

Life Transitions: Well-being and Physical Activity

An evaluation of physical activity interventions in
Ipswich and Stowmarket

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LOTTERY FUNDED



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EXECUTIVE SUMMARY

This report is based on quantitative and qualitative data gathered between April 2017 and April 2018, as part of the University of Suffolk's evaluation of physical activity programmes and their impact upon activity levels and well-being in Suffolk, specifically Ipswich and Stowmarket. A total of 63 stakeholders were consulted via focus group interviews, including participants and activity leaders across five different organisations. As well as focus group interviews, validated baseline and comparison questionnaires were collected from 53 participants from the same group.

Well-being during key life transitions, such as movement between educational institutions, movement from education into working life, as well as transition from working life into retirement, is the key focus of this report. Research suggests that psychological well-being as well as social and self-identity is at risk during these transition periods. Group physical activities, in addition to having both physical and mental health benefits, also provide a medium for engaging individuals and creating a sense of belonging, community connectedness and social identity.

This evaluation presents preliminary findings for an incremental increase in self-reported well-being, as well as positive influences on social connection and group identity reflected across participant narratives. There was also an incremental increase in levels of physical activity. Some of the key findings are highlighted below:

- Narratives across all participants portray appreciation for ongoing physical activities, describing an increase in health-related benefits and improvements in well-being as a result of increased social connection and support
- Older adults describe a sense of belonging and increased confidence through engaging in group physical activities; young people report positive interpersonal relationship formation within their groups, and also in some cases with groups within the wider community (for a summary of qualitative findings, see Table 1.)
- Activity leaders describe a positive change in participant activity levels, well-being and overall confidence as a result of engaging in the programmes
- Quantitative findings reveal an incremental increase in average well-being scores from baseline to comparison time points across older adults ($n = 24$). However, the difference was not statistically significant
- The difference in well-being scores for young people ages 17-25 increased slightly, as did minutes spent engaging in physical activity ($n = 4$)

- Well-being scores in young people aged 12-16 ($n = 25$) show a significant increase from baseline to comparison time points, particularly for younger individuals
- Both older adults and young people were more likely to feel connected to their local community after participating in the intervention
- In terms of physical activity, there was a slight decrease in mean MET/minutes per week for older adults, although this was statistically insignificant. Nevertheless, percentages of older adults categorised as engaging in moderate physical activity and high physical activity increased post-intervention
- Across young people, total time spent engaging in sporting, leisure and sedentary activities from baseline to comparison across this group was statistically insignificant. However, a slight reduction in sedentary activity was evident, as well as a slight increase in sporting activity
- Session feedback from older adults and younger individuals regarding the session, including from the activity leader, was highly positive.

In summary, the present findings provide insight into the impact of physical activity interventions upon the well-being of young people and older adults in Suffolk. The results indicate that, overall, there is an average increase in well-being scores post-intervention and an incremental increase in physical activity levels. The tendency for statistically insignificant findings is likely to reflect the small sample size. Therefore, future work should consider evaluation on a larger scale with longitudinal outcomes.

Session feedback was highly positive, with both age cohorts enjoying sessions and providing positive feedback regarding activity leaders. Participant narratives also provided a positive insight into the benefits of engaging in group physical activities to well-being, health and, most consistently, reductions in social isolation and enhanced social identity. The findings present preliminary evidence, which suggests that sport and physical activities provide a positive means for attracting and engaging both older adults and young people in group activities to enhance well-being, social identity and community connection across Ipswich and Stowmarket.

Therefore, replication or continued provision of physical activities should consider centralising social relationships between participants and with activity leaders as a core element to improving psychological well-being, as well as continued and consistent monitoring of outcomes. (For a summary of recommendations, see Table 2.)

Table 1: Summary of qualitative findings

Theme	Description
1. Social Connectivity	<ul style="list-style-type: none"> • Social connectivity, as a result of participating in group physical activities, was frequently described as having positive influences upon social identity and well-being across all age groups
2. Role Models, Positive Leadership	<ul style="list-style-type: none"> • Empowering and positive activity leaders were important to all age groups, and encouraged the development of leadership skills, particularly in younger age groups
3. Well-being: Belonging and Confidence	<ul style="list-style-type: none"> • Participants engaging in regular routine activities reported increased self-confidence and belonging
4. Valuing Physical Activity	<ul style="list-style-type: none"> • Physical activities provided 'common ground' for forming social relationships, as well as positively impacting upon health and fitness levels

Table 2: Summary of recommendations

1. Longitudinal, large-scale further research	Further research across all age groups, but particularly across younger people aged 16-25. In addition to well-being, consider monitoring self-reported life satisfaction and loneliness, using objective measures of physical activity, as well as investigating the barriers to participation in physical activities, including reasons for people dropping out of interventions
2. Continued provision of activities at a localised level	Continued provision in rural areas of Suffolk – as well as in areas of disadvantage – to increase independence and reduce social isolation, and to increase the likelihood of safe and supportive networks
3. Investigate economic impact	Investigate the economic impact of activities to calculate a return on investment and cost-efficiencies
4. Awareness and role of GP and well-being services in Suffolk in encouraging physical activity for well-being	Develop understanding of the role of GP and well-being services in promoting participation and engagement in group physical activities in Suffolk as a preventative, alternative or accompanying measure for low-level mental illness diagnoses, as well as awareness of current physical activity programme provision across the region
5. Increased monitoring and participation in evaluative procedures	Closer monitoring, feedback and encouraged participation in evaluative procedures. Embedding the importance of evaluative procedures, establishing expectations and encouraging consistent and standardised data collection

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INTRODUCTION

This report presents the findings from a mixed method evaluation following the implementation of a series of interventions based upon physical activity levels and well-being of different Suffolk cohorts. Between April 2016 and April 2017, Suffolk County Council funded the delivery of a programme of sports and physical activities, via Sport England funding, across Ipswich and Stowmarket. The primary purpose of this project was to build on the mapping exercise and report produced through the Sport England and Chief Cultural Leisure Operators Association (CLOA) commissioning programme to explore how the sport, physical activity and mental health sectors in Suffolk can work more closely together for mutual benefit. The evaluation's aim was to identify the impact of a programme of sports and physical activity on psychological well-being and social connection, as well as determine the level of physical activity.

Based on the Sport England and CLOA mapping exercise and report recommendations, a particular focus was placed upon periods of risk during the life-course, specifically difficult life transitions (such as transitioning from different educational institutions, from adolescence to adulthood and from working life to retirement). The project also has a geographical dimension, with individuals aged 11-25 in transition between educational institutions or adolescence to adulthood being the focus in Ipswich, and 50-85 year olds in transition from working life to retirement as the focus in Stowmarket.

An abundance of previous research reveals an association between engagement in physical exercise and improvements in mental health issues, particularly depression and anxiety¹. Previous reports reveal an overlap between inactive individuals and common mental health issues in Suffolk². A more inclusive service of physical activity programmes, which has the

¹ Fox, K. R. (1999). The influence of physical activity on mental well-being. *Public health nutrition*, 2(3a), 411-418.

² Hughes, L (2016). Commissioning support for local authorities, Suffolk.

potential to improve overall emotional well-being and physical activity levels, has therefore been developed.

This evaluation therefore provides a holistic analysis of the strengths and limitations of the programme, and offers evidence to inform future developments and the potential to scale up and replicate activities.

1. BACKGROUND

1.1 Physical Activity and Well-being

Physical activity is defined as any physical movement, including specific types of activity like exercise and sport resulting in energy expenditure³. Increasing levels of physical activity across the lifespan has become a national agenda, with the introduction of the 2015 government strategy, 'Sporting Future: A New Strategy for an Active Nation' and the 2016 Sport England strategy, 'Towards an Active Nation'⁴. Increasing interest around improving the population's levels of physical activity is likely to be a result of a vast evidence base surrounding the benefits of engaging in physical activity in reducing the likelihood of disease and conditions such as cardiovascular disease and diabetes. Additionally, a wealth of research suggests that physical activity has a positive influence upon symptoms of clinical mental health disorders, as well as overall psychological well-being.

Well-being is typically described as the feeling of being comfortable, happy or content and is central to maintaining positive mental health. The promotion and prevention of mental health is a worldwide agenda, with its inclusion in the WHO (2017) 'United Nations Sustainable Development Goals'⁵ paper, attracting considerable attention around best practice and interventions for both treatment and prevention of mental ill health. An abundance of research suggests that physical activity has a beneficial influence upon levels of psychological well-being and mental health.

Physical activity interventions can act as a supplement to traditional therapeutic methods of treatment for mood disorders (such as cognitive behavioural therapy or pharmaceutical interventions) to alleviate symptoms of mental health illness⁶. Research consistently suggests numerous beneficial effects of physical activity upon mental health, primarily depression and anxiety, across individuals with a clinical diagnosis. The positive influence of physical activity upon mental health, particularly symptoms of depression, is evident across

³ Caspersen, C. J., Powell, K. E., & Christenson, G. M. (1985). Physical activity, exercise, and physical fitness: definitions and distinctions for health-related research. *Public health reports*, 100(2), 126.

⁴ Lester et al., (2017). Physical Activity Needs Assessment. Suffolk Joint Strategic Needs Assessment.

⁵ World Health Organisation (2017). Mental health included in the UN Sustainable Development Goals. Geneva. Switzerland.

⁶ Kvam, S., Kleppe, C. L., Nordhus, I. H., & Hovland, A. (2016). Exercise as a treatment for depression: a meta-analysis. *Journal of affective disorders*, 202, 67-86.

the lifespan. For example, structured exercises for elderly individuals have been shown to improve the prevalence of depressive symptoms⁷, with similar results also evident across children and adolescents. This is increasingly important considering the increase in individuals experiencing mild symptoms of anxiety and depression who may be less likely to receive treatment, despite their debilitating effects⁸. Physical activity has also been identified as having beneficial effects upon mental health in adults without a clinical diagnosis⁹.

1.2 Life Transitions

Transitions occur across the lifespan and can encompass a variety of meanings, being either positive or negative in nature. Key transitional points include, but are not limited to, the movement from primary school to secondary school, education into employment or further education, and working life into retirement.

Key transition points for children and adolescents, such as from primary school to secondary school, are linked to rapid changes in physical, emotional and social development, which can have detrimental effects on well-being. Transition periods for adolescents, for example, include the completion of secondary school to enter into higher education and/or employment, during which young people may experience shifts in daily life activities, social identity and emotional changes. Similarly, transitions for older individuals from work into retirement are linked to lower well-being and a loss of identity as a result of life restructuring¹⁰.

Considering the impact of transitions on levels of well-being and mental health, physical activities may be appropriate interventional responses to mitigate this. Indeed, research suggests that transitional phases, such as retirement for older generations, may be an effective intervention point for changing health behaviours¹¹. Additionally, during periods of transition, such as from secondary school to post-school life, physical health has positively predicted psychological well-being and life satisfaction¹².

⁷ Bridle, C., Spanjers, K., Patel, S., Atherton, N., & Lamb, S. (2012). Effect of exercise on depression severity in older people: Systematic review and meta-analysis of randomised controlled trials. *British Journal of Psychiatry*, 201(3), 180-185. doi:10.1192/bjp.bp.111.095174.

⁸ Cuijpers, P., Vogelzangs, N., Twisk, J., Kleiboer, A., Li, J., & Penninx, B. W. (2013). Differential mortality rates in major and subthreshold depression: Meta-analysis of studies that measured both. *The British Journal of Psychiatry*, 202(1), 22-27. doi:10.1192/bjp.bp.112.112169.

⁹ Rebar, A. L., Stanton, R., Geard, D., Short, C., Duncan, M. J., & Vandelandotte, C. (2015). A meta-meta-analysis of the effect of physical activity on depression and anxiety in non-clinical adult populations. *Health psychology review*, 9(3), 366-378.

¹⁰ Pettican A, Prior S (2011). 'It's a new way of life': an exploration of the occupational transition of retirement. *British Journal of Occupational Therapy*, 74(1), 12-19.

¹¹ Brown WJ, Heesch KC, Miller YD: Life events and changing physical activity patterns in women at different life stages. *Ann Behav Med*. 2009, 37 (3): 294-305. 10.1007/s12160-009-9099-2.

¹² Martinez, C. J., Martin, A. J., Liem, G. A. D., & Colmar, S. (2012). A longitudinal analysis of physical and psychological wellbeing amongst late adolescents: Exploring the transition from school to postschool life. *The Educational and Developmental Psychologist*, 29(1), 17-43.

Further protective factors against the decline in well-being during periods of transition are group membership and social relationships. For example, research suggests a strong predictor of well-being among young people transitioning from primary to secondary school is peer support¹³. Group membership and social relationships used to reinforce social identity are also linked to improvements in symptoms of mental health illnesses such as depression. Indeed, research has found that social identity loss predicts reduced well-being following stressful life events¹⁴.

The formation or maintenance of social identity also assists in the process of ageing. Social isolation, particularly across individuals who have entered into retirement, is a key influencing factor in the experience of low well-being, and has become a key focus in a new government strategy to tackle loneliness. Age UK in Suffolk revealed that 15,000 people in the county can spend a month without speaking to another individual, contributing to poor physical and mental well-being.

But social isolation is not limited to individuals of an older age. Young people, particularly those who identify as having a disability, are also prone to experiences of loneliness. Therefore, physical activity interventions, which encompass a social element and opportunities for relationship formation with other group members during periods of transition, contribute to enhanced well-being.

1.3 The State of Suffolk: Well-being and Physical Activity

Suffolk is a large rural county in the East of England that contains multiple towns within each geographical region. The State of Suffolk Report (2015)¹⁵, 'Joint Strategic Needs Assessment' (JSNA) reveals a growing population in Suffolk and identifies concerns around the levels of well-being and physical activity, particularly during key stages of transition. Findings from the 'Active People Survey' suggest that, compared to national averages, the number of individuals who are physically active in Suffolk is lower, and it is estimated that 1,368 individuals are living with a disability as a result of low levels of physical activity^{16,17}. The Suffolk JSNA suggests that transitions into adulthood are accompanied by a reduction in physical activity. Similar findings are evident in the 'Suffolk Children's Physical Activity Survey' (2017), in which physical activity levels during the transition from primary to secondary education dropped by 20%. Not only are stages of transition in Suffolk associated

¹³ Lester, L. and Cross, D., (2015). The Relationship Between School Climate and Mental and Emotional Wellbeing Over the Transition from Primary to Secondary School. *Psychology of Well-Being*, 5(1), pp. 1-15.

¹⁴ Praharsu, N. F., Tear, M. J., & Cruwys, T. (2017). Stressful life transitions and wellbeing: A comparison of the stress buffering hypothesis and the social identity model of identity change. *Psychiatry research*, 247, 265-275.

¹⁵ Joint Strategic Needs Assessment (2015). The State of Suffolk Report

¹⁶ Murray, C. J., Richards, M. A., Newton, J. N., Fenton, K. A., Anderson, H. R., Atkinson, C., ... & Braithwaite, T. (2013). UK health performance: findings of the Global Burden of Disease Study 2010. *The Lancet*, 381(9871), 997-1020.

¹⁷ Lester et al., (2017) Physical Activity Needs Assessment. Suffolk Joint Strategic Needs Assessment.

with higher levels of physical inactivity, they are also associated with experiences of mental ill health. According to the Suffolk JSNA, 70% of individuals entering into retirement experience high levels of mental ill health.

The purpose of this report was to evaluate physical activity interventions to identify the impact on physical activity levels and well-being in young people and older adults during periods of transition. Rural areas in Suffolk are associated with higher rates of social isolation, contributing to poorer well-being, particularly across older generations. In contrast, urban areas are linked to higher levels of deprivation and higher numbers of young people. As a result of this, the programme of physical activities also incorporated a geographical element, basing activities in the rural town of Stowmarket and in Suffolk's central town, Ipswich, to engage target populations at key transition stages¹⁸.

2. METHODOLOGY

The evaluation comprised two main aims:

1. To provide evidence in relation to how effective physical activity is on improving the emotional well-being, physical activity and community connection of individuals with, or at risk of, low level mental health and undergoing a difficult life transition
2. To investigate the efficacy of the programme in bringing together local sports/physical activity providers, and the potential to scale and replicate programme activity.

Success indicators included:

- ◆ an increase in positive emotional well-being across participants
- ◆ an increase in overall physical activity
- ◆ a reduction in feelings of social isolation and lack of community connection.

The evaluation used a mixed method approach, incorporating a range of data collection tools, to ascertain how effective the introduction of physical activities funded by Sport England in Suffolk have been. What distinguishes mixed method evaluation is the intentional or planned use of diverse methods for particular mixed method purposes using particular mixed method designs¹⁹.

Mixed method evaluations seek to integrate social science disciplines with predominantly quantitative and qualitative approaches to theory, data collection, data analysis and interpretation. The purpose is to strengthen the reliability of data, validity of the findings and

¹⁸ Hughes, L (2016). Commissioning support for local authorities, Suffolk

¹⁹ Greene, J. C. (2005). Mixed Methods in Mathison, S. (ed.) *Encyclopedia of Evaluation*. Thousand Oaks, CA: Sage. p. 255

recommendations, and to broaden and deepen our understanding of the processes through which programme outcomes and impacts are achieved, and how these are affected by the context within which the programme is implemented²⁰. The evaluation framework was developed in partnership with Suffolk County Council and incorporated a range of stakeholder views through questionnaires and focus groups (*Figure 1*).

2.1 Quantitative Methods

To measure levels of self-reported well-being and physical activity, paper questionnaires using standardised and validated measures were distributed to participating organisations for completion with their participants. Short versions of standardised measures were selected to reduce participant burden and fatigue.

2.1.1 Short Warwick-Edinburgh Mental Well-being Scale (SWEMWBS)

The SWEMWBS²¹ has seven items, with respondents asked to rate the extent to which they have experienced positive feelings and thoughts in the past two weeks on a five-point Likert scale. The correlation between the short and long (14 items) versions of the Warwick-Edinburgh Mental Well-being Scale is positive, and the SWEMWBS has high reliability.

2.1.2 Stirling Children's Well-being Scale (SCWBS)

Developed by Stirling Council Educational Psychology Service (UK), the SCWBS²² comprises 12 items measuring the emotional development and psychological well-being of children, particularly school-aged children, with high levels of reliability.

2.1.3 International Physical Activity Questionnaire Short-Form (IPAQ-SF)

The IPAQ-SF²³ is a tool used to obtain estimates of physical activity levels which are comparable internationally. The short form provides scores on walking and moderate/vigorous intensity physical activity over the previous seven days. MET-minutes per week can be derived, which refer to the required energy expenditure for certain activities.

2.1.4 Youth Physical Activity Questionnaire (YPAQ)

The YPAQ is a UK adaptation of the Children's Leisure Activities Study Survey. The YPAQ questionnaire has good reliability, and is considered to be an accurate measure of group

²⁰ Bamberger, M. (2012:1). *Introduction in Mixed Methods in Impact Evaluation*, available from <https://www.interaction.org/resources/training/guidance-note-3-introduction-mixed-methods-impact-evaluation>

²¹ Warwick Medical School: SWEMWBS <https://warwick.ac.uk/fac/med/research/platform/wemwbs/development/swemwbs/>

²² Liddle, I., & Carter, G. F. (2015). Emotional and psychological well-being in children: the development and validation of the Stirling Children's Wellbeing Scale. *Educational Psychology in Practice*, 31(2), 174-185.

²³ International Physical Activity Questionnaire (IPAQ): <https://sites.google.com/site/theipaq/>

level physical activity energy expenditure²⁴. The YPAQ assesses frequency, duration and type of physical activity, such as sport (e.g. dancing, football, running), leisure (e.g. household chores, skateboarding, walking pets) and sedentary activities (e.g. reading, surfing the internet, watching TV) during weekdays and weekends over the previous seven days.

2.2 Qualitative Methods

Focus group interviews were conducted with five different organisations, including stakeholders between 10-84 years of age, engaging in discussions across the six focus groups. These focus groups also had a geographical element, as with the distribution of questionnaires. Two focus groups took place in Stowmarket, the other four focus groups took place in Ipswich. All focus groups were facilitated by two researchers, and took place on the activity site.

Focus group discussions can be empowering for sharing ideas with others who can relate to their experience and for considering the extent to which their rights and needs are met within everyday environments and contexts²⁵. Using a thematic content analysis framework²⁶, the qualitative data was analysed to identify common shared and unique themes within the young people's perceptions and experiences.

2.3 Participants

A total of 63 stakeholders were included in focus groups across all organisations (including participants and activity leaders); a further 53 baseline and comparison questionnaires were completed by participants. To ensure anonymity, but to allow for accurate individual pre- and post comparisons, participants were asked to provide their initials and the day and month of their date of birth to create a unique participant code for questionnaires. Young people up to the age of 16 years were asked to complete the SCWBS and YPAQ; young people aged 16 years and over were asked to complete the SWEMWBS and IPAQ-SF. Older adults were asked to complete the SWEMWBS and IPAQ-SF. The project included participants from five separate organisations. For a brief intervention description, further information and questionnaire responses, please see the [Appendix](#).

²⁴ Corder, K., Ekkelund, U., Steele, R. M., Wareham, N. J., & Brage, S. (2008). Assessment of physical activity in youth. *Journal of Applied Physiology*, 105(3), 977-987.

²⁵ Hill, M. (2006) 'Children's Voices on Ways of Having a Voice: Children's and young people's perspectives on methods used in research and consultation' in *Childhood* Vol 13 (1) pp 69-89

²⁶ Green, J. (2013) 'The Use of Focus Groups in Research into Health' in Saks, M. and Allsop, J. (Eds) *Researching Health: Qualitative, Quantitative and Mixed Methods*. 2nd Edition. London: Sage Publications Ltd.

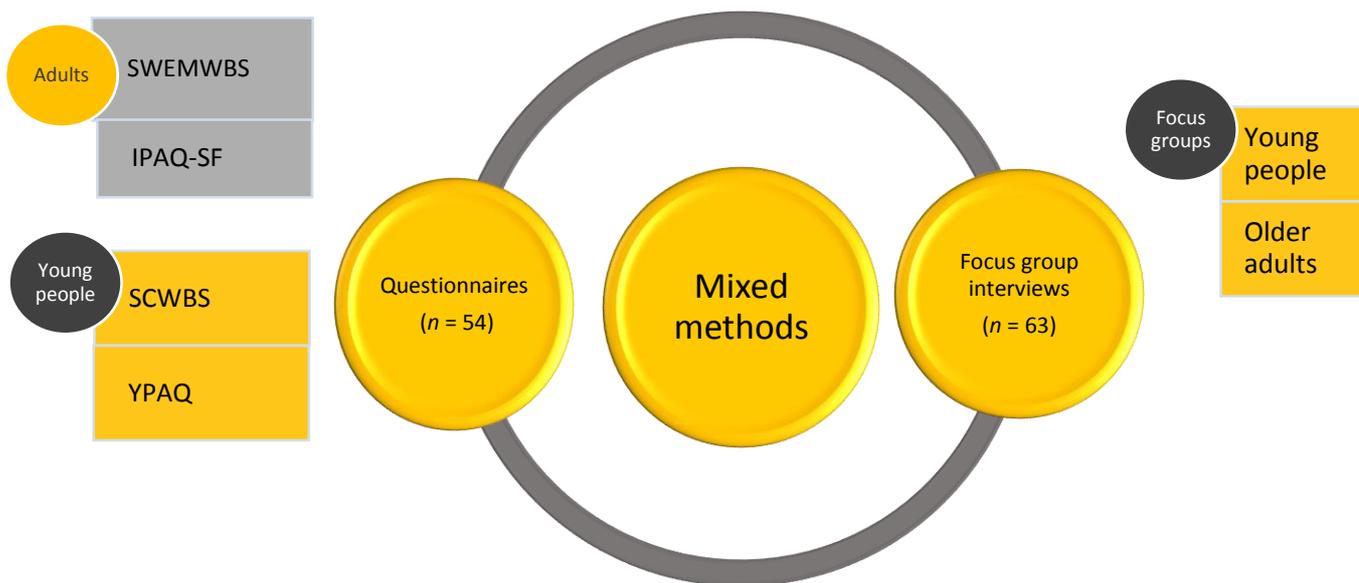


Figure 1: Mixed methods framework

2.4 Ethical considerations

Individuals who engaged in focus groups as part of the evaluation were active participants in activities and volunteered to participate. All of them were provided with information about the University of Suffolk’s evaluation, as well as how the findings would be circulated. Informed consent was obtained from all participants and they were informed about their rights to anonymity, confidentiality and their right to withdraw from the evaluation study. The research team are highly experienced researchers, working with individuals across the lifespan, have enhanced DBS certificates and have all undergone appropriate safeguarding training.

The evaluation was subject to University of Suffolk’s ethical scrutiny and approval, and it complied with the British Sociological Association and the British Psychological Society’s guidelines. Adherence to guidelines set out by the UK Research Integrity Office’s Code of Practice for Research ensured that the research followed the principles of the Singapore Statement of Research Integrity:

- Honesty in all aspects of research
- Accountability in the conduct of research
- Professional courtesy and fairness in working with others
- Good stewardship of research on behalf of others.

All focus groups were audio recorded, with the participants' consent, and the verbatim data was subject to thematic framework analysis as devised by the National Centre for Social Research²⁷.

The quantitative data consisted of questionnaire responses to standardised measures, as well as additional questions around community connectedness and general intervention feedback. Quantitative data analysis was carried out within the software Statistical Package for Social Sciences (SPSS), with a focus primarily on descriptive statistics and some inferential statistics.

²⁷ Richie, J.; Lewis, J.; McNaughton-Nicholls, C. and Ormston, R. (2014). *Qualitative Research Practice*. London: Sage.

3. FINDINGS

3.1 Quantitative findings

Quantitative statistics were derived using SPSS, focusing mainly on descriptive statistics and inferential statistics where appropriate. Participants were categorised into two groups based on age. Comparisons were made across both groups separately as different questionnaires were utilised. Comparisons were made between well-being and physical activity levels across interventions and within interventions, as well as at different stages of transition at both baseline and follow-up time points.

Due to the small number of respondents across the evaluation, as a result of missing data or inability to match pre and post questionnaires, statistical significance should be interpreted with caution; however, preliminary emergent patterns can be observed.

3.1.1 Older adults: Working life into retirement – Well-being & Physical Activity

Individuals within the older age group had a mean age of 71 years (Range: 57-84 years), with 25% male respondents and 75% female respondents in total. A total of 56 baseline questionnaires and 35 follow-up questionnaires were collected within this participant group. Of these, 24 provided both baseline and follow-up questionnaires upon completion of their physical activity intervention (11 Group A, 13 Group B).

When looking specifically at the data for individuals who provided both baseline and follow-up questionnaires ($n = 24$), the mean well-being score increases slightly from pre- to post-intervention (*Table 3*). Older adults were just above the national average SWEMWBS score (23.6 at baseline) and slightly higher than average at the comparison time point, according to the Health Survey for England data (2011). A Wilcoxon signed-rank test was conducted to look at the difference in well-being scores across baseline and follow-up responses across the 24 participants, which was found to be statistically insignificant ($p = 0.08$). There was an increase in average well-being scores, yet there is the likelihood that this occurred by chance. An increase in well-being scores, but without statistical significance, was also reflected when considering programmes individually.

A Wilcoxon signed-rank test was also conducted to look at the difference in mean IPAQ-SF MET-minutes per week scores across baseline and follow-up responses. The difference in means across these 24 individuals was found to be insignificant (*Table 3*). This was reflected also when considering programmes separately. A Chi-square test was conducted to look at the association between physical activity category before and after the intervention period;

the general trends suggest that intervention completion is associated with a movement toward higher categories of physical activity. For example, the percentage of individuals categorised as engaging in moderate or high levels of physical activity is more likely at comparison time points compared to baseline time points (*Table 4*).

Table 3: Mean SWEMWBS and IPAQ-SF scores at baseline and comparison time points with the associated significance

	Mean Score (Baseline)	Mean Score (Comparison)	Statistic	P- Value (Significance)
SWEMWBS	24.03	25.10	Z = -1.74	p = 0.08
IPAQ-SF (MET-minutes/week)	3,092.50	2,900.83	Z = -0.47	p = 0.64

Table 4: The percentage of individuals within each physical activity (PA) category at baseline and comparison time points (N = 24)

	Low PA	Moderate PA	High PA
IPAQ-SF Categories - Baseline	45.8%	29.2%	25.0%
IPAQ-SF Categories - Comparison	33.3%	37.5%	29.2%

Average self-reported minutes per day spent engaging in different levels of activity at baseline and comparison

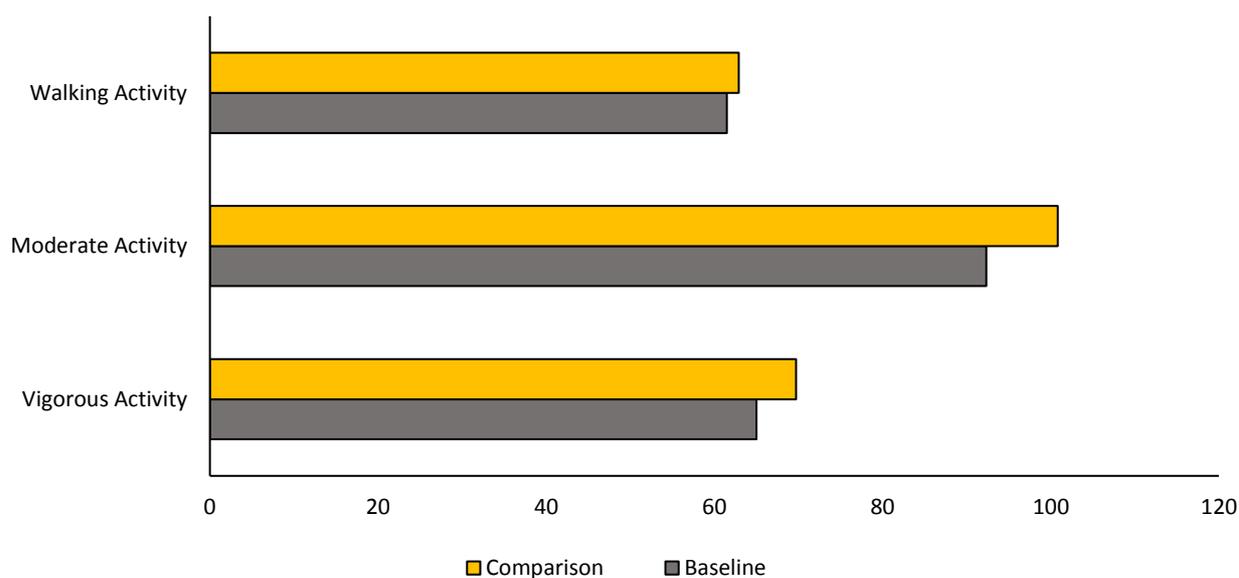


Figure 2: Average minutes engaging in walking, moderate and vigorous activity at baseline and comparison time points across older adults.

Figure 2 illustrates an apparent increase in average minutes spent doing moderate, vigorous and walking activity per day. Although not depicted in Figure 2, sedentary activity increased post-intervention from an average of 310 minutes to 330 minutes per day.

The results also suggest that older adults within this group spend, on average, 70 minutes taking part in vigorous physical activity or 101 minutes in moderate physical activity per day. This is in line with the recommended amount based on the Chief Medical Officers’ guidelines (2011) for adults and older adults.

3.1.2 Older adults: Working life into retirement – Community Connection

Overall, individuals were more likely to feel connected to their local community post-intervention compared with pre-intervention (*Figure 3*). For example, 4.2% of participants suggested that they felt connected to their local community all the time at baseline compared with 16.7% at the comparison time point. When asked whether individuals engaged in activities in the community, the differentiation pre- and post-intervention was less evident (*Figure 4*).

Older adults: I feel connected to my local community

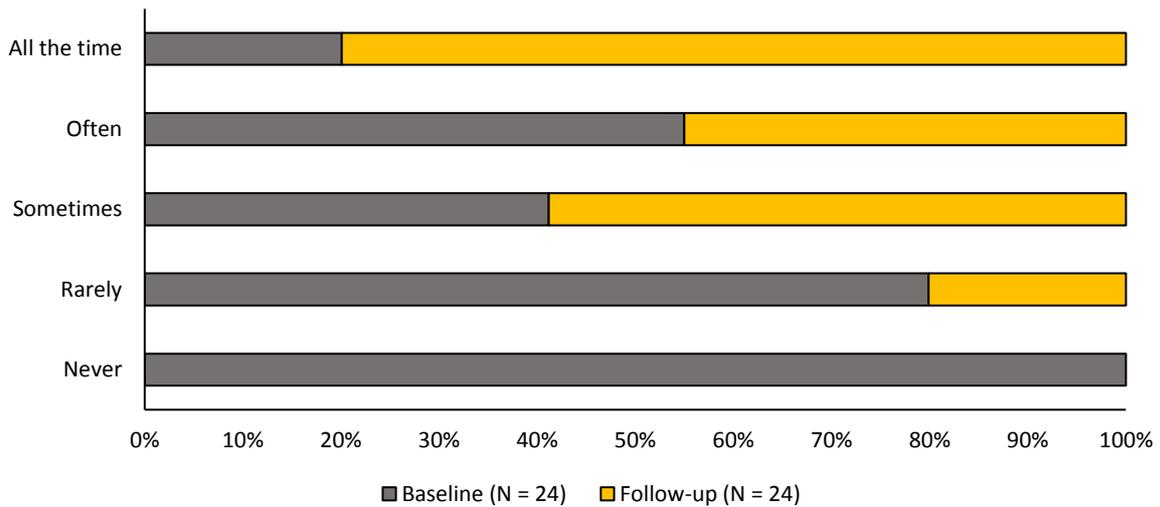


Figure 3: The percentage of older adults who feel connected to their local community at baseline and comparison time points

Older adults: I engage in activities within the community

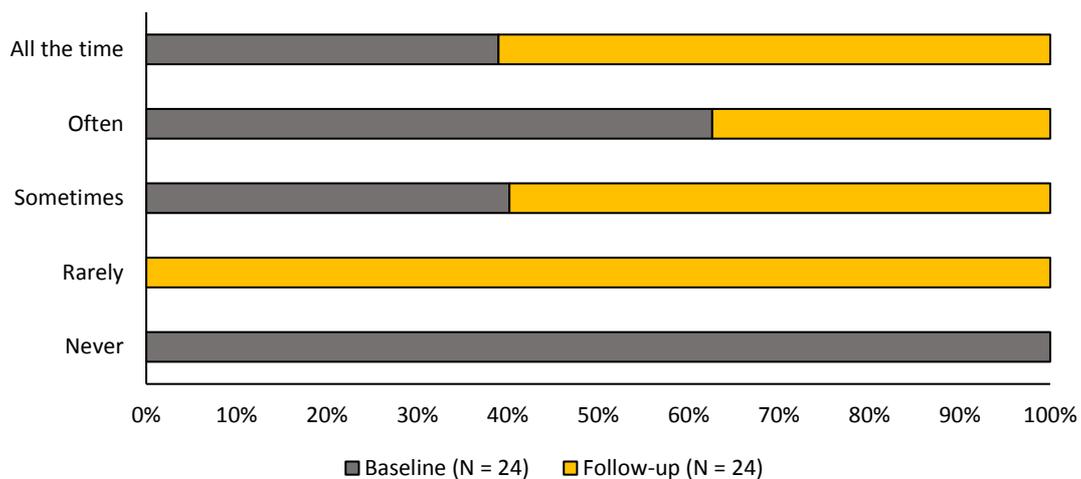


Figure 4: The percentage of older adults who engage in activities in their community at baseline and comparison time points

3.1.3 Older adults: Working life into retirement – Session Feedback

When asked to describe the activity leader who engaged the participants in their particular physical activity programme, the majority of individuals described their activity leader as great (87%, $n = 20$). The majority of individuals also described activity leaders as kind, challenging, friendly, caring, helpful and professional.

In terms of the programmes themselves, the majority of participants described the physical activity programme as very enjoyable (79%, $n = 19$) or enjoyable (17%, $n = 4$). The above findings were also reflected when considering programmes separately.

When asked if they had any additional comments, participants suggested that the programme was '*Good for all aspects – physical, mental, social, laughter, etc.*' and left comments such as '*When we go home, I feel so pleased with what we have achieved that afternoon*'. The majority of older adults suggested no improvements to be made to the programmes.

3.1.4 Young people's transitions – Well-being & Physical Activity

Individuals within the younger age group had a mean age of 15 years (range: 12-24 years), with 25% male and 66% female and 4% preferring not to state their gender. A total of 42 baseline questionnaires and 30 follow-up questionnaires were collected within this participant group. Of these, 29 provided both a complete baseline and follow-up questionnaire upon completion of their physical activity intervention (15 Group D, 4 Group C, 10 Group E). The use of questionnaires differs between groups so they will be analysed separately.

Due to the small number of participants in the first group of young people with complete baseline and follow-up questionnaires (17-24 years) ($n = 4$), only descriptive statistics were explored. Mean well-being scores (SWEMWBS) increased slightly from baseline to follow-up from an average SWEMWBS score of 21.2 to 22.6 (however, this is still below the national average). The IPAQ-SF average MET-minutes per week scores for this group appeared to decrease slightly suggesting they were engaging in slightly less intense physical activities at the second stage of data collection. However, across the group the total number of minutes spent engaging in low, moderate or vigorous activity increased from an average of 147 to 187 minutes per week. Across this group, average minutes per day engaging in vigorous and moderate activity increased, while minutes engaging in walking and sitting decreased post intervention. However, it should be noted that not all young people within this group reported approximate minutes per day per activity category. Contextual factors are likely to contribute toward low retention rates within this group, such as the fact the young people have caring responsibilities and may therefore find it difficult to attend each session. Further monitoring of individuals within this age group would be useful in order to generate more conclusive findings.

A Wilcoxon signed-ranks test was conducted to identify differences amongst the SCWBS scores within the second group of young people (12-16 years) ($n = 25$). The difference between well-being scores at baseline and follow-up was significant (*Table 5*), with higher

well-being scores post-intervention. SCWBS also move into the average range of scores (39-48) at the comparison time point²⁸. In terms of the different age groups, although both showing a general increase in well-being scores, this difference appeared to be greater within the young people aged 12-13 years, compared to those aged 15-16 years.

Activities within the YPAQ were categorised into sport activities, leisure activities and sedentary activities. Total time (frequency x time across both weekdays and weekends) spent across these categories across seven days was calculated for each young person at baseline and follow-up. The difference in minutes spent within each category at baseline and comparison time points was found to be insignificant (this was also evident across both cohorts). However, there was a small reduction in sedentary activity and small increase in sporting activity on average across young people in this group (*Figure 5*). Minutes spent engaging in leisure activities appears to reduce considerably from baseline to comparison. This could be a result of contextual factors, particularly within adolescent groups, such as increased pressure during revision and exam periods at time of comparison questionnaire completion.

Table 5: Average SCWB and YPAQ scores, Wilcoxon statistics and probability values pre and post intervention ($n = 25$) (* indicates statistical significance)

	Mean Score (Baseline)	Mean Score (Comparison)	Statistic	P- Value
SCWBS	36.9	39.3	$Z = -3.32^*$	$p < 0.01$

²⁸ Liddle, I., & Carter, G. F. (2015). Emotional and psychological well-being in children: the development and validation of the Stirling Children's Well-being Scale. *Educational Psychology in Practice*, 31(2), 174-185.

Average minutes per week spent engaging in different physical activities at baseline and comparison times

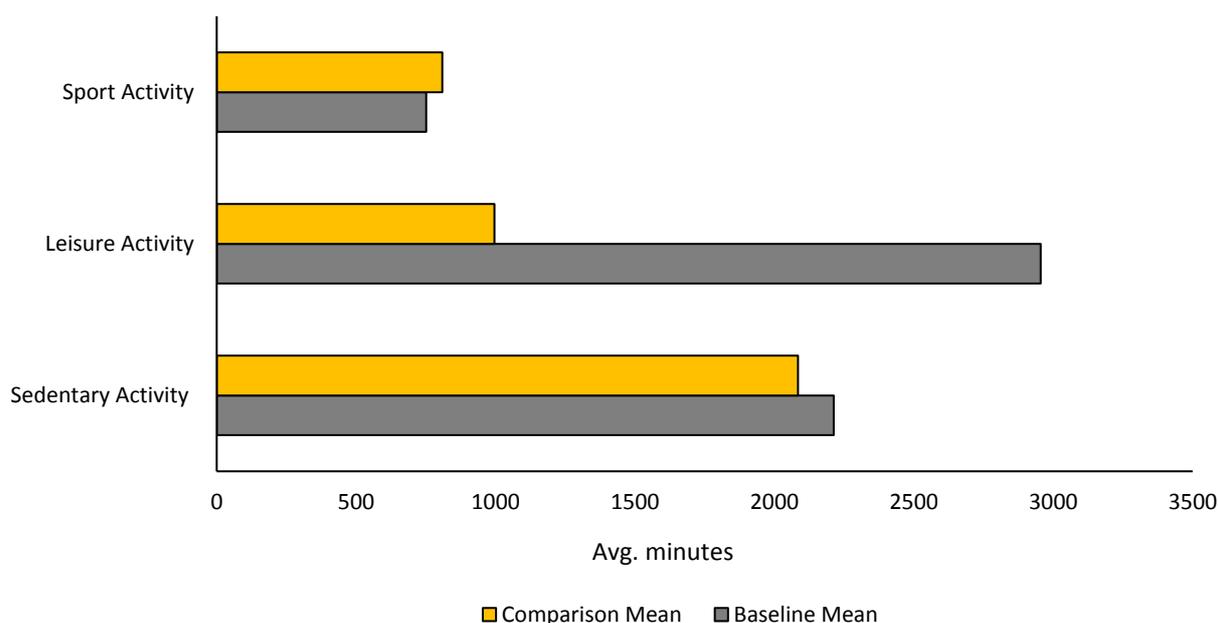


Figure 5: Average minutes per week spent engaging in sport, leisure and sedentary activities across young people at both baseline and comparison time points

3.1.5 Young people’s transitions – Community Connection

Overall, young people were more likely to feel connected to their local community post-intervention compared with pre-intervention (*Figure 6*). For example, as evident in the graph below, a higher percentage of young people at the comparison time point felt connected to their community all the time (17.9% vs. 10.3%) or often (42.9% vs. 27.6%). When asked whether individuals engaged in activities in the community, young people were also more likely to report engaging in activities within their local community post-intervention (*Figure 7*). For example, 17.9% of young people suggested that they engage in activities within their community at comparison time points compared with 3.4% at baseline.

Young people: I feel connected to my local community

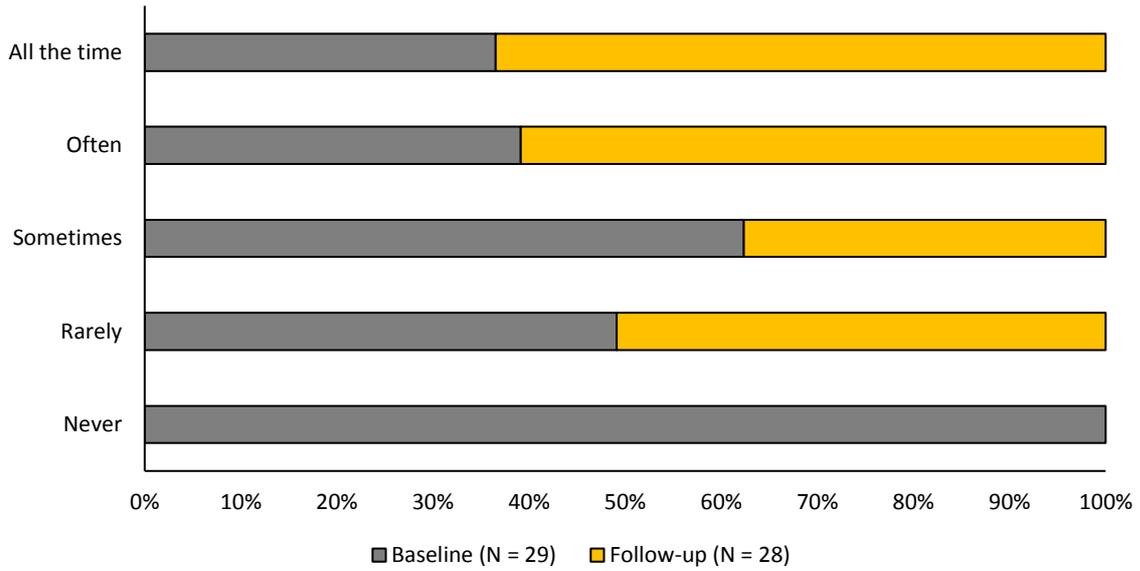


Figure 6: The percentage of young people who feel connected to their local community at baseline and comparison time points

Young people: I engage in activities within the community

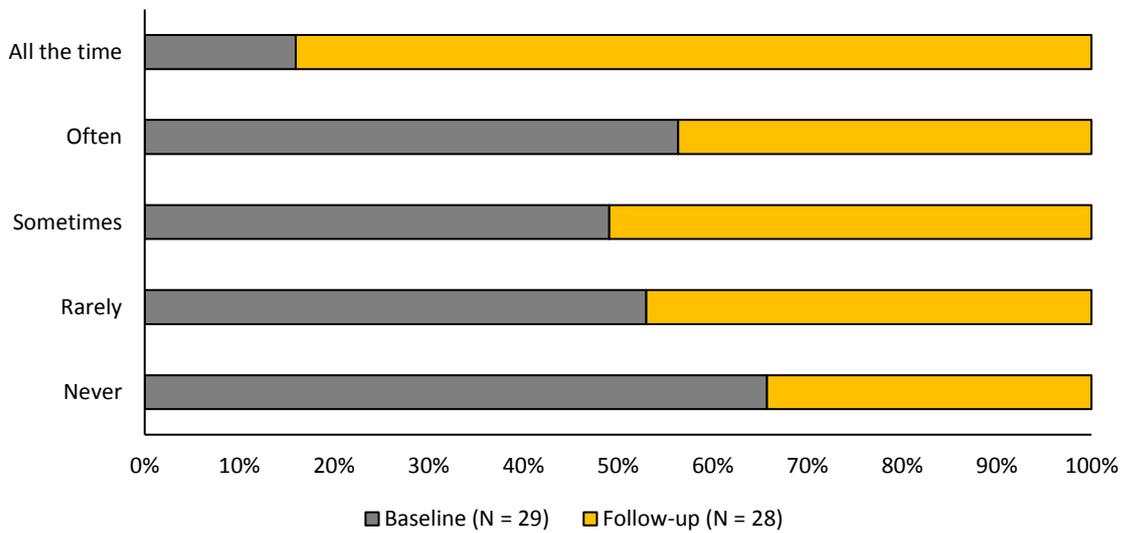


Figure 7: The percentage of young people who engage in activities in their community at baseline and comparison time points

3.1.6 Young people's transitions – Session Feedback

When asked to describe the activity leader who engaged the participants in their particular physical activity programme, the majority of individuals described their activity leader as 'great' (80%, $n = 20$) or 'good' (16%, $n = 4$). The majority of individuals also described activity leaders as 'kind, challenging, friendly, caring, helpful and professional.'

In terms of the programmes themselves, the majority of individuals described the physical activity programme as 'enjoyable' (50%, $n = 14$) or 'very enjoyable' (46%, $n = 13$). The above findings were also reflected when considering programmes separately.

When asked if they had any additional comments, participants suggested that the programme was '*something to look forward to*', '*very good at relaxing me*', and '*I loved it; she would challenge me a lot, which made me feel as if I'd achieved something*'. When asked if there was anything that could be improved, young people typically suggested '*more space and time*', and '*more supervision*'.

3.2 Case Study

Well-being, Social Connection and Physical Activity in School

Group D involved a group of 18 young people aged 15-16 years who engaged in activities twice a week for an 18-week period after school hours. Young people engaged in activities such as zumba, pilates, kickboxing and activities linking physical activity with cognition and memory, including linking heightened arousal and mental capacity, in order to help them prepare for their exams.

Young people's narratives within this group portray a consensus that engaging in activities had positive benefits for psychological well-being. Average SCWBS well-being scores across the group increased incrementally from 37 to 38. Furthermore, it was clear that the social connections resulting from group activities led to increased well-being as well as a sense of inter-group cohesion and achievement. Young people within this group were also more likely to report feeling connected to their local community after engaging in the activities.

'We've all done it since the beginning, so we're all progressing together.'
(16+ year old)

Teacher observations suggest an increase in student academic attainment, in addition to improved confidence, maturity and growth. Teachers also commented upon the group as a whole, suggesting that the activities enabled the formation of new relationships, which did not previously exist among students. However, some young people expressed concerns with activities taking up time to revise for exams, suggesting that student timetables need to be taken into account when developing programmes of physical activities for young people who are in the middle of their exam period.

'I was finding it hard to find a balance; when time is taken up with a sport, I don't have enough time to revise.'
(16+ year old)

3.3 Qualitative findings

The following section presents themes derived from the focus groups with young people, older adults and activity leaders engaging in the physical activity programmes in Suffolk. A total of 63 individuals engaged in focus group discussions to share their perceptions around the impact of the intervention upon their levels of physical activity and well-being.

3.3.1 Theme One: Social Connectivity

One of the most prevalent themes emerging throughout all focus group discussions with all age groups was the importance of group and community connection in order to build social relationships. Research frequently suggests that social connection is an important aspect of well-being, as well as reducing or preventing poor mental health. Building social connections is one of the five steps to mental well-being proposed by the NHS²⁹, and is also one of the indicators of well-being measured by the SWEMWBS. Social identity approaches suggest that positive and meaningful group membership counteracts poor psychological well-being as a result of providing belonging, purpose, worth and support³⁰. More specifically, interventions that revolve around group membership have led to increased well-being and social connectedness, as well as reductions in symptoms of anxiety, depression and stress³¹. Group interventions were particularly effective for reducing experiences of social isolation and loneliness amongst older adults. Narratives across young people regularly referred to the importance of the group physical activity sessions in bringing individuals within their community together, but also integrating with others outside of their immediate communities.

'I like being here with people my age; I like chilling here with my mates and I know this is something I do to get out of trouble basically, instead of walking around the streets.'
(15+ year old)

'Everyone in the community comes; without this session, we wouldn't know who they were, they'd just be a random person in the street.'
(16+ year old)

Activity leaders also commented upon the intersection between groups from different areas, creating social relationships with others outside of the group as a result of engaging in their original programme. This was across both young people and older adults.

²⁹ <https://www.nhs.uk/conditions/stress-anxiety-depression/improve-mental-wellbeing/>

³⁰ Haslam et al (2018). *The New Psychology of Health: Unlocking the Social Cure*. Routledge, London, New York.

³¹ Haslam, C., Cruwys, T., Haslam, S. A., Dingle, G., & Chang, M. X. L. (2016). Groups 4 Health: Evidence that a social-identity intervention that builds and strengthens social group membership improves mental health. *Journal of affective disorders*, 194, 188-195.

'Not only does it bring this community together, but it brings other communities together, because we do also do another programme which is town-wide and sometimes we get kids from [place] side over [place] side and they'll come over and join here, whereas the boys probably wouldn't have met them before.'
(Activity Leader)

Group connectivity, as a result of participating in the physical activities was also viewed as a key factor in reducing feelings of social isolation, particularly among older adults. Group membership solidifies a sense of social identity and belonging. Recent psychological research also emphasises the importance of group social identification in improving or preventing a broad range of physical and mental health-related problems³². Certainly, within the present context, group physical activities as opposed to gym attendance were perceived as highly desirable to older adults. Group cohesion and connectivity when engaging in physical activities also enabled a sense of joint progression and achievement among young people.

'If you sign up for the gym, you've got to pay a lot of money before you even start, and then you're isolated because you're doing your own thing, and you're not in a group.'
(60+ year old)

'We've all done it since the beginning, so we're all progressing together.'
(16+ year old)

³² Haslam et al (2018). *The New Psychology of Health: Unlocking the Social Cure*. Routledge, London, New York.

Case Study: Caring Responsibilities, Well-being & Social Connection

Group C involved a group of young people aged 16-25 years with caring responsibilities taking part in regular martial arts interventions. Narratives clearly reflected the impact of the intervention on their social lives and subsequent psychological well-being. Many of the young people suggested that they use the activity as an opportunity to meet socially beforehand, to build new connections as well as discussing shared experiences.

'We chat quite a lot on the bus; there's a group of us that meet up beforehand and chat and come here.'

(16+ year old)

The sense of social identity based on group membership was evident among the young carers, relating with one another on a personal level and collectively using physical activity as a means of expressing feelings resulting from difficult and complex situations at home.

'I don't know about other groups, but we're all carers so it can be quite difficult, so it's nice to have the technique to do that in a safe way and it's quite therapeutic and helpful.'

(16+ year old)

Those leading the activity also reflected upon the impact of the activity upon social inclusion and group bonding, as well as confidence at an individual level when socialising with others.

'Invariably, our service users are isolated and lonely, but this course helped overcome a lot of fear of confidence within friendships.'

(Activity Leader)

3.3.2 Theme Two: Role Models, Positive Leadership

In addition to group membership, the importance of role models and effective leadership also emerged from focus group discussions. Activity leaders were described as being dedicated to empowering individuals and encouraging participation, with a large role to play in the perceived programme success. Additionally, positive social relationships with activity leaders were frequently identified by groups, particularly younger participants, as one of the most important elements of their physical activity intervention, something which has been reflected in previous research³³. Leaders actively involved participants in the creation and control over sessions, which led to a sense of empowerment across groups.

‘So, it’s not just about having to learn a routine, it’s all about working it through together as a whole group with the women that run the session.’
(60+ year old)

Additionally, effective leadership was reflected within activities, particularly across younger groups. Activity leaders described an increased sense of ownership amongst participants, particularly within groups of younger people. Older members of the group became role models for younger members, encouraging participation, providing praise and support.

‘Yeah, because I didn’t used to know anyone who came here and now I’ve started talking to them all; I’ll always talk to them when I see them, sit with them and talk to them if I can.’
(15+ year old)

3.3.3 Theme Three: Well-being: Belonging and Confidence

Social connection is a significant contributor to positive psychological well-being. However, self-esteem, confidence and having a sense of purpose on an individual level are also of vital importance. Participant narratives, particularly across older adults, reveal a real sense of belonging when engaging in their group physical activity programme. Regular and routine activities were described as important, particularly during stages of transition, such as from working life into retirement.

‘Once you retire, you lose your pattern in life, don’t you? And if you don’t have things like that in life, you don’t feel important anymore. That’s what keeps everyone going; you could always just sit, but that’s not so good.’
(60+ year old)

³³ Coalter, F. (2013). ‘There is loads of relationships here’: Developing a programme theory for sport-for-change programmes. *International review for the sociology of sport*, 48(5), 594-612.

Furthermore, routine physical activity groups enable consistency and stability, factors of increasing importance during stages of life transition and subsequent uncertainty.

'We know what we're doing each week we turn up; there is always a game.'
(16+ year old)

Many participants across the groups also described an increased sense of confidence as a result of achieving something during the session, whether that be improving fitness or remembering a particular routine. Some young people also described a sense of increased motivation, specifically with regard to school, college or university work. Although this was reflected across most young people, some young people suggested that engaging in a physical activity, while enjoyable, impacted negatively upon their time to revise and prepare for exams. And this may explain some of the trends found within the questionnaire responses.

'I think another good thing about this is that it is actually quite satisfying when you get a couple of things right, and then you feel a bit more confident.'
(60+ year old)

3.3.4 Theme Four: Valuing Physical Activity

Many participants reported a perceived improvement in physical health and activity levels. This was particularly evident across the older adults, who also suggested that since engaging in their original activity they continued to join in with other local physical activity programmes, such as local walking groups. Activity leaders also commented on the positive changes seen in individuals participating in physical activity sessions:

'As a trainer, I see so much change in people as well... They work muscles so well because of these exercises, and it's great to see, and I know that helps, it really does, and they have a range of motion which is much greater than when we first started.'
(Activity Leader)

Additionally, from the narratives of both young and older adults, it appears to be the physical activity in itself, breaking down barriers to enable a shared experience and common ground, which subsequently leads to the formation of strong social connections. As reflected in previous research, group physical activity interventions therefore appear to be a means for improving and strengthening social connections³⁴, with a subsequent positive impact upon

³⁴ Coalter, F. (2013). 'There is loads of relationships here': Developing a programme theory for sport-for-change programmes. *International review for the sociology of sport*, 48(5), 594-612.

well-being. This is particularly the case within group sports in which the likelihood of interpersonal competitiveness is minimised.

'Yeah, you've got a common ground; there are no different interests, you're just doing one thing.'

(16+ year old)

'I think it's a bit of a social bond; everyone is doing something so you feel as if you're participating, which is good for you, and you don't really realise you're exercising.'

(60+ year old)

All participants preferred a flexible, non-judgemental approach to group physical activities. Older adults appreciated activities suitable for all levels of fitness and health; young people also appreciated a non-competitive and flexible approach to physical activity. Young people engaging in various activities enjoyed the diversity and opportunity to experience new activities and make their own decisions about which ones they would like to participate in.

'We can basically do whatever we want... the sports you want to play, or the stuff you want to do, you can do it, they'll put the effort in to get it out for you.'

(11+ year old)

Organised activities were highly sought after within both areas, for young people as an alternative outlet and safe space, and for older adults due to perceived limited provision of activities, both physical and non-physical, within rural regions of Suffolk, or, when an activity is identified, it is typically 'oversubscribed' or has an 'extensive waiting list'.

4. CONCLUSIONS

The findings suggest that physical activities provide a positive means for individuals across the lifespan to connect with others. Narratives across participants portray the importance of these activities in building social connections, reducing social isolation and connecting them with their local and wider communities.

Many young people and older adults described subjective improvements in levels of fitness as well as psychological well-being. Early indicators suggest that there is a general trend towards increasing physical activity levels and well-being as a result of participation in the programmes, although this difference tends to be insignificant, which is likely to be a reflection of the small sample size. An incremental increase in average well-being scores was evident across older adults, with fewer individuals engaging in low levels of physical activity and more participating in moderate or vigorous activity.

Similar findings with regards to descriptive statistics were evident across young people aged 17-24, although this was based on a very small sample size. Younger people, aged 11-12 and 15-16 years, had a significant increase in self-reported well-being scores, particularly across the younger age range of 11-12 years. However, levels of engagement in sport, leisure and sedentary activities at baseline and comparison did not differ significantly. On the other hand, questionnaire responses reveal that both young people and older adults felt a greater connection to their local community after engaging in the programme.

Due to the small number of questionnaires, only preliminary conclusions can be made regarding quantitative outcomes and should therefore be treated with caution. Furthermore, the use of self-report measures for physical activity may have led to overestimation or underestimation of activity levels. Nonetheless, participants and activity leaders frequently expressed the need for such activities to increase a sense of social identity based on group membership in order to prevent engagement in less positive activities or feelings of social isolation. Physical activity programmes therefore appear to provide a viable means of connecting people and reducing social isolation during times of uncertainty and transition.

5.RECOMMENDATIONS

Based on the findings of this evaluation, the following recommendations for improving the programme of activities as well as future research and evaluative work are presented:

- Continued provision of group physical activity interventions at a localised level is needed, particularly within rural areas of Suffolk, for older individuals to increase independence and reduce feelings of social isolation. Findings from the report also suggest that continued provision of activities for young people, particularly in areas of disadvantage is needed to increase the likelihood of safe and supportive networks. When replicating or extending provision of activities, the importance of emphasising the centrality of social relationships in group physical activity and sport should be central³⁵
- Closer monitoring, feedback and encouraged participation in evaluative procedures is needed across the majority of activities. Embedding the importance of evaluative procedures, establishing expectations and encouraging consistent and standardised data collection from the outset of the project would be useful in future replications of activities. Regular recorded feedback from participants around which activities are suitable, when and how frequently, may also be a useful activity for some interventions
- Investigating the economic impact of physical activities in Suffolk may be useful in order to estimate a return on investment, which was outside the scope of this project
- Further research is needed on a larger longitudinal scale to evaluate the impact of group physical activity interventions upon physical activity and well-being within Suffolk across all age groups, but particularly across younger people aged 16-25. In addition to well-being, monitoring of self-reported life satisfaction and loneliness may be of use to provide increased understanding of the impact of activities upon life satisfaction and social isolation. Furthermore, objective measures of physical activity (e.g. use of digital health applications or activity trackers) would provide greater accuracy in determining the impact of activities upon activity levels as well as some elements of physical health (for example,

³⁵ Coalter, F. (2013). 'There is loads of relationships here': Developing a programme theory for sport-for-change programmes. *International review for the sociology of sport*, 48(5), 594-612.

improvements in heart rate). Investigating the barriers to participation in physical activities, reasons for drop-out of interventions and impact for those with lower levels of psychological well-being is also needed

- A scoping project around the role of GP and well-being services in promoting participation and engagement in group physical activities in Suffolk as a preventative, alternative or accompanying measure for low-level mental ill-health diagnoses, as well as awareness of current physical activity programme provision in Suffolk, may also be of use

APPENDIX

Appendix 1: Intervention Summary

Intervention information						
Organisation	Intervention Description	Intervention Duration	Intervention Frequency	Participant Ages	No. Baseline Questionnaires	No. Follow-up Questionnaires
Group A	Physical and creative dance movement activity sessions followed by social time, held in a local community venue	12 weeks	1 session per week	64-79	26	24
Group B	Physical activity session focusing on small ranges of movement with weights	12 weeks	1 session per week	58-84	25	13
Group C	Martial arts intervention for young people with caring responsibilities	5 weeks	1 session per week	16-25	13	4
Group D	A variety of activities, including zumba, pilates, kickboxing and activities linking physical activity with memory and cognition	18 weeks	2 sessions per week	15-16	18	15
Group E	Multi-sport session, which encourages participation in various sporting activities for young people within a disadvantaged area	4 weeks	1 session per week	12-13	15	15

