Silver Saplings Adventures for Older People: a qualitative review and evaluation of intended positive interventional change and wellbeing effects for participants of the programme.

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'Silver Saplings Adventures for Older People': a qualitative review and evaluation of intended positive interventional change and wellbeing effects for participants of the programme

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Executive summary

Background

The Silver Saplings Adventures programme is one of several project streams of 'Wild Things', an environmental education charity working across Moray, Aberdeenshire and the Highlands areas in Scotland. Wild Things was set-up to encourage individuals from diverse backgrounds to engage with and learn from their local natural environments to ultimately improve the wellbeing of individuals, communities and natural habitats. The Silver Saplings Adventures (SSA) programme is a nature-based wellbeing intervention targeting older people, located in Moray, Aberdeenshire and areas of the Highlands. It consists of monthly day trips to outdoor settings, providing opportunities for participants to engage within communities, connect with others, as well as learn about and from their local natural environment. The SSA programme has been purposively designed in this way to promote individual wellbeing, social cohesion and feelings of inclusivity.

Recent years has witnessed a growing interest and emerging body of literature concerning the effects of nature-based wellbeing interventions similar to the SSA programme; incorporating exposure to nature and green space, social inclusion and later-life learning. Generally, such programmes have been linked to several positive wellbeing effects, particularly around emotional wellbeing, cognition and aspects of mental health. Nevertheless, there are some differences noted in terms the causal factors underpinning wellbeing effects across different studies, as well as limited evidence around the effects of such programmes for older adults.

This report presents a focused, independent evaluation of the SSA programme, based on a sample of 17 participants who engaged with the 12-month programme during its third -and penultimate- cycle, spanning January – December 2023. Evaluating the SSA programme was undertaken to optimise the development and continuation of the programme beyond its current funding and to inform the transferability of this to other similar programmes and contexts.

The primary objective of this evaluation was to assess the SSA programme to ascertain any wellbeing effects on participants, how these effects manifested and the broader ramifications, and to identify what specific aspects of the programme might be responsible for generating these reported effects. This aim was translated into three research questions, specifically:

1. **Did 'Silver Saplings Adventures' activities for the various demographics Silver Saplings work with improve wellbeing?**
2. **If improved - in what way was wellbeing improved and what are the broader ramifications?**
3. **What is the overall impact of nature-based interventions on individual and community wellbeing?**

Methodology

A qualitative evaluation of the SSA programme was undertaken, during the third of four funded cycles of the programme in December 2023. Data was collected via remote, semi-structured interviews with a purposive, convenience sample of 17 participants who had taken part in the third cycle of the programme. The purpose was to uncover and explore perceptions and experiences of the Silver Saplings Adventures programme and the perceived effects on their wellbeing. The data was analysed using Braun and Clarke's (2006) six-point framework of analysis that involve: data familiarisation, coding, generating themes, reviewing themes, defining and naming themes and writing up. Double coding and independent analysis ensured trustworthy, rigorous and valid findings.

Findings

The findings addressed the three key research questions, as follows:

Question 1: Did 'Silver Saplings Adventures' activities for the various demographics Silver Saplings work with improve wellbeing?

Participants own understanding of 'wellbeing' revealed a holistic, multi-faceted, inter-connected conceptualisation encompassing three key areas: ***physical*** (*mobile, well and active*), ***social*** (*having connections, being with and helping others*) and ***mental, psychological and emotional*** (*absence of stress, loneliness and isolation, feeling happy, safe, engaged and stimulated*). The importance of being and remaining 'active' across these areas central to all those themes. Participants regarded the Silver Saplings Adventures programme in generally positive terms with only minor critical points raised by a small number of participants for consideration. Participants associated Silver Saplings Adventures with various key aspects of wellbeing, supporting individuals to flourish physically, socially, mentally, psychologically and emotionally. They also generally concluded the effects and benefits of the programme they experienced, exceeded initial expectations prior to engaging with the programme.

Question 2: If improved, in what way was wellbeing improved and what are the broader ramifications?

Participants reported that their wellbeing was improved through engagement with the SSA programme, across the three broad areas – **physical**, **social** and **mental/emotional/psychological**.

In terms of addressing ***physical*** wellbeing, individuals were encouraged (and supported as required) to be mobile and active, through walking around and exploring the outdoor locations visited during the Silver Saplings Adventures outings. The level of care, support and comfort offered by staff and volunteers in enabling individuals to achieve this whilst feeling safe, secure and well catered for, was highly appraised. It was also widely recognised that without the Silver Saplings Adventures, many of the locations visited would otherwise be inaccessible for participants.

In terms of ***social*** wellbeing, developing new connections and being with others was encouraged through the Silver Saplings Adventures, by bringing together 'likeminded' individuals and offering space and opportunities through shared experiences to foster friendships. This was particularly important for those new to their geographical area, as well as post-COVID-19 pandemic, as many social groups and opportunities had paused.

The positive effects of engaging with the Silver Saplings Adventures on ***mental, psychological and emotional*** wellbeing were extensive and wide-ranging. Going on the group outings, being with other people and being outdoors, were all viewed as being beneficial **in managing feelings of stress, depression, loneliness, and isolation**, and **increasing general feelings of happiness and enjoyment**. One of the most often extensively discussed benefits of engaging with the Silver Saplings Adventures programme related to **its role in supporting mental stimulation and growth**. This was typically attributed **to acquiring, developing and sharing new knowledge (**with others in and outside the group) about their own locale, nature, environmental issues, or other people, as well as **developing practical skills**. The extensive **knowledge of project staff and volunteers,** as well as the type and **delivery of information, were all positively appraised** by participants. Moreover, the positive effects on mental, psychological, and emotional wellbeing **lasted beyond the duration of the outings**, via recollections, sharing of information, knowledge and experiences, as well as a sense of anticipation or 'looking forward' to future outings.

Regarding broader ramifications, these findings reiterate **the importance of: accessing** and **making accessible outdoor spaces to promote multiple aspects of wellbeing;** learning throughout the life-course/ later-life learning and knowledge-exchange utilising creative methods and ad-hoc opportunities; and fostering 'networks of community and friendship'.

Question 3: What is the overall impact of nature-based interventions on individual and community wellbeing?

Focussing on overall impacts, the Silver Samplings Adventures programme **improved subjective perceptions of wellbeing**, **community engagement**, **development of social ties and improved social cohesion** between members via mechanisms of nature-immersion and learning activities. This occurred via the programme encouraging new connections between people, new mechanisms of learning promoting later-life learning, and new rejuvenated perceptions of learning about nature in a local, relatable space to participants. This could best be conceptualised as the programme generating new social capital for the older adults participating in the programme. Participants developed lasting connections with each other, and rejuvenated connections to nature in their immediate space and home locale; looking forward to new Silver Saplings Adventures and asserting the positive –and long-lasting- impacts of these upon their wellbeing and their desire to learn new nature-linked knowledge, continue meeting new people and gain new confidences surrounding developing new friendship and community circles.

Conclusions and recommendations

Our findings are supported by existing literature around the effects of greenspace and generation social capital in older adults through bespoke wellbeing initiatives. While literature on the generation of social capital in older adults is sparse, existing studies focus on social capital declining as adults age; friendship circles become smaller and opportunities to meet new people and develop new points of contact and context mediated by common knowledge decrease. The Silver Saplings Programme operated against this decline, providing a new platform and capacity for knowledge, connections, and self-development opportunities for older adults, increasing social capital as a mechanism to developing renewed confidence and increased perceived wellbeing.

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Tables and Figures

Glossary of terms

Community Wellbeing: "*Community wellbeing is the combination of social, economic, environmental, cultural, and political conditions identified by individuals and their communities as essential for them to flourish and fulfil their potential".* (Wiseman and Brasher, 2008, p. 358)

Natural Heritage: "*Natural heritage refers to natural features, geological and physiographical formations and delineated areas that constitute the habitat of threatened species of animals and plants and natural sites of value from the point of view of science, conservation or natural beauty. It includes private and publicly protected natural areas, zoos, aquaria and botanical gardens, natural habitat, marine ecosystems, sanctuaries, reservoirs"* (UNESCO, 2009)

1.Introduction

Introduction – Chapter Highlights

- This body of work represents a structured evaluation of Silver Saplings Adventures for Older Adults, developed in partnership with Wild Things charity, but conducted independently by RGU.
- Preparatory work for the aims and objectives of the evaluation developed three research questions focused on wellbeing effects. Questions focussed on wellbeing effects generated by the Silver Saplings programme, how these effects manifested, and impacts of nature-based interventions.
- Existing literature on wellbeing interventions supports positive impacts of nature exposure, community involvement, and later-life learning on wellbeing, but with mixed results regarding the benefits of green space exposure for older adults.

This research report explores our independent, structured evaluation of the 'Silver Saplings[1] Adventures for Older Adults[2]' (SSA) programme. The primary objective of our engagement was to assess the SSA programme to ascertain any wellbeing effects of the programme on participants, how these effects manifested, and to identify what specific aspects of the SSA programme generated these possible effects.

This document firstly provides an introduction to the 'SSA' programme (as situated within the broader Wild Things Charity), detailing its scope and aims. Thereafter, the background to the current evaluation will be detailed. A brief account of key literature around wellbeing interventions will then be provided to both contextualise 'SSA' and highlight the uniqueness of this programme. Then follows a methodology section, outlining the design for the evaluation, the choice of methods utilised and how this was executed in practice. Next the findings of the evaluation will be presented, highlighting participants definitions of wellbeing, and the mechanisms of affect generated by the SSA programme; answering three key research questions. A discussion and conclusions section follows, delineating structured conclusions drawn from the research project and linking findings back to existing research. Some considerations for further work around additional and ongoing research evaluation(s) are provided, as is some feedback regarding different components of the programme.

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[1] Silver Saplings and Wild Things were used interchangeably as descriptors for the organisation in the early stages of the research project. Herein for this report Silver Saplings is used to describe the wellbeing programme evaluated. For clarity, Wild Things is the parent company of Silver Saplings.

[2] We use the term 'older adults' to describe those aged over sixty-five years of age, this is congruent with present literatures and descriptive UK policy guidelines (see Age UK, 2019, 2023).

1.1 The Wild Things programme and Silver Saplings Adventures: Aims and brief programme description

The SSA programme represents one of a range of the offshoot project streams of 'Wild Things', an award-winning environmental education charity working in Moray, Aberdeenshire and the Highlands areas in Scotland, funded principally by donations and a range of sponsoring funders and charities, including the National Lottery Heritage Fund and The Garfield Weston Foundation among others. Wild Things was set-up in 2003 to fulfil an overarching aim of encouraging individuals across a range of age groups, including the most vulnerable in society, to engage with and learn from their local natural environments through adventure and learning-focussed activities and experiences. Thus, facilitating a mutually beneficial relationship between local communities and their natural environments and improving the health and wellbeing of both. Since its inception, Wild Things has reached around 36,000 people via various programmes and initiatives including conservation and habitat restoration schemes (e.g. rewilding the river Findhorn), e-learning training programmes and qualifications, school programmes, yurt hire, as well as various charitable projects.

The SSA represents one of Wild Things charitable programmes, alongside other Silver Saplings initiatives including Silver Saplings Care Homes (intergenerational visits and activities), as well as programmes aimed specifically at school-aged children, teenagers and young adults, each funded for a period of four years by Heritage Scotland. The SSA aims to give older people who may be socially isolated or unable to engage in outdoor activities – because of lack of confidence, transport issues, or health or mobility problems - an opportunity to re-engage within their communities and develop new friendships, whilst connecting with and learning about their local natural environment and developing new skills. Thus, promoting a sense of social cohesion, inclusivity and wellbeing (see Silver Saplings Website, 2024).

In terms of structure and design, the SSA programme takes place over a planned 12-month period and is then repeated annually. Each programme cycle typically involves once-monthly daytrips for four different groups of older people across four distinct geographical areas. Over the course of the four-year funding, the programme will have reached a total of eighty participants, eighty activity days and 160 volunteer days.

During sessions, participants are transported by minibus from their homes to various outdoor locations and supported by project staff, instructors and younger volunteers to engage in a variety of different activities linking with nature, such as rock pooling, pond dipping, osprey and dolphin spotting, nature-based crafts and gentle walks on beaches, woodlands and alongside rivers. Each session follows a typical format consisting of a guided walk or exploration, a break for refreshments, and then an opportunity to reflect,

reminisce and chat between attendees, facilitators and volunteers present - where a craft-based activity typically takes place. Provisions to ensure shelter, warmth and comfort whilst outdoors -and indoors- are always provided, and the final session of the year in December is hosted in an indoor setting because of the particularly harsh winter weather conditions typical in North-East Scotland. Whilst some of the Wild Things' activities incur a nominal fee (such as yurt hire, e-learning, and some aspects of the wellbeing programme), 'SSA' is free to attend for all participants.

1.2 Engagement work prior to evaluation

The immediate research team (Dr Nick Adams [NA] and Dr Emma MacIver [EM]) were first made aware of the Silver Saplings programme in discussions with professors Flora Douglas [FD] and Catriona Kennedy [CK]. Discussions between Robert Gordon University (RGU) and Wild Things had been ongoing regarding a possible evaluation project run by RGU researchers for approximately six-months prior to formal team engagement. An initial meeting with Luke Strachan [LS] (Wild Things Chief Executive Officer) was arranged to discuss possible involvement. Following this, an initial evaluation plan was developed and presented. During subsequent meetings, this plan was refined iteratively and inclusively into a more concrete approach, with active involvement and feedback provided from LS. The plan centred around examining three research questions (see *1.3 Aims and Objectives of the Evaluation*). Subsequently, funding was agreed for four researchers, NA, EM, FD, and CK to complete a structured, six-month long, independent evaluation project of the Silver Saplings Adventures wellbeing programme; NA and EM co-leading the evaluation, costed at 26 days, and FD and CK costed at 1.3 days each. The agreed period of engagement was set at six-months and the evaluation would take place over this timeline. A contract was signed by both parties (RGU and Silver Saplings, see **Appendix 1**). This report represents the primary outcome of this evaluation, delivered in fulfilment of the agreed objectives of conducting a structured, independent evaluation of the Silver Saplings Adventures programme.

Prior to undertaking the evaluation, NA and EM had several discussions with LS and the wider Silver Saplings team to ascertain the structure of the SSA programme; the aims and goals of the programme and to understand the intended audience of the programme and how this was executed in practice. LS also provided written materials in the form of the latest Wild Things annual report, which further enhanced understanding around the structure of the programme, the aims, participant numbers, and activity planning sheets for each individual SSA outing, which gave details around the location, activities planned, and risk assessments conducted. Importantly, in discussions with LS and the wider SSA team, the SSA programme design was understood to be iterative and under revision; feedback from participants allowing for the programme to be refined into a

newly developed form. Thus, participants' voices and feedback regarding the programme structure are represented as a central component of this evaluation.

1.3 Aims and Objectives of the Evaluation

The aims and objectives of the evaluation can be conceptualised into three research questions, developed by the core research team, in collaboration with LS. The objective of this evaluation is to investigate and answer each research question. These questions are:

1. **Did 'Silver Saplings Adventures' activities for the various demographics[3] Silver Saplings work with improve wellbeing?**
2. **If improved - in what way was wellbeing improved and what are the broader ramifications?**
3. **What is the overall impact of nature-based interventions on individual and community wellbeing?**

1.4 Relevant existing research

Existing research exploring bespoke wellbeing interventions that cover nature and green space, social inclusion and cohesion, and later-life learning consists of a myriad of different studies focussing on wellbeing effects (Klein, 2013; Ronzi et al., 2018; Shanahan et al., 2019; Smyth et al., 2022). More broadly, a growing body of scholarship connects notions of wellbeing, and subjective improvements in wellbeing, with general green space and nature immersions, later-life learning, and developing community initiatives that bring people together. Bratman et al., (2019) explore linkages between rapid urbanisation in late-modernity and declining prioritisations of human-to-human contact as a mode of facilitating wellbeing. Authors develop points of consensus connecting the positive impacts of 'nature experience' (p. 1) on cognition, emotional wellbeing and aspects of mental health; constructing a conceptual framework suggesting universally positive outcomes linked to nature contact and green space. Similarly, Capaldi et al., (2015) present a deconstruction of the benefits of nature-connective approaches to promoting wellbeing, suggesting that forming psychological connections to nature can carry powerful and sustained effects over wellbeing, defining nature as a fundamental component of facilitating 'flourishing in life' (p. 1). The World Health Organisation (WHO) has also highlighted evidence suggesting manifold benefits of exposure to nature -as green space- as being correlated with increased health outcomes, including mental health

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[3] We note the demographics of our sample were low in diversity: The sample consisted of 17 participants, all were female and of White, British ethnicity, ranging in age from 64-91 years (mean age: 77.5 years). This is discussed in later sections.

improvements (WHO, 2017, p. 5). However, they caution that understandings of the impacts and mechanisms of some effects are incomplete (p. 203). Other research has suggested similar perspectives to the above (see Hunt et al., 2021; Hunter et al., 2019; Kaplan et al., 1995; Lee et al., 2017; Passmore & Howell, 2014; Silva et al., 2024). However, within studies, there is a lack of specific evidence exploring wellbeing effects linked with green space exposure, experienced by later-life participants; older adults specifically.

More specific studies network supportively with some of the above positions, deconstructing select programmes and approaches that speak to interventions similar to the different structural components of the SSA programme. Importantly, some studies present mixed results regarding the benefits of specific components, such as green space. For example, with regards to nature and green space exposure, a fascinating study by Noordzij et al., (2021) explores the impacts of green space immersion upon subjective wellbeing within four cohorts of middle-aged and older adults to ascertain impacts upon depressed affect. Study sample consisted of collated aggregate data exploring the impacts of green space exposure on wellbeing (p. 1). Importantly, while results indicated linkages between psychosocial and physical health factors and green space, no associations were found between distance to nearest green space or volume of local green space and mental health affect, including measures of good self-rated health. The authors conclude that, perhaps, the importance of green space may be lesser for older adults who are also urban residents. This evidence may introduce the thinking that components of the SSA programme - should these be successful at positively influencing wellbeing, may be combinative in creating any positive affect, as opposed to effects generated by green space immersion or exposure alone. Relatedly, and reading evidence via a different lens, any positive effects may be generated by what is *done* within green spaces and participants, as opposed to green space exposure itself. This presents a salient investigatory enquiry for this work; establishing whether any wellbeing effects are simply achieved by presence of exposure to nature and green space, or whether any effects are linked to specific activities, occurrences and actions occurring *within* these spaces. This is a point of difference and nuance this appears underexplored within existing literatures and within specific ages of community groups.

Speaking to this; role of community in bringing people together appears to play a salient factor in the development of wellbeing. Robertson et al., (2022) explore the networked interdependencies between communities, environments, and social justice initiatives as generating enhancements in quality of life (QoL) for older adults, particularly focussing on the importance of generating *agency* for older adults within their community involvements as a key factor linking with wellbeing. Similar findings have been highlighted by others, for example, Nyqvist et al., (2013) explore the

role of developing social capital; generated by interactions between individual and collective -inclusive- experiences with available circles of friends and family as having positive aspects over mental health and wellbeing for older people. Conversely, living alone, bereavement, low contact with friends and family have been cited as corrosive factors over developing wellbeing (see Allen, 2008). Further relating to the above, later-life-learning appears to play a key role within older adults with regards to enhancing some components of wellbeing (Law et al., 2023; Merriam & Lee, 2014). For example, Merriam & Lee, (2014) argue the promotion of lifelong learning among older adults can significantly contribute to overall community wellbeing. Further, the authors suggest the more active, healthy and educated older adults are, the less 'drain' same individuals carry over collective community resource services. Operating in support of findings from Nyqvist et al., (2013), Merriam & Lee suggest lifelong learning promotes social capital, this operating as a preservation mechanism against decay in overall wellbeing. The authors argue formal and informal interventions and processes, that promote and drive learning activities for older adults are a critical factor in developing active and engaged lifestyles linked with social capital, that enhance notions of perceived community connections and enhanced wellbeing.

Networking this brief review of literatures together, there appears a strong scholarly precedent for the contents of the SSA programme, given that this programme incorporates elements from all of the three key literature themes highlighted above; promoting access and involvement within nature and green space, collective community links that draw different peoples -and groups of peoples- together, and link these contexts and components with promoting later-life learning within and about nature.

2. Methodology

Methodology – Chapter Highlights

- This structured evaluation utilised qualitative methods for data-collection and analysis.
- Individual semi-structured interviews were conducted remotely with a sample of 17 participants in December 2023. All were attendees of the current cycle of the SSA 12-month programme.
- Participants were asked a range of questions about their experiences of taking part in the SSA and the impact on their wellbeing. Interviews lasted 20-65 minutes.
- Interview data was analysed thematically.

The methodological design of our evaluation programme prioritised qualitative data-collection methods. This was informed by existing research evaluating novel wellbeing interventions, where ascertaining wellbeing effects from a specific intervention, course or activity are the primary objective (Benton et al., 2018, 2021; Ronzi et al., 2018). The below sections discuss our methods and research design in detail.

2.1 Note on the time that evaluation was conducted

In discussions with LS it was highlighted that the SSA programme is externally charity-funded for a period of four years. Wild Things are presently seeking funding to be able to continue this programme beyond this time. Thus, our evaluation began towards the end of year three; around three-quarters way through the programme's current complete life-cycle, and just prior to the beginning of the final cycle. In discussions with the SSA team, this was deemed an ideal time to conduct the evaluation, the programme being already well-established and having developed a wide-ranging uptake in local community over the last two years, but yet still operating in an iterative design model and seeking to continually improve based on previous, and ongoing feedback, prioritising the experiences of SSA participants.

2.2 Initial Observations

In order to understand the SSA programme, after funding for the evaluation had been agreed and as a component of our initial research, we (NA and EM) observed a programme session in action -an indoor session at Elgin Museum- in December 2023. This enabled us an opportunity to speak with participants, facilitators and project leaders, to both witness and understand how a session played out in practice. These observations aided in understanding the discussions of research participants in later interviews

and informed the questionnaire framework developed for which to guide semi-structured interviews.

2.3 The issue of 'Defining 'Wellbeing'

Before proceeding to discuss the interview methodology utilised to collect data, it is pertinent to preface first by acknowledging the challenge of tangibly measuring improvements in wellbeing.

Wellbeing has recurrently been highlighted as a challenging concept to measure (Allen, 2008; Krueger & Stone, 2014; Park et al., 2023). While established, validated, quantitative scales of wellbeing enjoy regular usage, it is widely recognised that these only provide a single temporal snapshot of how an individual perceives their levels of wellbeing at that point in time (Diener et al., 2009; White, 2014). Conversely, semi-structured interviews allow the freedom to ask an individual to define their own understandings and conceptualisations of wellbeing, allowing for further probing as to how this is perceived to be influenced and shift against different stimuli, as per the voice and experience of the individual participant. This represents a more localised yet less generalisable focus towards wellbeing, recognising the importance of prioritising participants' autonomy and voice in the process of establishing what wellbeing means *to them*; 'wellbeing' as a general concept, likely representing different things to different people, and thus the ways in which this can be influenced also representing diverse pathways of affect. This was supported during observations, when EM and NA spoke with several facilitators, volunteers and participants about the SSA programme and the impacts of this (observed by facilitators and volunteers) was experienced by participants. It was felt, given the flexibility of semi-structured interviews, and focus on developing 'real' insightful accounts from participants regarding how their perceptions of their own wellbeing had shifted, that interviews represented the most robust and valid mechanism of capturing change, allowing feedback to be effectively communicated to SSA, and any improvements possible -highlighted from our study- to be implemented in accordance with participant's lived experience, voice, and articulated feedback.

2.4 Recruitment, Sampling and Participants; data-collection

2.4.1 Recruitment and Sampling Strategy

We utilised a non-probability sampling approach, combining elements of both purposeful and convenience sampling. In terms of this, both the project support workers and the researchers shared details of the study with SSA attendees, asking them to self-select if they wished to participate in our evaluation, with more targeted follow-on recruitment work during which project workers and one participant acted as gatekeepers or recruitment facilitators'; identifying and contacting participants who may

be interested in partaking in an interview. Whilst we had aimed to capture a range or variation in socio-demographic characteristics (such as age, sex and ethnicity) across the sample, this did not fully transpire due to the relative homogeneity of the SS Adventures users (typically White females). We did, however, access a range of ages, as elaborated on below.

2.4.2 Participants

The sample consisted of 17 participants, all were female and of White, British ethnicity, ranging in age from 64-91 years (mean age: 77.5 years). Ten lived alone and seven with a partner. The participants lived in or near three specific locales which were linked to three SSA groups. Length of involvement with the SSA varied from 3 months to 3 years (from the beginning of the SSA programme), though three participants had been involved in other Wild Things groups for a number of years (6 years, 7 years and 14 years respectively) prior to engagement with the SSA. The vast majority were recruited into the SSA through information shared at a weekly coffee morning in one locale and through a weekly B.A.L.L. (Be Active Live Long) group held at two other locations. Table 1 (below) shows the socio-demographic characteristics of the recruited sample.

Table 1: Socio-demographic characteristics of participants

Participant Number	Sex	Ethnicity	Age	Household details	Area of residence and length of time in area	How heard about SS	Length of time attending SS
1	F	White	88	Lives alone	Findhorn (3 years)	Village weekly coffee morning	2 years
2	F	White	90	Lives alone	Findhorn (6 years)	Word of mouth from friend	6 years?
3	F	White	78	Lives with husband	Findhorn (6 years)	Village weekly coffee morning	2 years
4	F	White	74	Lives alone	Findhorn (38 years)	Village weekly coffee morning	3-4 years
5	F	White	86	Lives alone	Archiestown (23 years)	B.A.L.L. group	2 years
6	F	White	71	Lives with husband	Hopeman (19 years)	B.A.L.L. group	2 years
7	F	White	89	Lives alone	Hopeman (6 years)	B.A.L.L. group	2 years
8	F	White	76	Lives with Partner	Carron? (18 years)	B.A.L.L. group	2 years
9	F	White	77	Lives alone	Kinloss (21 years) (FINDHORN GROUP)	Village weekly coffee morning	7 years
10	F	White	88	Lives alone	Findhorn (33 years)	Village weekly	*A few years*

						coffee morning	
11	F	White	75	Lives with husband	Findhorn (? But not new to the area)	Village weekly coffee morning	?
12	F	White	76	Lives with husband	Hopeman (14 years)	B.A.L.L. group (leads Ball group and saw a WT activity on beach, sparking interest)	3 years
13	F	White	76	Lives with husband	Hopeman (47 years)	B.A.L.L. group (attends Ball group and attendance at Wild Things kids party)	14 years (Wild Things)
14	F	White	75	Lives alone	Hopeman (? But not new to the area)	B.A.L.L. group	?
15	F	White	64	Lives with husband	Hopeman (7 years)	B.A.L.L. group	4 months
16	F	White	91	Lives alone	Carron, Aberlour (22 years)	B.A.L.L. group	?
17	F	White	77	Lives alone	Hopeman (? But not new to the area)	B.A.L.L. group	2.5 years

2.5 Semi-structured Interviews

Individual semi-structured interviews were held with participants and facilitated by either NA or EM via MS Teams (or telephone in one case, in line with participant preference). These were recorded and -following the interviews- were immediately saved onto the University secure 'R' Drive. Interviews were guided by a schedule (see appendix), covering a range of questions discussed and agreed with LS and Elizabeth Knock [EK] (the Wild Things development officer, who was introduced by LS during discussions of the project design and participant recruitment). Interviews lasted between 20 and 65 minutes.

2.6 Data Analysis, use of distanced digital research methods

MS Teams and digital audio recordings of interviews were transcribed utilising MS Teams transcription software. Where a portable -university approved- digital recording device was utilised to record the interview, the interview was transcribed using a university approved MS Word AI-plug-in, which transcribed the interview in a similar manner to MS Teams; outputting this into a Word file. Distanced methods were chosen as participants were often located in remote geographical locales distanced

from the location of the two principal researcher's home university. It was also felt that it would be more comfortable for participants to be interviewed in a 'home' context, given most participants were older adults. After discussions with LS and a wider Silver Saplings team of volunteers, it was decided some participants would be interviewed remotely in their own homes, some would be interviewed remotely in a location operated by Silver Saplings, at the end of a SSA programme session, and some would be interviewed in the home of one volunteer, who acted as a quasi-gatekeeper; allowing others -whom she already knew well- to visit her and be interviewed using her computer to run MS Teams. This project design was complementary to our focus on participant wellbeing and care, with each participant interviewed in either their own home or in direct proximity to a friend or SSA worker and wider collective of individuals partaking in the SSA programme. It was felt that this would likely enhance available supports for participants.

Data were imported into NVivo 14[4] and analysed iteratively. Firstly, data were coded using Braun and Clarke's six-point framework of analysis; familiarisation, coding, generating themes, reviewing themes, defining and naming themes and writing up (Braun & Clarke, 2006). Double coding and independent analysis ensured trustworthy, rigorous and valid findings. Throughout all coding and familiarisation, data were routinely explored for negative cases. This detailed analysis was conducted by EM, and NA, with CK and FD contributing through regular discussion. The research team have backgrounds in psychology, social work and nursing, with past experience in evaluation; representing a complementary blend of skills from which to collectively process and draw conclusions from collected data. Coding took place initially within NVivo 14, but then moved to a diagram format to clarify themes for stage four of analysis: review themes, and stage five of analysis: define themes. This provided a visual depiction of themes that had emerged from the data, allowing this to be represented and worked with more clearly and iteratively by the researchers through discussions and revisiting of the raw data and NVivo file (EM and NA). The original visual diagrams of themes are presented in **Appendix 2**.

2.7. Ethical considerations and commitment to upholding good ethics in research

Full institutional ethical approval was applied for and secured via the SERP – School Ethical Review Panel at SNMPP – The School of Nursing, Midwifery and Paramedic Practice, Robert Gordon University [SERP Ethics Reference:

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[4] NVivo is a software programme for aiding in the analysis of qualitative data. It allows themes to be selected, marked and compared with other transcribed written data to help draw conclusions regarding findings.

23-11]. All participants who took part in the study provided informed consent. Participants were provided with an information sheet detailing the study aims and objectives in advance and explaining the process of semi-structured interview; that they would be asked a range of questions and researchers were interested in hearing about their lived experiences. Anonymity, privacy and confidentiality were maintained as paramount considerations of conducting this research. All participant details were immediately anonymised upon collection of data. All data collected was stored in a secure online location [R/Drive]; the approved RGU encrypted data storage location for research. Only the immediate research team have access to this anonymised data.

2.7.1 Planning for support at interviews where required

We remained mindful, during the recruitment process, that some participants may require support at interviews, and that discussing -or answering questions on- topics linking to perceived changes in wellbeing may have the potential to cause distress or anxiety for some. This was openly acknowledged and factored in discussions between NA and EM prior to beginning the interview process and the goal to be aware -maintain situation awareness- of participants' wellbeing during the interview process was paramount. During interview processes, NA and EM remained mindful of participant's body language, visual and audio cues and the tone and deliverance of discussions. Participants were advised that they could take a break at any time during the interview process. Further, it was decided that regular 'check-ins' with participants would be conducted as a component of the interview process; if participants exhibited any signs of discomfort or stress they would be offered a break, to move to a different topic of discussion, or to end the interview process. In the interviews conducted, no participants indicated in any way that they were experiencing distress during discussions.

3. Findings

Findings– Chapter Highlights

- The findings addressed three key research questions, around if and how wellbeing was improved by attending the SSA programme, and the impacts on individual and community wellbeing.
- Participants self-defined well-being in a holistic sense, with inter-connected physical, social, mental, psychological, and emotional aspects. All participants felt that their wellbeing (across one or more of these aspects) had improved through taking part in SSA.
- Taking part in the SSA outings encouraged physical activity, fostered new social connections and tackled isolation, provided mental stimulation via new learning, and offered mental health benefits via these aspects and being outdoors.
- The SSA programme was appraised very highly across all the participants and viewed as transformational by some. The role of later-life learning and knowledge acquisition were particularly key here.
- Participants positively assessed the organisation and facilitation of the programme. SSA staff and volunteers were appraised very positively around the support and care offered, as well as the level and quality of their knowledge.
- Positive effects were long-lasting beyond the SSA outings, via uplift in mood, reflecting and recollecting, and sharing new knowledge with others.
- Very minor critical aspects were identified, mainly around comfort during transportation, an interpersonal issue, and appraisal of one of the SSA outings.
- Resulting positive impacts on community wellbeing were also evident, including renewed interest and investment in own local environments, further developing networks of connection, intergenerational engagement around local nature, and behavioural change.

The following section focusses on answering the three research questions at the centre of the structured, independent evaluation of the SSA programme, and this findings section will be structured according to these. The research question were:

1. **Did 'Silver Saplings Adventures' activities for the various demographics Silver Saplings work with improve wellbeing?**
2. **If improved - in what way was wellbeing improved and what are the broader ramifications?**
3. **What is the overall impact of nature-based interventions on individual and community wellbeing?**

Question 1: Did 'Silver Saplings Adventures' activities for the various demographics Silver Saplings work with improve wellbeing?

Developing an understanding of the meaning of 'wellbeing' for participants

Before discussing the findings proper linking the SSA programme with wellbeing and examining effects identified, it is important to qualify what we mean by 'wellbeing effects'. For the purposes of this research, we asked

each participant to define their own understanding and definitions of wellbeing. This was agreed as the most authentic barometer from which to chart any positive effects, in a manner that prioritised and amplified the voice of the individuals experiencing any effects. As wellbeing is a subjective term and descriptor; representing language to describe a 'state of being' it is only fitting that participants were first asked to define this, before being encouraged to identify, from their own lived experiences of the SSA programme any positive, neutral, or negative effects that they perceived, how these effects came about, were generated, and the length and duration of these effects.

As a collective, the participants described wellbeing in a holistic, multi-faceted sense encompassing social, physical and mental, psychological and emotional aspects, many of which are inter-related. As expected, some aspects of wellbeing were more prominent than others for individual participants, but all related their understanding of the term to one or more of these. Each of these elements will be elaborated on in turn.

Physical aspects

Physical wellbeing was expressed in terms of being mobile, being '*well enough to do things'*, getting out(side), getting involved, being physically active, and achieving a good quality, balanced diet. The interconnectedness between physical and mental health was also described, as evident in the following excerpts:

> '*it's feeling good about myself, you know, being happy content. I mean, I know we can't be like that all the time, but most of the time I I think that, I mean, I go out for a walk everyday for instance...and for me that's essential because that makes me feel good. So you know, well being is about health as well and and you know I kind of feel that walking and being outside keeps you healthy, keeps you physically healthy, keeps your mind healthy too'. (Participant 12)*

> '*Being contented with life and living your best life and eating well and 100 do as much exercise as possible, just generally being healthy if you can'. (Participant 9)*

Social aspects

This was expressed in terms of having '*connections'* with others – in '*being with'* others, socialising and meeting new people (especially important

where relatively new to the geographical area and post-COVID pandemic lockdowns), as highlighted here:

> *'Being healthy and happy and able to get about and mix with people and socialise' (Participant 4).*

Additionally, a sense of being able to *'help'* and share with others was viewed as integral (particularly in sharing knowledge), as illustrated in the following excerpt:

> *'Being able to discuss things and seeing what help and everything and that's how I want to be, that's me at the moment. And understand what they do and why they do it. And to help other people...and engaging in knowledge...to help other people'. (Participant 2)*

Mental, psychological and emotional aspects

This was described in terms of an absence of stress, loneliness and isolation, feeling happy (*'in mind'* and with life), feeling able to cope with everyday life and uncertainties, feeling safe, being mentally stimulated and keeping mentally active (particularly in being interested, involved and engaged with new knowledge and other people – seeing, understanding and discussing), and lastly, a satisfaction gained from 'helping others', and engaging with other people and with new learning/ knowledge, as illustrated below:

> *'I think it's really being able to cope with everyday life with a little bit of extra'. (Participant 5)*

> *'I think it means that you're happy in your mind, with what you're doing and what you're seeing and just happy with life, I suppose'. (Participant 3)*

Underpinning each of these elements is the importance of being and remaining active, physically, socially and mentally. As will be elaborated on in the next section, the SSA very much complemented these various key aspects of wellbeing, by offering opportunities and supporting individuals to flourish physically, mentally, psychologically, emotionally and socially.

Below, these wellbeing understandings have been developed into a typology diagram of participant wellbeing, illustrating the networked effects of the above dimensions upon wellbeing.
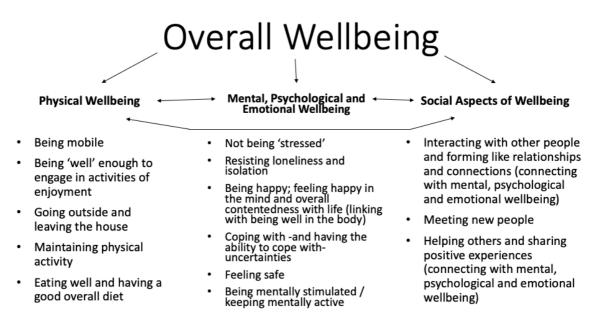
Figure 1: a typology diagram of participant's understandings of what wellbeing means to them

Overall Wellbeing

Physical Wellbeing	Mental, Psychological and Emotional Wellbeing	Social Aspects of Wellbeing
• Being mobile	• Not being 'stressed'	• Interacting with other people and forming like relationships and connections (connecting with mental, psychological and emotional wellbeing)
• Being 'well' enough to engage in activities of enjoyment	• Resisting loneliness and isolation	• Meeting new people
• Going outside and leaving the house	• Being happy; feeling happy in the mind and overall contentedness with life (linking with being well in the body)	• Helping others and sharing positive experiences (connecting with mental, psychological and emotional wellbeing)
• Maintaining physical activity	• Coping with -and having the ability to cope with- uncertainties	
• Eating well and having a good overall diet	• Feeling safe	
	• Being mentally stimulated / keeping mentally active	
	• Learning new things	

Note: all areas of wellbeing are interconnected and linked, as shown by the black arrows.

Answering the first research question, it was clear from our analysis of the interview data collected with participants that the perceived wellbeing of those taking part in the SSA programme was improved as a result. Reasons given for initially deciding to join the SSA varied, but broadly related to one or more of the following: to meet people and socialise; to reignite a previous or further develop an ongoing interest in nature; to visit new places or learn more about their local area. Yet the extent of the actual benefits experienced by attending the group transcended this, as illustrated here:

> *'Mainly I wanted to be in a social group, so that's why I joined it. But when I actually started to go out with them, I found it was really stimulating'. (Participant 1)*

Some described the effects of the programme as *'beyond expectations'* or *'transformational'*, a *'reawakening'* or *'enlightening'*, with a clear desire for the programme to continue beyond its current funding voiced by all participants (and indeed, a few offered that they would be happy to offer a financial contribution towards the cost of attending the SSA or described

fundraising ideas). Improvements to aspects of wellbeing were highlighted and explained for all participants, across all demographics partaking in the sample examined.

The following section elaborates on this finding, answering research question 2, by exploring the ways in which wellbeing was improved through engaging with SSA, as explained by the participants themselves and the broader ramifications of this improvement in wellbeing.

Question 2: In what way was wellbeing improved and what are the broader ramifications?

The SSA was appraised in very positive terms by all participants. Essentially the content and design of the programme complements all the key aspects of this self-defined, multi-faceted sense of wellbeing, as identified by participants. This will now be described, discussed and evidenced according to the physical; mental, psychological, emotional; and social aspects; though again it is imperative to note that firstly. many elements of the programme addressed multiple aspects of wellbeing; and secondly, most participants described very active lifestyles with involvement in other community or social groups, physical activity or volunteering, with their involvement in SSA complementing the wellbeing benefits experienced.

Physical

Being and remaining physically active and mobile was viewed as critical to wellbeing and   also recognised as a core component of the SSA. Each outing involved a walk or physical activity, supported and/ or modified where necessary in line with individual needs, enabling access to some rugged outdoor spaces (such as beaches and riverbanks), which many felt would be otherwise inaccessible to them, as described in the following:

> *'It got me being more keen to walk about and explore and got out rather than just sit in the house all the time'.*
> *(Participant 1).*

One person commented that this could be enhanced even further for those with poor mobility through the future availability of a multi-terrain wheelchair.

Mobility was also discussed in a broader sense in terms of getting to the locations visited. Without being transported via minibus to and from the outdoor locations, many felt that visiting these places would be

unachievable for them (due to lack of transport, or a lack of confidence to visit independently), as illustrated below:

> '*I don't drive, so you can't go to places unless you drive'* (Participant 10).

There were, however, minor criticisms raised around the minibus journey. A participant felt that one driver travelled faster than she was comfortable with which exacerbated her motion sickness. Another found the seating uncomfortable which worsened her joint pain. A further person commented about the lengthy bus journey to get to one particular location.

The types and level of support and care offered by the project workers and volunteers was also appraised in very positive terms, with individuals feeling safe, nurtured and '*taken care of'*, and project staff and volunteers described as going '*above and beyond'* in being sensitive to and meeting individual needs. This was achieved through measures such as supporting people physically (either personally or via walking aids), to get around, explore and take part, offering shelter, warmth and comfort whilst outdoors (through the provision of hot water bottles, blankets, hot drinks and snacks, as well as canvas shelters and seats, and availability of toilets enroute and/ or at the locations visited), providing choice around taking part in activities, as well as offering alternative activities in line with individual needs. Some of these aspects are illustrated below:

> '*'Because when you get to the age of [X], you begin to feel a bit frail if your knees start to go and you're on sticks and things like that, you're afraid of failing. You're not very happy about walking in woodlands, you prefer walking on pavements. And they're so caring, they always look after you, they're always there at your elbow and if you're cold they bring rugs and hot water bottles. They always take hot drinks and cake and you just feel cared for'. (Participant 1)*

One person added that whilst toileting needs were normally planned for and available at all locations visited, there were no facilities on one occasion which necessitated a bus drive to supermarket toilets, viewed as inconvenient.

Social

Developing new friendships and connections to other people was seen as key in terms of wellbeing, and fundamentally facilitated through the SSA by bringing together a group of '*likeminded'* individuals and enabling and

supporting members to get out together and take part in the activities, as illustrated here:

> *'It makes you feel better when you're out socialising...And that in itself, getting out and about and talking to different people, it just makes you feel better' (Participant 8)*

This was viewed as particularly important for those relatively new to their geographical area, or more generally, following the COVID-19 pandemic during which many social groups and opportunities had ceased, as evident in the following excerpt:

> *'It (SSA) opened the world again for me after after the lockdown for COVID. And having moved such a long distance from where all my friends and activities were. I felt very lonely and very isolated…it [SSA] stimulates me mentally and cheer me up and stop being depressed...I think my whole life has been transformed. I would really, really miss it if it were to stop'. (Participant 1)*

Being outdoors with opportunities to discuss and share experiences and knowledge, led a few participants to reflect that they *'got to know'* people better and developed or nurtured friendships with people during the SSA outings that they may have known through other indoor facilitated groups, as illustrated below:

> *'you learn more about them, the people in our group when you're out and about than just sat. If you're just sitting talking...you don't talk about everything. When you're out and about you speak about different things that people have been on, people talk about what they've done previously and that's quite interesting as well'. (Participant 8)*

Further, a few individuals described a new sense of *'belonging'* or group identity resulting from their involvement with part of the SSA.

Mental, psychological and emotional

Going out with the group, being with other people, getting outdoors and into the 'fresh air, were all viewed as having clear mental health benefits, helping to alleviate feelings of stress, depression and loneliness, with the outings referred to as a *'pick up',* as illustrated in the following:

> *'It bucks you up, it gives you something else to think about. I think sometimes if you feel a bit down in the dumps, and you go out to the group...it takes my negative thoughts away and it's something else to concentrate on'. (Participant 8)*

Across the participant group, keeping mentally active through learning and knowledge acquisition was viewed as particularly important to individual wellbeing. Individuals spoke about being keen to learn new skills, or more about their own locale, nature, environmental issues, or other people – all of which were complemented through taking part in the SSA, and experiencing the wide range of locations visited and experiences afforded, as illustrated below:

> *'You know, the plants, I've learned to bake mushrooms, and different things that grow and the trees, which has really enlightened me a lot. I think the knowledge that lots of these people have and just going out and seeing the country, because I come from a City and I think that although we have parks and we have things, here it's around you. And then you want to know what everything is. I'm mainly interested in what's growing and what's coming up. And the walks are good. And as we're walking along they're [project support workers] explaining things to you, it's really good'. (Participant 2)*

This learning was sometimes expressed in terms of *'thinking about things differently'* or *'a bit more'* (particularly environmental issues) often sparking a new curiosity and interest, further independent research or applying new skills afterwards (such as crafts learnt during the SSA sessions), or a new sense of *'achievement'*, as evidenced here:

> *'I mean, I consider myself an intelligent person...but there's always something new that I come home with. And I think I never thought of that or I didn't know that or it's made me look at something and do a bit of research or something. So probably I would never have done that'. (Participant 5)*

Interestingly, whilst the majority had either not heard of the term 'natural heritage' or were aware of the term but unsure of its full meaning, all participants exhibited a clear working knowledge of this as evidenced by their descriptions around their learning via SSA. Further, the vast majority, despite having some prior interest in or knowledge around some aspects of nature, also expressed an improved connection to nature and awareness of environmental issues through their engagement with the programme, sometimes leading to specific behavioural changes, as expressed below.

'And the other thing that I think is very important is the fact that. I know we're trying to protect the World and be greener and encourage wildlife and new forests and all these things. So they're [SSA] increasing my knowledge all the time. Yeah, and because of that, I'm conscious about which charities I'd support and I'm trying to do my little bit, really to make it a greener planet and not pick things that shouldn't be picked, it's just been an eye opener'. (Participant 1)

Repeat visits to the same places were also viewed as mentally stimulating and beneficial to learning, with *'no two visits the same'*, because of seasonal changes to the landscape, different staff and group members on trips or different information shared, as illustrated in the following:

'Well I look forward to it, you know when it's coming up and sometimes it's places have been before this. It doesn't matter because every time you go there's something different, it's a different season you know everything changes all the time. So it's not like you're going back to see the same film, everything's changing. So I mean it's a different experience each time although you're still maybe going to the same place' (Participant 4).

The extent and impact of this learning was discussed in very positive terms and generally described as being beyond what had been expected prior to their engagement in the programme. Whilst the programme and range of activities offered were appraised very positively, two individuals felt that a particular session around 'mindfulness' practices and teachings had been less beneficial for them, both stating that they felt *'too old'* for this type of activity. However, they noted that this was likely a personal disconnect and others may have indeed found these specific teachings and practices helpful and useful. It should also be noted that this these mindfulness practices occurred only as a component of one specific session, where there were also other activities ongoing.

The extensive knowledge of project staff and volunteers, and the quality, quantity and ad-hoc, informal delivery of the information provided was also positively discussed by the vast majority, as evident in the following illustrations:

'...you know, I mean, for me, I don't care what I learn in a day. If it's one thing or more, we've, we've had such fun out with them. You know, it's not like serious learning, it's it's a

> *learning really through walking and talking and and enjoying it'. (Participant 12)*

> *'...I mean the the volunteers and the people that come with us, they're just so kind and thoughtful and knowledgeable and and fun '. (Participant 8).*

Two people, however, recounted specific issues here, with one feeling that the level of detail (around specific names of birds and dragonflies) provided on one occasion was inadequate for her, and another person felt that she was sometimes addressed in a less age-appropriate manner by an individual project worker/ volunteer.

Additionally, learning and sharing knowledge was described as multi-directional – not only from project staff and volunteers to the SSA group members, but from individuals to the wider group, staff and volunteers (based on previous knowledge and interests relevant to the topic of interest), and from the group members to family members (particularly grandchildren interested in nature or already engaged in another Wild Things programme), as well as in other capacities such as a volunteering role. This notion of 'knowledge exchange' was described as both beneficial to both self (own mental stimulation and growth) and others learning, as well as being enjoyable, as illustrated below:

> *'I get to share the photos and speak to them and show them...like we've got all these great pictures of most unusual things and...they're all like...'Wow' there's photos of people inside trees and funny coloured mushrooms...drangonflies, stuff like that. And we can talk about it and then I'll ask my granddaughter what they saw and they did [on their 'Wild Things' trip] and it gives us something to talk about' (Participant 4).*

Lastly, it is important to reiterate that across the participant group, these positive effects on wellbeing were viewed as long-lasting, beyond the confines of the actual SSA outings. This was attributed to being able to remember and reflect on happy memories of the outings, the satisfaction of being able to share these recollections and photographs taken during outings with others afterwards, as well as using, sharing and developing newly acquired knowledge and skills beyond the outings, and very much looking forward to the next trip. These notions are illustrated in the following excerpts:

> *'...you don't know these things are necessarily good for you, but you come back after a day out and you go. yeah, that was really good, I really enjoyed that. And it's just a good feeling about being together and, you know, having learned*

something, having just learned about a new place, learned about new things out in the environment there, or even doing a craft activity with them, you know, I don't think any of us had ever done any weaving before or any whittling before, you know, it's that...I wouldn't say it wears off it's something that if you keep doing it, then yeah, and there's a continuity about it in terms of enjoying it'. (Participant 12)

'When I get home, I'll tell my husband about it. And he says, 'oh, that's really great. And when we go back to the ball group, we're all talking about it. How fun it was, or if we didn't like certain aspects of it or what we did like, you know, would we do it again?..I can't remember all the plants and all the tree names and everything, but I tried my best. But you know everything else and it it makes me feel good. It's like me going swimming in the sea for 5 minutes or 10 minutes. I come out refreshed'. Participant 6)

Essentially, SSA offers the 'perfect blend', in terms of the organisation and facilitation of the programme and activities and clearly promotes improvements across key aspects of wellbeing for participants (with only minor critical points highlighted for consideration). In terms of the broader ramifications, these findings underline the importance of: accessing and making accessible outdoor spaces to promote multiple aspects of wellbeing; learning throughout the life-course/ later-life learning and knowledge-exchange utilising creative methods and ad-hoc opportunities; and fostering 'networks of community and friendship'. This leads onto addressing Question 3 below, specifically looking at the overall impact of nature-based interventions on both individual and community wellbeing.

Question 3. What is the overall impact of nature-based interventions on individual and community wellbeing?

Overall impacts upon community and wellbeing are best characterised by drawing together the findings from the second research question, remaining mindful that the impacts of the SSA nature-based intervention at individual and community levels were interlinked in effect.

Primarily, individual effects saw participants engaging in the SSA assert that the programme had improved their subjective perceptions of their own wellbeing. As demonstrated in Question 2, the mechanisms of this perceived increase in wellbeing effect were multifaceted, driven by combinations of the formation of new networks of society; meaningful friendships with others that developed as a product of meetings, and engaging together in activities arranged by SSA. For example, speaking to

linkages between the social aspects of the SSA programme and wellbeing affect, one participant explained:

> "I love walking and seeing things; doing and learning things and just the experience really. It's nice and it's social. [There are] friendly, informative and helpful staff on the trip. And I've learned new things on every trip, which is great and it bridges the age gap as they work with young and old. And a lot of people, not so much me, but a lot of people on the trips know lots of things that people are learning from each other…" [Participant 4]

Physical supports and engagements also played a significant role for individuals, some participants stating that they felt actively supported to engage in activity and movement which they may not have engaged in otherwise, should they have remained inside; absent of the context and contact with others and not been supported within a collective to visit a nature-based and learning environment. In addition to these considerations, several participants voiced that the inclusivity of SSA arrangements to cater for those who had reduced physical mobility was a significant factor in facilitating their engagement in social and learning activities that enhanced their wellbeing. Thus, such participants felt routinely included; encouraged towards activities that enhanced wellbeing, as opposed to their reduced mobility driven by either physical factors or aging, operating as a barrier. This was explained best by one participant.

> "[They] take elderly people out who haven't got the chance to go out themselves, and seeing that my husband was dead and I was having trouble with my knees. I wasn't driving. So, it was that was to be taken out and to be able to see the countryside and it was fine [good] countryside to me because all the place names are totally unknown. Yeah, when they said when we go [to such-and-such a place] and I have no idea where that [was]. Well I've never heard [of it]. It's very good - definitely geographically getting to know the area by being taken out in the minibus where I could look out and see the route, you know, and not be worrying about trying to jump around the map" [Participant 1].

Speaking to the mental, psychological and emotional benefits, these were explored a number of times by different participants, networking with the themes discussed in the previous section. Namely, participants felt that being in the outdoors, in a positive learning collective and collaborative - safe- environment, where their comfort needs were acknowledged, fostered an ideal platform to develop changed thinking on a range of

perspectives. Most saliently, thinking regarding later-life learning was a dominant theme within these narratives. Participants spoke of how -prior to attending SSA-Adventures, they held a more 'traditional' perspective upon their life-course; participant narratives suggesting many felt that learning and adventure occurred primarily in early-midlife. However, following engagement with the SSA programme, participants experienced a renewed sense of ability and engagement with new learning activities. This took the form of a reinvigorated perspective on learning possibilities experienced by participants; participants focussed on engaging more in learning, becoming active in the development and sharing of knowledge with other SSA attendees, and actively looking forward to new learning opportunities in their futures. This illustrated a dramatic change in perspective, triggered by attendance at SSA events. It should be noted this effect appeared most pronounced in those who had attended multiple SSA events and had been engaging for lengthy periods of time, participants often reminiscing and reflecting on their learning experience long after the actual learning event had finished. One participant explained this:

"I couldn't manage without them. I really couldn't… and I really look forward to it, you know, and it's just, they're just such lovely people and so kind. [...] But you know, [now] I'm looking at this, they've got a thing of a map here of them, different plant life. And it reminds me of when we went to the wildlife thing, you know, and they were finding all different bugs. And we found a toad. It does increase your knowledge of things and keeps your mind active and it gives you conversation. I mean, we often; the [whole] group of us that go we often sit and talk about what we did when we did it and how lovely it was. We're still talking about the visit to Elgin Museum two weeks later, you know?" [Participant 9]

Turning to community wellbeing, the above individual effects were felt in an overall community perspective. Unpacking this, the SSA programme provided a bespoke community platform for bringing individuals together; providing a unique, supportive, inclusive and safe space for the above interlinked wellbeing effects of occur.

A wider impact regarding this links to the aforementioned point discussing the impact of later-life learning upon participants. While the effect of this was individual when considering the impacts upon wellbeing, the impact of this was collective. After engaging in the SSA programme, participants developed a keen interest in local nature occurrences and local histories; some discussing how these effects translated to renewed interest in their own gardens and direct local environments – the green-space areas immediately surrounding their houses. At times this renewed interest focussed on the presence of different types of birds, different plants; flora

and fauna or simply the landscape and layout of different views and perspectives visible within the local landscape. Further collective wellbeing effects were found when considering the potential of the SSA programme at forming networks of connection between participants. While these networks were certainly developed as a product of participants engaging with the programme, our evaluation uncovered tentative evidence that such networks had the potential to develop further and become self-perpetuating solid networks of recruitment for new attendees to SSA. For example, once participants began to engage with the SSA programme, they rarely (if at all) resigned their involvement from the programme (not one case was reported in our evaluation). Rather, participants attended as many sessions as they were able, exalting the benefits of the program to their wider networks. For this reason, participants may recruit their own contacts into the programme and integrate their personal networks with the networks constructed within -and by- the SSA programme. Further, in terms of community wellbeing, as discussed in the previous section, engagement with the SSA programme instigated an intergenerational sharing of new knowledge around local nature and natural heritage, potentially sparking an interest and investment amongst younger people in the community. Lastly, there was evidence of increased awareness leading to behavioural changes, around recycling habits, supporting environmental charities and engaging in litter picks.

Summarising the above findings, the Silver Saplings programme generated -as told by participants- multiple dimensions of increased positive wellbeing. Primarily, this was achieved on an individual level by the interlinked themes of developing social connections, community and friendships within the context of nature and linking with ongoing, later-life learning, the promotion of care, kindness and inclusion when it came to facilitating physical wellbeing; engaging persons into nature with suitable considerations for their abilities, and facilitating a shift in perception regarding the ability to learn new things in later life, linking directly to nature. These effects were also felt collectively, SSA participants developing new -renewed- networks of contacts and friendships in the above context and sharing their positive learning experiences within such spaces in reflective, contemplative and inclusive manner. Thus, the effects upon wellbeing generated by the SSA programme were interconnected between individual and community benefit; participants experiencing many benefits on both concurrent individual and collective levels and sharing the positive benefits with others as a mode to form connections, heighten the SSA experience and further promote and develop collective nature-based learnings.

4. Discussion

Discussion – Chapter Highlights

- The SSA programme stands out for its bespoke approach to each activity session; evolving and adapting based on participant feedback. The iterative process fosters engagement and ensures that activities remain varied and relevant, contributing to participant engagement.
- Participants in the SSA programme reported lasting positive effects beyond the immediate nature experiences, including increased community engagement, renewed interests in local environments, and ongoing development of social connections. This suggests a unique ability of the program to facilitate the transference of wellbeing benefits into participants' daily lives, extending its impact beyond the program itself.
- Through fostering connections, shared interests, and community engagement, the SSA programme generated social capital among older adults. This aspect, coupled with opportunities for independent decision-making and lifelong learning within the SSA program, contributed to the overall wellbeing of participants, aligning with current research on ageing well and longevity.

The SSA programme presents a bespoke collection of initiatives, networking together different components that promote enhanced wellbeing for participants, that occurs within nature-environments and involves later-life learning.

Most salient regarding the SSA programme is the bespoke content of each activity session, these varying over time and taking on different nature and learning activities that occur outdoors in different parts of the North-East of Scotland, developing variety and promoting engagement via a constantly changing learning environment and landscape; always developing new programme components to engage participants with. In our discussions with both participants and the course developers and volunteers, it was highlighted that each session is constructed in an iterative manner; developed to factor the feedback given from each past session. This highlights a degree of informal nuancing to each SSA session; the facilitators, volunteers and leaders all operating 'in tune' with the participants' requirements and needs, fostering open communications and engaging in ongoing dialogues to 'check-in' with how participants are doing as each session progresses, and which parts of the day participants are most receptive to; how and why. While this formal analysis of the SSA programme represents the first qualitative endeavour to track the impacts of the programme upon participant's wellbeing, and our feedback will be utilised to further refine the programme to maximise wellbeing, it is undoubtedly evident that a process of ongoing revision and care is already being ongoingly engaged in, to ensure the SSA programme represents the most effective wellbeing intervention for participants.

Both the above iterative 'variety perspective' of the SSA programme, and the informal ongoing evaluation process is different to most programmes evaluated by current literatures, where programme learning environments

are often static, or are simply defined as 'green space' locales, and feedback is gathered more formally at designated points prior to this feedback influencing programme content or parameters.

The above reflexive perspective of the SSA programme adds a degree of novelty, appearing as a key component of generating the successes of the programme; actively factoring the voices of participants interviewed. Linking this to existing studies, Noordzij et al., (2021) discusses the perspective of nature; green-space effects on the wellbeing of individuals situated within -and visiting- these spaces, suggesting -from the mixed results of their own study- that it may be more important to focus upon *what* occurs within nature spaces as a mechanism of influencing wellbeing, as opposed to simply the practice of persons being immersing within green-space in itself as a mechanism of generating wellbeing. The components of the SSA programme speaks to this: the voices of participants highlighted that, while immersion in nature was -in itself- beneficial, wellbeing was largely conjured by the combined components of the programme; developing social cohesions and new community links between participants, fostering care and concern for individuals wellbeing, promoting learning and connectedness via reflexive ad-hoc discussions surrounding nature-related knowledge generated and how individuals held different perspectives upon this. This is also very much in line with current and well-publicised thinking around aging well and longevity, where having social connections and a sense of purpose are as key as diet and movement (Buettner, 2021).

In addition to the above, much research localises the effect(s) of nature-based interventions and green-space exposure, citing these as temporal or transient effects linked to location in the green-space or nature locale. However, the SSA programme demonstrated that positive wellbeing effects lasted beyond the initial -contextual- period of time participants were immersed in a given nature experience. Participants highlighted accounts of reminiscing over the positive effects and learning experiences, community connectiveness and knowledge gained; spending much time thinking about their past experiences, *reliving* such experiences once situated back at home, looking forward to opportunities for new experiences, and translating the positive effects and knowledge of such experiences more locally. This occurred via participants engaging in renewed interests in nature-based learnings, observations and discoveries in their immediate home locale, such as their own garden. All of these points evidence a significant -lasting- process of transference occurring as a result of the SSA programme, something seemingly unique to the programme's ability to generate wellbeing effects that translate and carry ongoing effects beyond the locale within which they were first developed.

The above findings also network with Robertson et al.'s (2022) work exploring the importance of generating agency for older adults as a route

to promoting wellbeing. Namely, our evaluation of the SSA programme pointed to this as promoting the development of agency by facilitating opportunities for independence; for example, participants having their own autonomy in deciding which adventures to attend (or not) and being provided the means and support; transport and facilities to attend adventures of their choosing. Thus, SSA were not positioned as a mandatory 'attend all' initiative, where complete attendance was suggested as a requirement to experience any wellbeing benefits. Autonomy was underpinned by an awareness of older individual's travel and transport requirements; providing transport, catering and comfort facilities. Individual's interviews -at times- exalted the benefits of their optional choice to attend specific sessions of their choosing; discussing how this placed involvement choice on the individual. However, it should be noted everyone we interviewed attended regularly and all available sessions where possible, but; the option of choice was positioned as valuable.

Perhaps one of the most significant components of discovery that arose from our evaluation was the promotion of development of social capital for older individuals attending the SSA programme. The role of social capital in developing community networks and individual and collective wellbeing has been explored within other research (Nyqvist et al. 2016, 2013). Linking with this, some existing studies explored the benefits of lifelong learning as promoting overall community wellbeing (Merrian & Lee, 2014). We argue that the SSA programme effectively links these two components as one of the core promotional factors to wellbeing.

Social capital refers to a shared set of values and beliefs that operate to link together groups that have a common purpose. It can be broadly understood as a construct that brings people together into states of interaction and connection (Bhandari & Yasunobu, 2009; Nyqvist et al., 2013). Some scholarships suggest an active decline in social capital as individuals get older (Clark, 2015; Gray, 2009), some correlating this with increased loneliness (Nyqvist et al. 2016), a known detriment to wellbeing as individuals age (Tani et al., 2022; Woolham et al., 2013).

The process by which the SSA programme linked individuals together into connective communities could be best described as generating social capital. In particular, the social, and the mental, psychological and emotional dimensions of wellbeing effects discussed, all speak to the generation of social capital for older individuals. Drawing together the findings discussed previously in this section, participants were encouraged to develop cohesive networks within groups, linking with shared interests, values and goals. Re-examining the content of interviews, all participants spoke of an acute desire to connect with others, engage (and reengage) with communities in an independent manner dictating the localisation of their own choice in engagements, and to develop new branches of interests and shared interests with new people; connecting, making new friends and

joining new communities. This was achieved by those joining SSA; participants rapidly becoming part of a new group -a collective- of shared interests with whom they could discuss the learnings they had collectively shared within, as facilitated by the SSA programme. Not only did the programme operate as a conduit to bringing people together into this collective group, it also fostered the knowledge and communication materials for individuals to host their own conversations with, opening connections between persons and facilitating the building of relationships based on shared values, experiences and perceptions. Thus, the facilitation of social capital in older adults may be one of the key components by which the SSA programme generated positive wellbeing effects, when considering the current scholarly evidence linking the development of social capital in older adults with later-life learning and -overall- wellbeing improvements.

Summarising findings and evidence together: the SSA programme effectively links together the most beneficial components of green-space and nature-based wellbeing programmes highlighted by other literatures, in a manner that develops benefits for participants that connect different effects into a coherent and overlapping wellbeing initiative. The programme brings together immersion in nature and greenspace, with later-life learning and the generation of social capital for older individuals, while maintaining individual autonomy and agency. For these reasons, and following the evidence generated in our investigation and details in this report, the SSA programme significantly influenced participants perceived wellbeing in positive ways.

4.1. Strengths and limitations of the Evaluation and Future Work

It is prudent to be mindful of the limitations of our sample and study. Speaking to the demographics of the persons sampled, all participants were white British females. This was perhaps reflective of the typical demographic of SSA users, some participants discussing that women were the primary gender attending SSA programmes. Reflecting upon why this was the case, some participants volunteered information about the framing of SSA programmes, linking these –at times- to being depicted or perceived as 'coffee mornings', 'get togethers' and 'friendship groups', for these reasons, further investigations may be beneficial in understandings whether there is a gendered relationship between the perception of SSA linking with the above descriptors being more attractive to women and less attractive to men. Speaking to similarities in sample age, gender, and ethnicity: future research would benefit from recruiting more diverse samples, including male voices to validate experiences and highlight any areas for improvement, and ascertain any age-related or cultural differences that could impact the effects of activities that this sample perceived to improve wellbeing. This would offer an additional layer of validity to evaluation and strengthen or challenge existing findings with the

additions of new data. Further, our evaluation focussed mainly on individual wellbeing, and whilst some insights around the impact of SSA on community wellbeing were offered, the area of community wellbeing merits further consideration and investigation as an area in itself, which again could be explored more directly in further in future research. Also, as a further body of work, consideration of the other SSA programmes to increase understanding on our understanding of individual and community wellbeing is merited.

With regards to transferability of findings: it is reasonable to expect that, given the positive findings of this evaluation, other streams of Silver Saplings wellbeing-focussed programmes that follow similar structure to the programme subjected to this evaluation may have similar positive effects, provided structural components generating this effect; outdoor context and learning are similar. However, expectations of a direct translation of wellbeing effects should be tempered. This is namely because of the tightly ranged –small and similar- sample of participants evaluated for this research; all being of similar demographics: age, gender, ethnicity. Also, as explored in our analysis, building connections, generating community, and building social network and capital and later-life learning played roles in the generation of subjective wellbeing for participants. Thus, and following some existing research, these effects may be lesser in younger groups who already have high social capital, and manifold networks of connections. A natural next step of evaluation, which would significantly investigate and answer the question regarding translatability of findings would be to evaluate an alternative Wild Things programme focussing on improving wellbeing, where the attendees were of different age and with more diverse gender and demographics to the sample examined for this research.

Next steps for future research

As above, a salient next step would be to conduct an analysis of a different Wild Things programme stream, where the attendees are of different ages, diverse gender and demographics. This is to ascertain any direct translatability of findings from this study to another sample.

5. Conclusions

Conclusion – Chapter Highlights

- Our evaluation revealed that the SSA programme boosts wellbeing for older participants in Scotland. By connecting people with nature, fostering social ties, and promoting ongoing learning, the programme enhances holistic perceptions of wellbeing for participants.

- The SSA programme's emphasis on community engagement and knowledge exchange fosters social capital among older adults, countering social isolation and empowering participants.

- While mostly positive, our study highlights the need for diverse samples to validate experiences and explore potential gendered perceptions. Future research should consider age-related and cultural differences, cautioning against direct translation due to sample homogeneity and the role of social connections.

- Ongoing support, investment, and structured evaluations are crucial for similar nature-based initiatives. Assessing programmes with diverse demographics can reveal best practices for maximising wellbeing outcomes among older adults.

In conclusion, our structured evaluation of the Silver Saplings Adventures programme has illuminated its significant positive impact on the wellbeing of older participants within the Moray, Aberdeenshire, and Highlands areas of Scotland. Through engaging with nature, developing and fostering social connections, and facilitating ongoing learning experiences, the programme has demonstrated its effectiveness in promoting holistic wellbeing encompassing subjective and participant-defined physical, social, and mental dimensions. Participants reported improvements in mobility, social engagement, and emotional resilience, with lasting effects extending beyond the duration of each specific programme outing. Moreover, the programme's emphasis on community engagement and knowledge exchange contributes to the development of social capital among older adults, countering trends of social isolation and fostering a sense of belonging and empowerment. These findings underscore the importance of nature-based interventions in enhancing individual and community wellbeing, highlighting the need for continued support, investment and structured evaluations linked to similar initiatives. While findings are largely positive, our study recognises limitations in the sample's homogeneity, consisting solely of white British females, prompting the need for more diverse samples to validate experiences and explore potential gendered perceptions of SSA going forward. Future research should consider age-related and cultural differences impacting wellbeing effects, and explore community wellbeing further. While similar programmes may yield positive effects, caution is advised in direct translation due to the present sample's homogeneity and the role of social connections in generating wellbeing, suggesting potential differences may be present when evaluating younger groups with already-established social networks. Further evaluation of alternative programmes with diverse demographics is recommended to assess translatability accurately.

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Appendix

Appendix 1: Robert Gordon University and Wild Things (Silver Saplings) contract agreement

ROBERT GORDON UNIVERSITY ABERDEEN

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For the attention of:- Luke Strachan
Chief Executive Officer
Wild Things!

Date: 31/07/2023

RGU Reference:- Project 1953000/Contract 2023287

Dear Sirs,

LETTER OF AGREEMENT FOR PROJECT ENTITLED:-

AWARD:- Fourteen Thousand, Seven Hundred and Twenty-Five pounds and thirty-nine pence sterling (£14,662.94 sterling GBP) from the attached budget at part 3 of the Schedule
FUNDER:- Wild Things! Environmental Education in Action, a company registered in Scotland (Company registration number SC251691), and whose registered address is at The Findhorn Village Centre, The Old School, Church Place, Forres, Moray, IV36 3YR ("Funder")

Whereas:-

A. We, **ROBERT GORDON UNIVERSITY**, a body corporate incorporated under The Robert Gordon University (Establishment) (Scotland) Order 2006, a Scottish Charity (Charity Number SC013781) and having its principal administrative office at Garthdee House, Garthdee Road, Aberdeen, AB10 7QB ("**RGU**") have received the above Award from you, the Funder.

B. The Award shall be used to fund the work carried out by RGU on the Project.

Now it is hereby agreed by RGU and the Funder:-

1. RGU and the Funder agree that the Project shall be carried out according to the terms and conditions specified in this Letter of Agreement (the "**Agreement**"), including a detailed account of the tasks to be performed as per the proposal in part 1 of the Schedule attached hereto and made a part of this Agreement (the "**Project**").
2. Words with a capital that are not defined herein are defined and detailed in part 2 of the Schedule attached hereto and made part of this Agreement.
3. The Project shall start on 1 September 2023 (the **"Commencement Date")** is expected to terminate on 29 February 2024 unless an extension is agreed in writing between RGU and the Funder.
4. RGU's part of the Project will be undertaken and managed by Nick Adams and Emma MacIver, both of School of Nursing, Midwifery and Paramedic Practice at RGU reporting to Funder's representative Luke Strachan.

Vice-Principal Research
Professor Nicholas Fyfe
MA PhD FAcSS FRSA

INVESTOR IN PEOPLE

Robert Gordon University, a Scottish charity registered under charity number SC013781

If either of the above representatives are unable to continue on the Project, the Party affected will endeavour to appoint a successor as appropriate and notify the other Party without undue delay of the details of any proposed replacement.

5. Words with a capital that are not defined herein are defined and detailed in part 2 of the Schedule attached hereto and made part of this Agreement.

6. Award and Terms of Payment
   6.1 The Award (as per Part 3 of the Schedule) is exclusive of any applicable VAT.
   6.2 Invoices shall be sent quarterly in arrears. The invoice shall mention the Funder's reference: "Silver Saplings"
   6.3 The Funder shall settle any invoice issued by RGU within 30 days of the date of the invoice.
   6.4 If the Funder fails to make any payment on the due date then, without prejudice to any other right or remedy available to RGU, RGU shall be entitled to:
   (i)withdraw from or suspend any further performance of work on the Project; and/or (ii)charge daily interest at the rate of two percent (2%) per annum above the base rate of the Bank of Scotland from time to time in force on any overdue or unpaid amount from the due date for payment

7. Each Party acknowledges and confirms that nothing contained in this Agreement shall give it any right, title, or interest in or to any Background of the other Party, save as explicitly granted by this Agreement.

8. Notwithstanding the terms of Clause 7, each Party grants to the other Party a non-exclusive, non-transferable, royalty-free licence to use its Background for the duration of this Agreement for the purpose of conducting the Project and for no other purpose. All licences granted under this Clause 8 shall terminate automatically on completion or termination of the Project.

9. Each Party shall own their own Foreground it generates . Each Party shall grant to the other a non-exclusive royalty-free, fully paid up, revocable, non-commercial licence to its Background and Foreground for non-commercial purposes. In the event that a Party needs to use the Foreground for commercial purposes, an appropriate agreement will be negotiated between the Parties.

10. In accordance with academic practice each Party shall be entitled to use all Foreground for any purpose including but not limited to academic research and teaching, scientific publications subject to clause 14.

11. RGU shall use reasonable endeavours to ensure the accuracy of the work performed on the Project and any Information given but it makes no warranty, expressed or implied, as to accuracy and accepts no responsibility for any use by the Funder of any Background or Foreground, nor for any reliance placed by the Funder on RGU's Background or Foreground, nor for advice or Information given in connection with the Project. All conditions and warranties are hereby excluded to the maximum extent permitted by law. In particular, RGU makes no warranty about the correctness of RGU's Background or Foreground, its suitability for any particular purpose or the safety of using it.

12. Nothing in this Agreement limits or excludes either **Party's** liability for
    a. Death or personal injury;
    b. Any fraud or any sort of liability that by law cannot be limited or excluded; or
    c. Any loss of damage caused by a deliberate breach of this Agreement.

    Subject to the above, the liability of one Party to the other for any breach of this Agreement shall not extend to any indirect damages or consequential losses, even if the Party bringing the claim has advised the other of the possibility of those losses or if they were within the other Party's contemplation.

13. Outputs for this Project are as per the proposal appended at Part One (1) of the Schedule.

14. Any announcement or publicity in relation to the Project by either of the Parties shall first be approved in writing by each of the Parties hereto within 28 days of receipt. Each Party shall unless otherwise requested acknowledge by name the other Party in all publicity relating to the project.

13. Any information that has been confirmed as Confidential Information by the disclosing Party that is exchanged between RGU and Funder will not without prior written consent, or as otherwise required by law, be used, published, or disclosed.

14. RGU and the Funder may make certain information relating to the Project public in accordance with usual academic principles and nothing in this Agreement shall inhibit this.

15. The Parties shall procure that in carrying out the Project they will comply with all applicable laws, regulations and statutes relating to anti-bribery including but not limited to the Bribery Act 2010.

16. This Agreement shall in as respects be construed and interpreted in accordance with, and governed by, the Law of Scotland, and the Parties prorogate the jurisdiction of the Scottish Courts.

In WITNESS WHEREOF, these presents comprising this, the Schedule (and all 3 parts) and the preceding 2 pages are executed by the Parties as follows:

Signed for and on behalf of ROBERT GORDON UNIVERSITY:

At Aberdeen..   Witness ………………………………..….

on   Name ………………………………….

……………………………………………………..

    Address ………………………………….

by Nicholas Fyfe   ………………………………………….

……………………………………………………..   ………………………………………….

Position Vice Principal for Research

Signed for and on behalf of Wild Things! Environmental Education in Action:

at Wild Things, FVC, Findhorn, Forres, Moray

on 11.10.2023

Witness _Elspeth Nairn_

Name ELSPETH NAIRROCKI

by LUKE STRACHAN

Position CHIEF EXECUTIVE OFFICER

Address WILD THINGS, FVC,
FINDHORN, FORRES, MORAY
IV36 3YR

THIS IS PART ONE OF THE SCHEDULE REFERRED TO IN THE FOREGOING LETTER OF AGREEMENT BETWEEN RGU AND THE FUNDER

Phase 1 – Initial Evaluation:

Existing Data

The plan for this initial phase is for a structured evaluation of existing qualitative and quantitative data already collected. The purpose of this phase is:

- To assess If and how this data can be used and what it can tell us;
- How much data has been collected;
- How data is stored;
- What kind of data has been collected and the data particulars, evaluate any analysis already undertaken;
- How existing data may be used to structure and inform a more in-depth evaluation design.

Selected Workstreams

Following appraisal of the data and its particulars, we will likely be in a better place to evaluate how much time it would take to structure an appropriate evaluation of the program. Following discussions within the group, we think the best approach to an evaluation may be to select one or two of the existing project workstreams to evaluate. This is opposed to attempting to develop a suitable evaluation program for all overarching and different Silver Sapling workstreams and programs. The reasons for this are many, but -broadly- it would likely comprise a stronger, more thorough, and more scientifically and methodologically sound evaluation to sample a select number of individuals from a wider demographic and geographical area across two project workstreams, versus sampling an equal number of individuals but drawing these from a larger number of Silver Saplings programs. This proposed approach avoids the issue of collecting a wide sample of data where the sampling is too diverse to infer transferability of the findings to other Silver Saplings programs and workstreams. For example, if we were to only sample two or three individuals from each program, this is likely not a sufficiently large sample to demonstrate an affect generalisable for the whole program, as it is 'only' the experiences of two or three individuals. As such, it would be better to concretely evaluate for positive affect in one or two programs and focus on developing a basis for transferability of findings to the other programs, rather than 'spread the evaluation thinly'. If we move forward with this, myself and Emma would plan to:

- Ask program attendees to complete a short questionnaire about their experience attending the Silver Saplings program(s) under evaluation. This may be a questionnaire we send to a larger number of individuals.

- Conduct MS Teams interviews with a purposefully selected sample of individuals, which is likely to be a relatively small sample of individuals.

THIS IS PART TWO OF THE SCHEDULE REFERRED TO IN THE FOREGOING LETTER OF AGREEMENT BETWEEN RGU AND THE FUNDER

DEFINITIONS

The following terms shall have the following meanings in the foregoing agreement:

Agreement means this letter of agreement together with the Schedule (and all 3 parts) which is incorporated into, and forms part of, this agreement;

Background means such Information (other than Foreground) and Intellectual Property, which is introduced to or is used in implementation of the Project and which at the date hereof is in, or during the continuance, and other than as a result of, the Project comes into the ownership or control of a Party and which such Party is free to disclose.

Confidential Information means any information (including samples, materials, drawings, specifications, photographs, designs, computer code, computer programs, software, data, formulae, processes, know-how, any technical or commercial information), reports, papers, correspondence or documents which is disclosed by or on behalf of one Party to the other, or to any of such other's employees, directors, officers, advisors or representatives, in whatever form, (including written, oral, visual or electronic), and which is, or which should reasonably be expected to be, of a confidential nature;

Foreground means such Information (other than Background) and Intellectual Property, which is developed and/or created after the Commencement Date, or during the continuance and as result of the Project comes into the ownership or control of a Party and which such Party is free to disclose.

Information means all and any information including, without limitation, samples, drawings, specifications, photographs, designs, computer code, computer programs, formulae, processes, software, any technical or commercial information, reports, papers, correspondence and documents of any kind, and including oral information if subsequently confirmed in writing within forty five (45) days after the disclosure thereof;

Intellectual Property means patents, design rights, (both registered and unregistered), semiconductor topography rights, database rights, copyrights, confidential know-how and any other form of intellectual property protection either arising automatically at law, or arising further to any statutory procedure and including any application for the same in any inventions, designs, trademarks, computer software, reports, drawings and other works and information;

Party means either RGU or the Funder;

Parties means both RGU and the Funder;

Schedule means the Schedule in three (3) parts annexed to this Agreement and which shall be deemed to form part of this Agreement.

Appendix 2: Visual Depiction of Themes Emerging from Interview Data

Q1 (1) Overview of Participants, how heard about SS + reasons for engagement

Did SS Adventures improve (H or) Wellbeing for various demographics SS work with.

— do we need to explore difference btwn H.

1) Establish what is meant by wellbeing for participants (Subjective understanding) (we did not use measures) SEE Part ① on "Definitions of Wellbeing - develop typology.

2) Improved sense of W·being for all participants in some aspects relating to their social, physical, mental, psychological / emotional wellbeing — impacts / experiences "beyond expectations", "transformational" etc. Link in here reasons for joining - eg ① Social aspect / to meet people (new to area / post-lockdowns in C19 pandemic) ② having previous interest (hobby or career-linked) in nature). ③ Wanting to find out more about local area. Experience was above + beyond this because of 'blend' of what SS Adventures offers. [staff care / feeling 'nurtured + supported, level of quality knowledge]
— Highlight here the minor criticisms also (outliers)

Q2

(i) In what ways was H or W·being improved?
→ see Part ② - How does SS Adventures complement W.B?

ii) What are the broader ramifications?
> SS Adventures addresses all of the key areas contributing toward "wellbeing", hence its positive impact. / Perfect blend?
> transformational impact on users.
> learning in later life / throughout the lifecourse / knowledge exchange is key in terms of this. models of learning - ad-hoc, play rather than formal.
> Older age can be a time of positive growth - SS very much fosters this - opposed to decay in social capital of older people. (also linked to Erikson's life stages)
> SS Adventures v. much based on social model generativity over demographics - recruiting other demographic groups vs stagnation

Q ...is the overall (impact) of (nature-based)
...ntims on (individual) + (community wellbeing)?
...to discuss?
1) what do we mean by impact, nature-based, individual + community wellbeing? Prob. need to define?
2) would this intervention have been as successful if not nature-based? importance of being outdoors / fresh air, previous interest in nature, exploring new places, improved connection to nature. ad-hoc learning.

[blue sticky note:] Community wellbeing is key in positive e social + cultural, environmental, political conding, enhanced by...

[right margin:] rejuvenation, sharing + community passing on some evidence of behaviour change re: env. issues by giving back...

Definitions of Wellbeing

What constitutes wellbeing? — Holistic — Multi-faceted

(sticky note) Awareness/ability to gain an understanding of wellbeing OR things which made individuals feel good

SOCIAL
Connections to other people
- helping others
- sharing knowledge with others (2 ways)
- Being with others & socialising / meeting new people (esp. if new to area)

PHYSICAL / BEING MOBILE
Keep up well enough
- to do things
- getting out & getting involved | Being Active or exercising
- good diet / eating well (#1)
  (feeling nourished / cared for etc)

MENTAL / PSYCHOLOGICAL / EMOTIONAL
- Absence of stress
- Absence of loneliness | Addressing loneliness / isolation (esp if new to area / post-pandemic)
- feeling happy ("in mind" + with life)
- feeling "able to cope" with life + its unpredictability (sense of 'balance')
- feeling safe
- mental stimulation ("see, understand, discuss") being interested + involved / engaged — Knowledge acquisition (L.L.L.)
- satisfaction of 'helping others' + 'engaging' with others + sharing Knowledge (family, children, friends + in volunteering capacity).

(sticky note) any desire for trips to continue development + progress + friendship ideas

Being 'Active' is multi-faceted also:
- physically active ← support to be mobile
- socially active ← arranging group based outings
- mentally active ← knowledge acquisition by sharing + mentally stimulated
(SS Adventures facilitate each).

How DOES SS Adventures Complement this Sense of Wellbeing?

(sticky note) IMPACTS / EXPERIENCES / EXPECTATIONS "BEYOND EXPECTATIONS"

fosters curiosity + interest

- sense of belonging / group identity
- getting out in the fresh air / outdoors
- Being Enabled + Supported to be mobile + take part (mobile- on an individual level, ie: support to walk + move + on a wider level - to get to the location, ie- transported).

- Going out with the group "bucks you up", is a "pick up", helps to avoid depression + feeling less stressed.
- social / friendships / meeting new + like-minded people (esp. if new to area + post-pandemic) getting out from own 4 walls. "going out" stimulates discussion
- feeling "taken care of", safe & nurtured (shelter, blankets, hot water bottles, refreshments, walking support) all key id allowing individual to engage
- learning about own area / places unknown / nature unexplored in area (Adventure); new skills; other peo
- thinking about things "differently" / "a bit more" (environment)
- fosters curiosity + interest (own research) + applying skills (eg. arts + crafts)
- "feeling challenged, challenging self, pushing own boundaries, sense of achievement (physically + mentally, pushing "out of comfort zone")
- Being "Enabled" + "Supported" (inclusivity)
- Knowledge (2-directional: from group leaders to members + from members to leaders + peers)
- High quality of Knowledge / information
- Even repeated visits are mentally stimulating bc changing landscape, seasons etc into impact, different people etc.

(in red) S.S. Adventures addresses all of the key areas contributing toward "Wellbeing" here its positive impacts — SENSE OF 'TRANSFORMATIONAL' REAWAKENING, ENLIGHTENING

Effective / lasting (reflections, sharing knowledge + memories + photos. Anticipation of next Adventure).

(sticky note on right)