   | 5                                       | 5                           | 5   | 5                       | 4                                  | 5                          | 66                              | 4.71                           | 0.61                            | 0.37                  |      |
|              | 11    | 3   | 4                        | 3                         | 3  | 2                        | 2                                    | 3                          | 3                                   | 3                                       | 4                           | 2   | 4                       | 2                                  | 4                          | 42                         | 3.00                      | 0.78                       | 0.62                       | 4   | 3                        | 2                         | 3  | 2                        | 3                                    | 3                          | 4                                   | 4                                       | 4                           | 5   | 5                       | 3                                  | 4                          | 49                              | 3.50                           | 0.94                            | 0.88                  |      |
|              | 11    | 5   | 3                        | 4                         | 3  | 5                        | 4                                    | 4                          | 5                                   | 4                                       | 5                           | 4   | 5                       | 4                                  | 5                          | 60                         | 4.29                      | 0.73                       | 0.53                       | 4   | 5                        | 5                         | 4  | 5                        | 5                                    | 5                          | 5                                   | 4                                       | 5                           | 5   | 5                       | 5                                  | 5                          | 67                              | 4.79                           | 0.43                            | 0.18                  |      |
|              | 9     | 5   | 3                        | 4                         | 3  | 3                        | 4                                    | 4                          | 5                                   | 4                                       | 5                           | 5   | 5                       | 4                                  | 4                          | 58                         | 4.14                      | 0.77                       | 0.59                       | 5   | 5                        | 5                         | 5  | 5                        | 5                                    | 4                          | 5                                   | 4                                       | 5                           | 5   | 5                       | 5                                  | 5                          | 68                              | 4.86                           | 0.36                            | 0.13                  |      |
|              | 12    | 4   | 3                        | 4                         | 5  | 5                        | 3                                    | 3                          | 4                                   | 4                                       | 4                           | 3   | 3                       | 5                                  | 5                          | 4                          | 55                        | 3.93                       | 0.83                       | 0.69  | 4                        | 4                         | 4  | 5                        | 5                                    | 4                          | 4                                   | 4                                       | 4                           | 4   | 4                       | 5                                  | 5                          | 5                               | 61                             | 4.36                            | 0.50                  | 0.25 |
|              | 9     | 4   | 3                        | 4                         | 3  | 5                        | 2                                    | 3                          | 4                                   | 3                                       | 3                           | 3   | 5                       | 4                                  | 4                          | 50                         | 3.57                      | 0.85                       | 0.73                       | 5   | 4                        | 4                         | 4  | 5                        | 5                                    | 5                          | 5                                   | 5                                       | 4                           | 5   | 5                       | 5                                  | 5                          | 66                              | 4.71                           | 0.47                            | 0.22                  |      |
|              | 11    | 4   | 5                        | 4                         | 5  | 5                        | 4                                    | 4                          | 5                                   | 4                                       | 4                           | 5   | 5                       | 4                                  | 4                          | 62                         | 4.43                      | 0.51                       | 0.26                       | 5   | 5                        | 4                         | 5  | 5                        | 5                                    | 4                          | 5                                   | 5                                       | 5                           | 5   | 5                       | 5                                  | 5                          | 68                              | 4.86                           | 0.36                            | 0.13                  |      |
|              | 9     | 3   | 3                        | 3                         | 3  | 3                        | 3                                    | 2                          | 3                                   | 4                                       | 4                           | 3   | 3                       | 2                                  | 3                          | 42                         | 3.00                      | 0.55                       | 0.31                       | 4   | 4                        | 4                         | 4  | 5                        | 4                                    | 5                          | 5                                   | 5                                       | 5                           | 5   | 5                       | 5                                  | 5                          | 65                              | 4.64                           | 0.50                            | 0.25                  |      |
|              | 11    | 5   | 4                        | 5                         | 3  | 5                        | 2                                    | 5                          | 5                                   | 5                                       | 5                           | 5   | 4                       | 5                                  | 5                          | 62                         | 4.43                      | 0.94                       | 0.88                       | 5   | 5                        | 5                         | 4  | 3                        | 5                                    | 5                          | 5                                   | 5                                       | 5                           | 5   | 5                       | 5                                  | 4                          | 5                               | 66                             | 4.71                            | 0.61                  | 0.37 |
|              | 11    | 3   | 4                        | 3                         | 3  | 2                        | 2                                    | 3                          | 3                                   | 3                                       | 4                           | 2   | 4                       | 2                                  | 4                          | 42                         | 3.00                      | 0.78                       | 0.62                       | 4   | 3                        | 2                         | 3  | 2                        | 3                                    | 3                          | 4                                   | 4                                       | 4                           | 5   | 5                       | 3                                  | 4                          | 49                              | 3.50                           | 0.94                            | 0.88                  |      |
|              | 11    | 5   | 3                        | 4                         | 3  | 5                        | 4                                    | 4                          | 5                                   | 4                                       | 5                           | 4   | 5                       | 4                                  | 5                          | 60                         | 4.29                      | 0.73                       | 0.53                       | 4   | 5                        | 5                         | 4  | 5                        | 5                                    | 5                          | 5                                   | 4                                       | 5                           | 5   | 5                       | 5                                  | 5                          | 67                              | 4.79                           | 0.43                            | 0.18                  |      |
|              | 9     | 5   | 3                        | 4                         | 3  | 3                        | 4                                    | 4                          | 5                                   | 4                                       | 5                           | 5   | 5                       | 4                                  | 4                          | 58                         | 4.14                      | 0.77                       | 0.59                       | 5   | 5                        | 5                         | 5  | 5                        | 5                                    | 4                          | 5                                   | 4                                       | 5                           | 5   | 5                       | 5                                  | 5                          | 68                              | 4.86                           | 0.36                            | 0.13                  |      |
|              | 9     | 4   | 5                        | 3                         | 4  | 2                        | 4                                    | 3                          | 5                                   | 5                                       | 4                           | 4   | 5                       | 4                                  | 5                          | 57                         | 4.07                      | 0.92                       | 0.84                       | 5   | 5                        | 3                         | 4  | 2                        | 3                                    | 5                          | 5                                   | 4                                       | 5                           | 5   | 4                       | 5                                  | 5                          | 60                              | 4.29                           | 0.99                            | 0.99                  |      |
| 11           | 3     | 3   | 4                        | 3                         | 5  | 3                        | 4                                    | 3                          | 2                                   | 4                                       | 4                           | 3   | 4                       | 4                                  | 49                         | 3.50                       | 0.76                      | 0.58                       | 5                          | 5   | 5                        | 5                         | 5  | 5                        | 4                                    | 5                          | 5                                   | 5                                       | 5                           | 5   | 5                       | 5                                  | 69                         | 4.93                            | 0.27                           | 0.07                            |                       |      |
| 12           | 3     | 4   | 2                        | 5                         | 5  | 3                        | 3                                    | 5                          | 5                                   | 4                                       | 3                           | 5   | 3                       | 4                                  | 54                         | 3.86                       | 1.03                      | 1.05                       | 5                          | 5   | 5                        | 5                         | 5  | 4                        | 5                                    | 5                          | 4                                   | 5                                       | 4                           | 4   | 5                       | 5                                  | 66                         | 4.71                            | 0.47                           | 0.22                            |                       |      |
| 15           | 3     | 3   | 4                        | 3                         | 5  | 3                        | 3                                    | 4                          | 4                                   | 3                                       | 4                           | 5   | 3                       | 4                                  | 51                         | 3.64                       | 0.74                      | 0.55                       | 4                          | 5   | 5                        | 5                         | 5  | 4                        | 4                                    | 4                          | 5                                   | 5                                       | 5                           | 5   | 5                       | 5                                  | 66                         | 4.71                            | 0.47                           | 0.22                            |                       |      |
| 9            | 4     | 3   | 5                        | 3                         | 4  | 3                        | 5                                    | 5                          | 1                                   | 3                                       | 4                           | 5   | 5                       | 5                                  | 55                         | 3.93                       | 1.21                      | 1.46                       | 4                          | 3   | 4                        | 3                         | 4  | 3                        | 3                                    | 4                          | 3                                   | 3                                       | 3                           | 3   | 4                       | 4                                  | 48                         | 3.43                            | 0.51                           | 0.26                            |                       |      |
| Averages     | 10.65 | 3.81  | 3.55                     | 3.84                      | 3.61   | 3.87                     | 3.29                                 | 3.55                       | 4.13                                | 3.87                                    | 3.97                        | 3.74  | 4.39                    | 3.77                               | 4.03                       | 53.42                      | 3.82                      | 0.77                       | 0.63                       | 4.52  | 4.29                     | 4.16                      | 4.32   | 4.35                     | 4.35                                 | 4.39                       | 4.61                                | 4.42                                    | 4.68                        | 4.74  | 4.71                    | 4.61                               | 4.84                       | 63.00                           | 4.50                           | 0.53                            | 0.30                  |      |

Figure 5



Covenant Project 2016  
A Scatter Graph showing the Initial and Intervention Total WEMWBS Scores  
for 46 Boys (1-46) and 32 Girls (47-78)

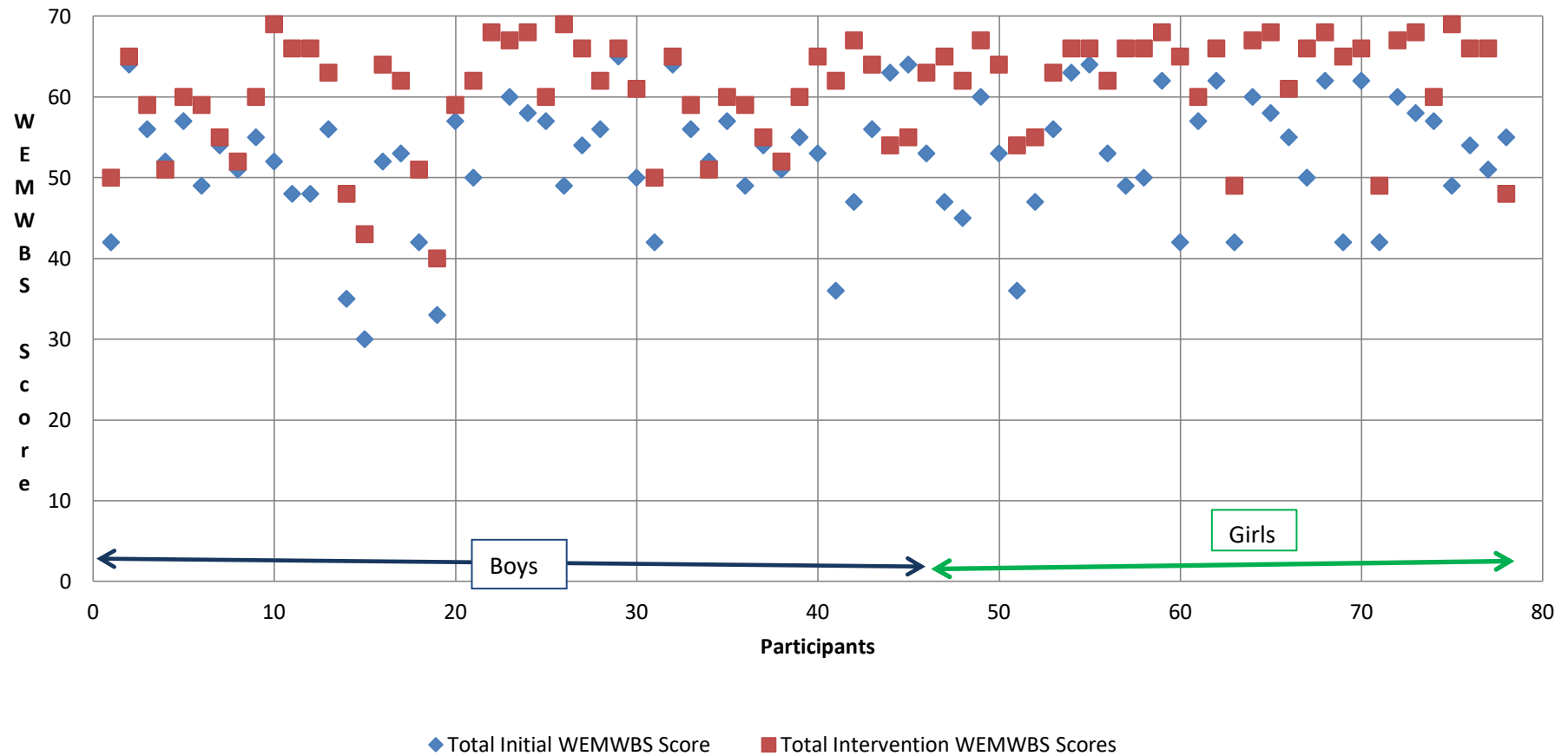


Figure 6



**Covenant Project 2016**  
A Stacked Bar Chart to show the Total Initial WEMWBS Scores for the 78 participants

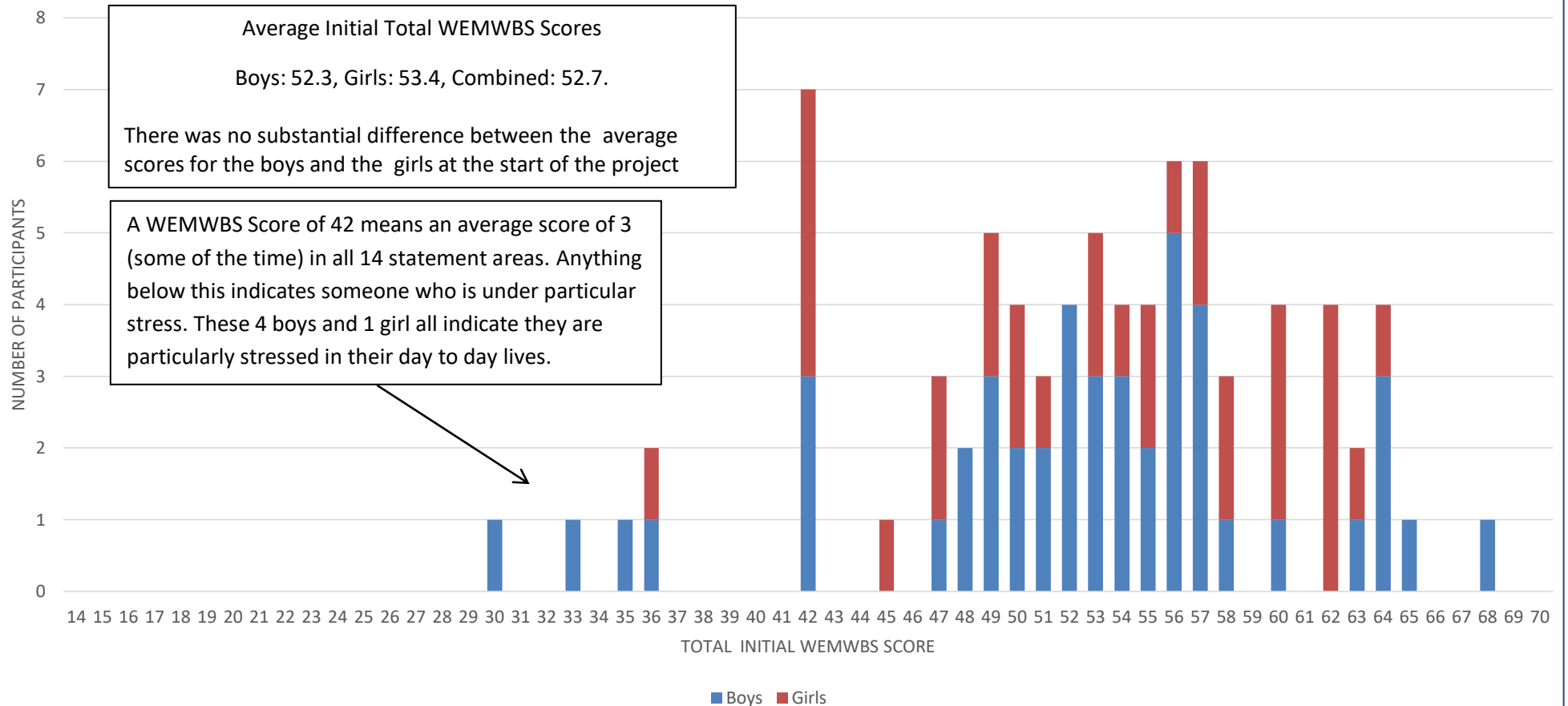


Figure 7



# Covenant Project 2016

## A Stacked Bar Chart to show the Total Intervention WEMWBS Scores for the 78 participants

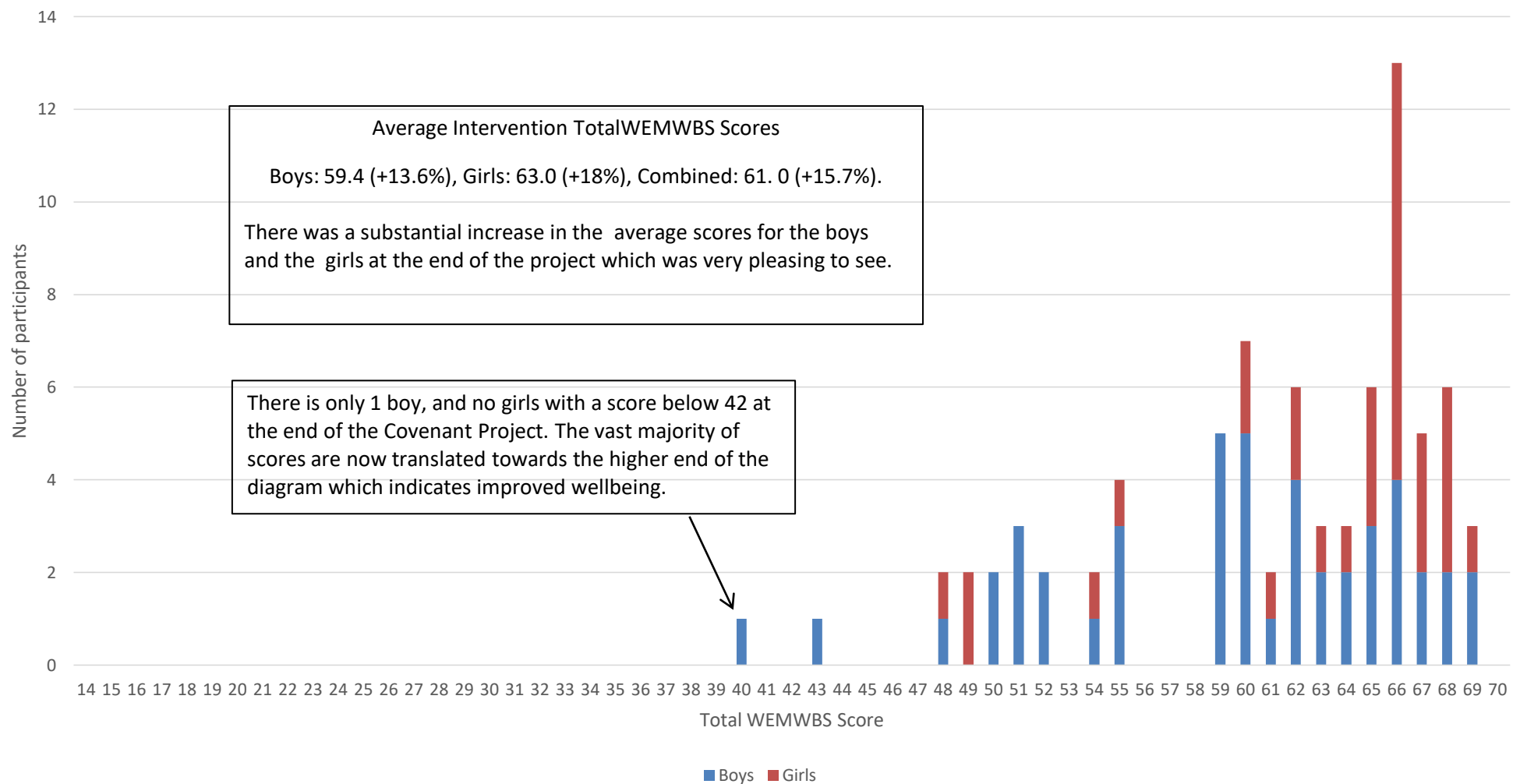


Figure 8



# A Spiders' Web diagram comparing the Initial and Intervention Average WEMWBS Scores for the 46 Boys by each of the 14 Audit Areas

Boys - All Sports Average Initial WEMWBS Score      Boys - All Sports Average Intervention WEMWBS Score



The Blue initial score polygon is entirely contained by the Red Intervention score polygon. This shows an increase in scores across all 14 audit areas. The farther apart the polygons, the bigger the increase in scores at the end of the project.

The Red Intervention Score Polygon is much less angular than the Blue Initial Score Polygon and this indicates that the scores are more consistent than at the outset.

Figure 9



## BOYS INITIAL AND INTERVENTION AVERAGE WEMWBS SCORES ACROSS ALL 14 AUDIT AREAS

|                   |                                    | I've been feeling optimistic about the future | I've been feeling useful | I've been feeling relaxed | I've been feeling interested in other people | I've had energy to spare | I've been dealing with problems well | I've been thinking clearly | I've been feeling good about myself | I've been feeling close to other people | I've been feeling confident | I've been able to make up my own minds about things | I've been feeling loved | I've been interested in new things | I've been feeling cheerful | Total WEMWBS Score | Mean WEMWBS Score | Standard Deviation | Variance |
|-------------------|------------------------------------|---|--------------------------|---------------------------|--|--------------------------|--------------------------------------|----------------------------|-------------------------------------|---|-----------------------------|---|-------------------------|------------------------------------|----------------------------|--------------------|-------------------|--------------------|----------|
| Boys - All Sports | Average Initial WEMWBS Score       | 3.43  | 3.54                     | 3.67                      | 3.54   | 3.76                     | 3.39                                 | 3.63                       | 3.93                                | 3.76                                    | 3.80                        | 3.80  | 4.28                    | 3.78                               | 3.93                       | 52.28              | 3.73              | 0.75               | 0.61     |
|                   | Average Intervention WEMWBS Score  | 4.04  | 4.15                     | 4.11                      | 4.09   | 4.04                     | 4.02                                 | 4.11                       | 4.46                                | 4.24                                    | 4.59                        | 4.28  | 4.37                    | 4.35                               | 4.54                       | 59.39              | 4.24              | 0.58               | 0.38     |
|                   | % Increase in Average WEMWBS Score | 17.7  | 17.2                     | 11.8                      | 15.3   | 7.5                      | 18.6                                 | 13.2                       | 13.3                                | 12.7                                    | 20.6                        | 12.6  | 2.0                     | 14.9                               | 15.5                       | 13.6               | 13.6              | -22.5              | -38.6    |

Figure 10

The table shows that the 46 boys demonstrated increased wellbeing scores across all 14-audit areas, which is gratifying. The smallest increase was 2% (I have been feeling loved) whilst the highest increase was 20.6% (I have been feeling confident). The average increase across all 14-audit areas was 13.6%, which demonstrates a definite improvement in wellbeing.

Both the Standard Deviation and Variance significantly reduced and this shows that the intervention scores were much more consistent and closer together than those at the start. This again indicates an improvement in wellbeing. This is confirmed by the smoothness of the intervention Score polygon in the spiders' web diagram on the previous page.



A Spiders Web diagram comparing the Initial and Intervention average WEMWBS scores for the 32 Girls by each of the 14 Audit Areas

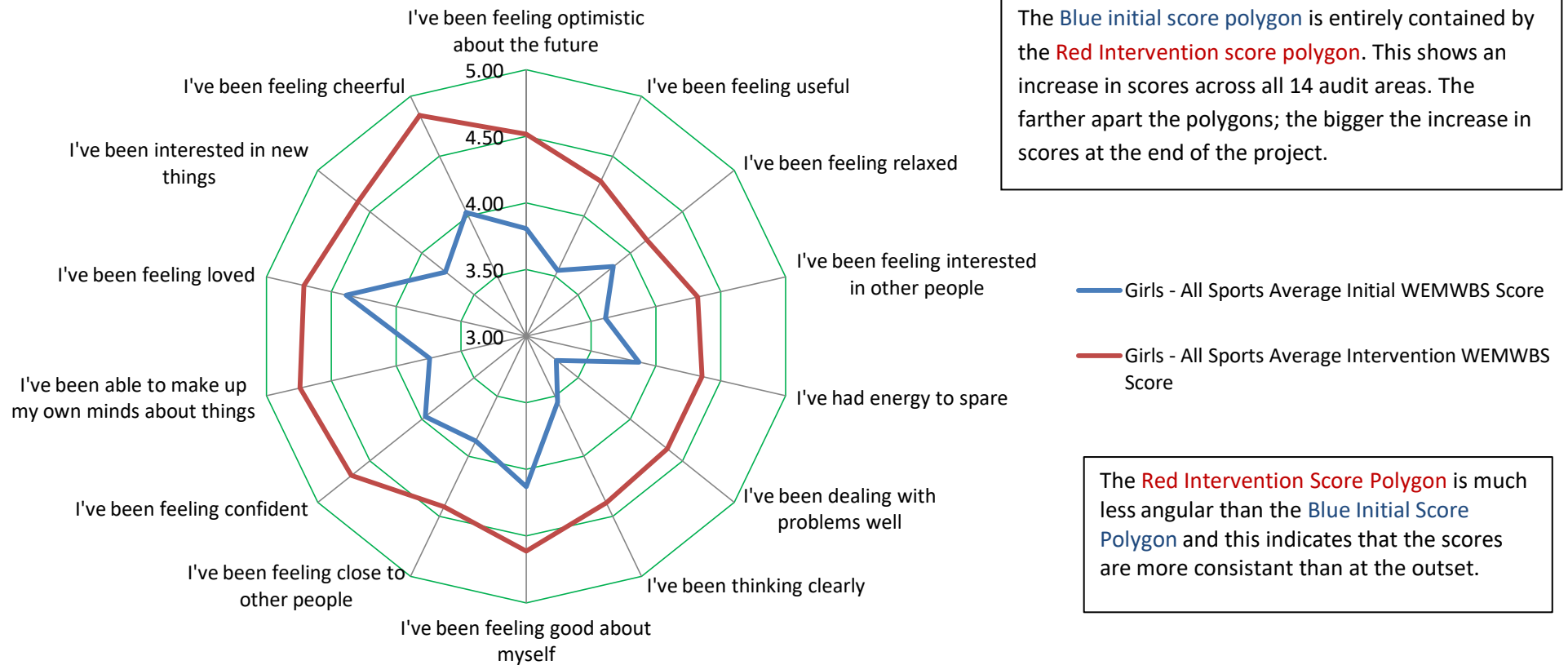


Figure 11



## GIRLS INITIAL AND INTERVENTION AVERAGE WEMWBS SCORES ACROSS ALL 14 AUDIT AREAS

|                    |                                    | I've been feeling optimistic about the future | I've been feeling useful | I've been feeling relaxed | I've been feeling interested in other people | I've had energy to spare | I've been dealing with problems well | I've been thinking clearly | I've been feeling good about myself | I've been feeling close to other people | I've been feeling confident | I've been able to make up my own mind about things | I've been feeling loved | I've been interested in new things | I've been feeling cheerful | Total WEMWBS Score | Mean WEMWBS Score | Standard Deviation | Variance |
|--------------------|------------------------------------|---|--------------------------|---------------------------|--|--------------------------|--------------------------------------|----------------------------|-------------------------------------|---|-----------------------------|--|-------------------------|------------------------------------|----------------------------|--------------------|-------------------|--------------------|----------|
| Girls - All Sports | Average Initial WEMWBS Score       | 3.81  | 3.55                     | 3.84                      | 3.61   | 3.87                     | 3.29                                 | 3.55                       | 4.13                                | 3.87                                    | 3.97                        | 3.74   | 4.39                    | 3.77                               | 4.03                       | 53.42              | 3.82              | 0.77               | 0.63     |
|                    | Average Intervention WEMWBS Score  | 4.52  | 4.29                     | 4.16                      | 4.32   | 4.35                     | 4.35                                 | 4.39                       | 4.61                                | 4.42                                    | 4.68                        | 4.74   | 4.71                    | 4.61                               | 4.84                       | 63.00              | 4.50              | 0.53               | 0.30     |
|                    | % Increase in Average WEMWBS Score | 18.6  | 20.9                     | 8.4                       | 19.6   | 12.5                     | 32.4                                 | 23.6                       | 11.7                                | 14.2                                    | 17.9                        | 26.7   | 7.4                     | 22.2                               | 20.0                       | 17.9               | 17.9              | -31.7              | -51.4    |

Figure 12

The table shows that the 32 girls demonstrated increased wellbeing scores across all 14 audit areas which is gratifying. The smallest increase was 7.4% (I've been feeling loved) whilst the highest increase was 26.7% (I've been able to make up my own mind about things). The average increase across all 14 audit areas was 17.9% which demonstrates a definite improvement in wellbeing.

Both the Standard Deviation and Variance significantly reduced and this shows that the intervention scores were much more consistent and closer together than those at the start. This again indicates an improvement in wellbeing. This is backed up by the smoothness of the intervention Score polygon in the spiders' web diagram on the previous page.



# Covenant Project 2016

## A Spiders Web Diagram comparing the Initial and Intervention WEMWBS Scores for 78 participants

— All Children Across All Sports Average Initial WEMWBS Score

— All Children Across All Sports Average Intervention WEMWBS Score

The Blue initial score polygon is entirely contained by the Red Intervention score polygon. This shows an increase in scores across all 14 audit areas. The farther apart the polygons, the bigger the increase in scores at the end of the project.



The Red Intervention Score Polygon is much less angular than the Blue Initial Score Polygon and this indicates that the scores are more consistent than at the

Figure 13

**ALL 78 PARTICIPANTS INITIAL AND INTERVENTION AVERAGE WEMWBS SCORES ACROSS ALL 14 AUDIT AREAS**



|                                |                                    | I've been feeling optimistic about the future | I've been feeling useful | I've been feeling relaxed | I've been feeling interested in other people | I've had energy to spare | I've been dealing with problems well | I've been thinking clearly | I've been feeling good about myself | I've been feeling close to other people | I've been feeling confident | I've been able to make up my own minds about things | I've been feeling loved | I've been interested in new things | I've been feeling cheerful | Total WEMWBS Score | Mean WEMWBS Score | Standard Deviation | Variance |
|--------------------------------|------------------------------------|---|--------------------------|---------------------------|--|--------------------------|--------------------------------------|----------------------------|-------------------------------------|---|-----------------------------|---|-------------------------|------------------------------------|----------------------------|--------------------|-------------------|--------------------|----------|
| All Children Across All Sports | Average Initial WEMWBS Score       | 3.58  | 3.55                     | 3.72                      | 3.55   | 3.78                     | 3.37                                 | 3.60                       | 4.01                                | 3.79                                    | 3.88                        | 3.78  | 4.29                    | 3.78                               | 3.96                       | 52.67              | 3.76              | 0.77               | 0.63     |
|                                | Average Intervention WEMWBS Score  | 4.23  | 4.21                     | 4.14                      | 4.19   | 4.18                     | 4.17                                 | 4.22                       | 4.53                                | 4.31                                    | 4.63                        | 4.47  | 4.50                    | 4.46                               | 4.67                       | 60.90              | 4.35              | 0.56               | 0.35     |
|                                | % Increase in Average WEMWBS Score | 18.3  | 18.4                     | 11.4                      | 18.1   | 10.5                     | 23.6                                 | 17.1                       | 12.8                                | 13.5                                    | 19.1                        | 18.3  | 4.8                     | 18.0                               | 17.8                       | 15.6               | 15.6              | -26.7              | -44.7    |

Figure 14

The table shows that the 78 participants demonstrated increased wellbeing scores across all 14 audit areas which is gratifying. The smallest increase was 4.8% (I've been feeling loved) whilst the highest increase was 23.6% (I've been dealing with problems well). The average increase across all 14 audit areas was 15.6% which demonstrates a definite improvement in wellbeing.

Both the Standard Deviation and Variance significantly reduced and this shows that the intervention scores were much more consistent and closer together than those at the start. This again indicates an improvement in wellbeing. This is backed up by the smoothness of the intervention Score polygon in the spiders' web diagram on the previous page.



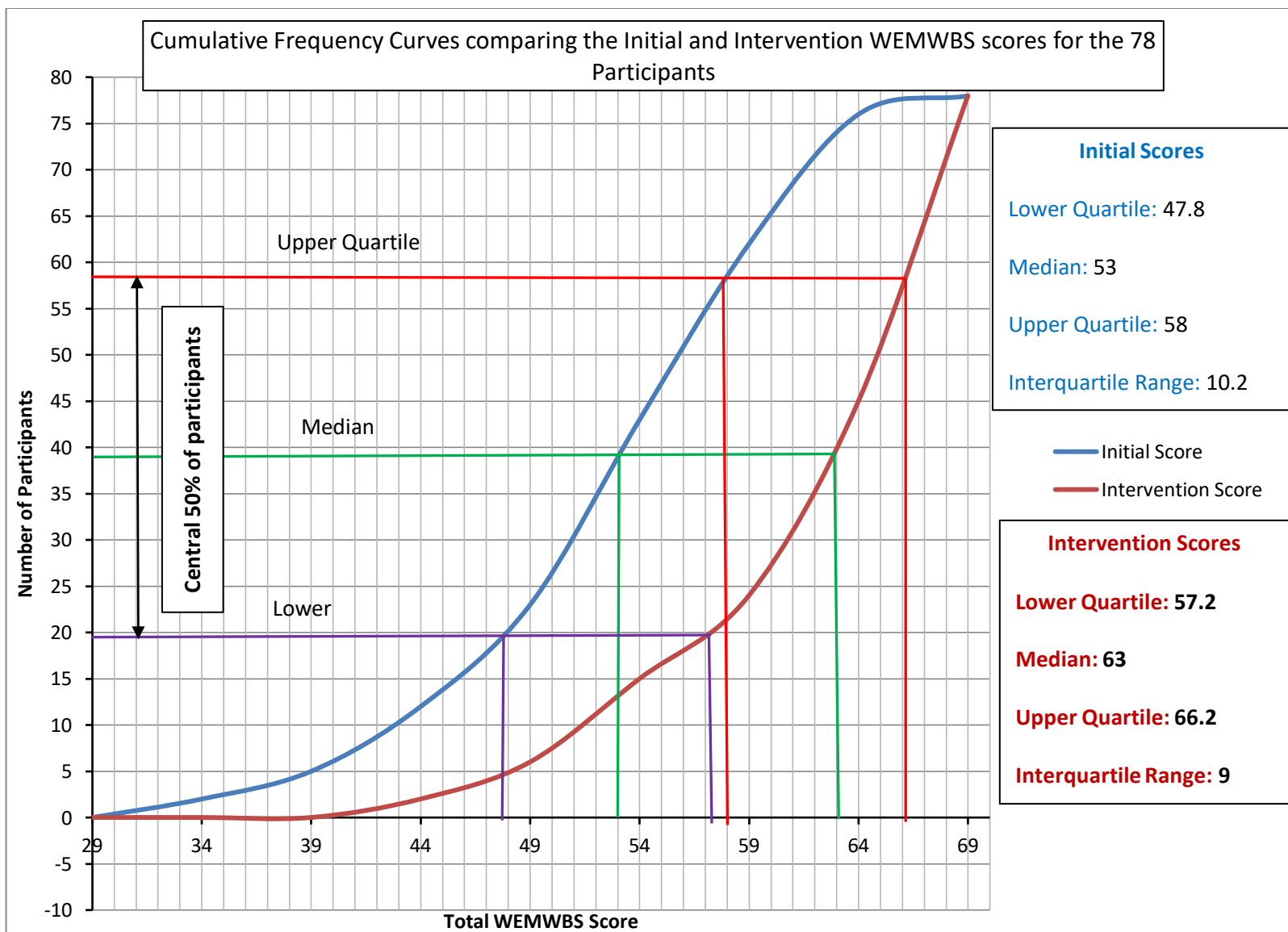


Figure 15



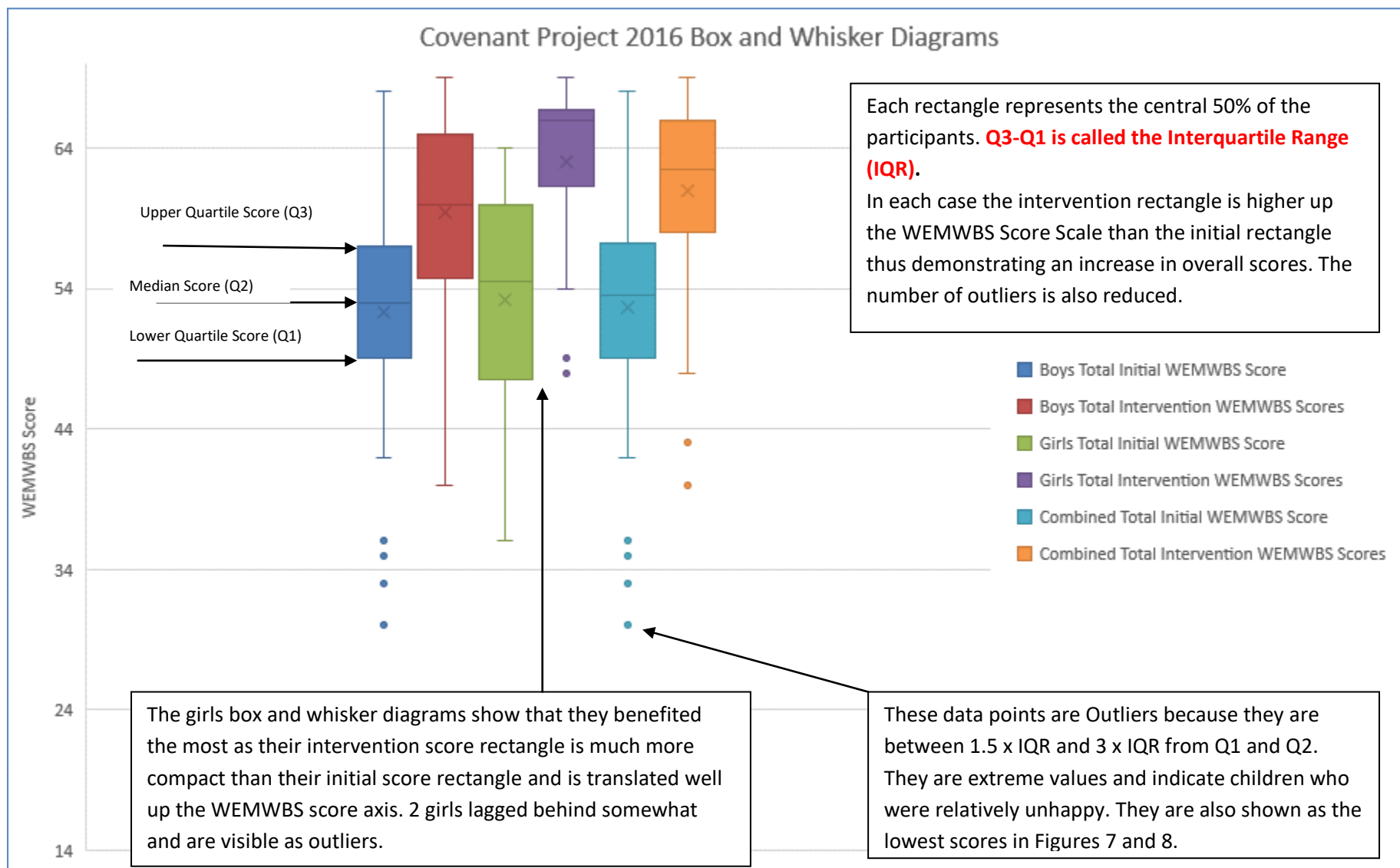


Figure 16







## Findings;

### Children

The diagrams above consistently show a significant improvement in the mean WEMWBS wellbeing scores/question amongst the participants.

| % Improvement in Total WEMWBS Wellbeing Scores |      |
|--|------|
| 46 Boys  | 13.6 |
| 32 Girls                                       | 17.9 |
| 78 Participants Overall                        | 15.6 |

For the boys this ranged between a 1.56% increase for one boy (he scored very highly despite this) and 43% for another. 3 boys did show a decrease but this was from a relatively high initial WEMWBS score and is thus not any cause for concern.

For the girls it ranged between a 3% increase for 1 girl and 54.8% change for another. 1 girl showed a 3% decrease but her initial score was very high so it was not a cause for concern.

For both the boys and girls the mean WEMWBS score/question increased and the standard deviation and variance decreased thus indicating a general increase in the wellbeing measure with the scores more tightly packed around the higher mean. Statistically the girls showed a larger improvement in their wellbeing than the boys (Figure 16) and this is interesting to note.

It was noticeable for both the boys and girls that the lowest increase in scores overall was in the 'I've been feeling loved' audit area. This can be explained as it is the one audit area which is more reliant on home life rather than the project itself.

The 3 audit areas showing the largest percentage increase were:

Boys;

1. I've been feeling confident – 20.6%
2. I've been dealing with problems well – 18.6%
3. I've been feeling optimistic about the future – 17.7%

Girls;

1. I've been dealing with problems well – 32.4%
2. I've been able to make my own mind up about things – 26.7%
3. I've been thinking clearly – 23.6%

Combined;

1. I've been dealing with problems well – 23.6%
2. I've been feeling confident – 19.1%
3. I've been feeling useful – 18.4%

Figures 6-16 clearly show that there was a statistically significant increase in the wellbeing of the children during the project.





## Parents

- Predominantly the husband/male partner was the serving partner. The parents and fathers in particular, loved the project and enjoyed participating in the activities with their children each week. Some fathers said they had spent more quality time with their children during the 8-week course than they had during the rest of the year. This did create some feelings of guilt but it was offset by the hope that they would continue doing it. Surf Action was surprised to find that up to then many of the service partners spent an extensive part of the weekends in particular away from their families and with their service mates playing sport etc even if they had been away from home during the week.
- During conversations over a coffee away from their partners it became apparent that there were considerable stresses building up in some families:
  - In particular in those where the serving partner was about to take early retirement/redundancy from their respective service:
    - The wife was often much more grounded in the day-to-day reality of civil life and took charge of the family and paying bills etc. and had considerable reservations about life outside the service and felt that their partner was being too optimistic about the ease of the transition and the future. They found it hard to talk about it to their partner without it seeming they were trying to undermine them. Children in particular were noticing these tensions. Housing and schooling were a continual worry to those who would have to leave married quarters.
    - The husbands often seemed to be living in a bubble of optimism and had friends who were in a similar position with the same attitude. People they knew who had already left always seemed to be positive in conversations with them yet their wives were telling a different story to the other wives.
    - The wives were very glad to have an opportunity to discuss these matters away from their partners with others who were in the same situation or who had already been through it. Similarly, their children were benefiting from the wider social contacts with the children of veterans.
  - The current political instability in many parts of the world is resulting in the increased likelihood of short term deployments of unknown duration. This is having a substantial effect on some families. The huge amount of coverage of the news in all formats means that children are no longer easy to isolate from reality and they are already showing signs at home of increased stress and worry as events unfold.



It was very gratifying to be sent photographs by parents, after the course had finished, showing their child/children participating in watersports on holiday etc, something which the parents said they would never have done before the course. One parent bought a family kayak as a result of participating on the course as they felt confident and enthused to continue kayaking as a leisure activity.

## Summary;

The aims of the Surf Action health promotion project were;

1. To explore and evidence the benefits of early and non-stigmatising intervention to support the mental and physical health and well-being of children and their families by involving them in healthy outdoor activities.
2. To help to reduce the demands on the services of the CAMHS by:
  - a. Supporting the physical and psychological wellbeing of the participants.
  - b. Encouraging participants to make friends, reduce isolation, build self esteem, and build self-confidence and self-reliance.
  - c. Provide families with the opportunity to take part in surfing and beach activities thus developing and strengthening family ties.
  - d. To build emotional resilience in the participants and make them better able to deal with the stresses of their day to day lives.
3. To encourage conversations between the parents of the participants so as to strengthen contacts within the armed forces and civilian communities thus enhancing the support available to all.
4. By engaging families in a healthy, demanding and fun activity such as surfing, something which most will not have tried before, to encourage parents to take the time to re-assess their family dynamics and the way they interact with their children and to see the considerable benefits healthy outdoor activities can bring.

The evidence presented in this report and the information in Figures 1-16 clearly demonstrates that these aims have been achieved.

By encouraging families to participate together in healthy outdoor water based activities in the magnificent Cornwall green and blue gyms, the families have shown remarkable increases in their wellbeing scores and have reported increased family cohesion. The children are more emotionally robust and confident to take part in new and healthier activities which they would not have done before. Their parents/guardians made good use of the weekly opportunity to make new friends and to engage in discussions on a wide variety of service life related topics and to gain from the experience/advice of veterans and volunteers who have already had experience of many of them. The fact that the girls seemed to benefit so much from these vigorous activities was very interesting and will be worth investigating in the future. The courses were all oversubscribed and we would very much like to continue to run the project as it is proving to be so beneficial to the Armed Forces Community.



Surf Action would like to thank those individuals and organisations who worked hard to make the project a great success;

- Global Boarders for their very high quality surf instruction and for encouraging and supporting the participants and making attendance at the surfing courses so much fun.
- South West Lakes Trust at Stithians Reservoir for making everyone so welcome and providing the great Kayaking, stand-up Paddleboarding and windsurfing tuition.
- All the volunteers whose support was invaluable to the provision of the project.
- The local Covenant Partnership for their support.

Surf Action would like to thank the Armed Forces Covenant for funding this highly successful project.



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