



Life Satisfaction Trials Strategy

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Prepared by the What Works Centre for Wellbeing for



Evaluation Task Force

About the What Works Centre for Wellbeing

We are an independent collaborating centre and the aim of our work is to improve wellbeing and reduce misery in the UK. We believe that this is the ultimate goal of effective policy and community action. By accelerating research and democratising access to wellbeing evidence, we develop and share robust evidence for governments, businesses, communities and people to improve wellbeing across the UK.

The What Works Centre for Wellbeing will close on April 30th 2024.

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Executive summary

This strategy is intended to support the Evaluation Task Force, government departments and wider stakeholders in identifying policy interventions and initiatives which would benefit from the inclusion of measures of life satisfaction in future evaluations, trials and other types of study to understand their efficacy. By including measures of life satisfaction policymakers would be able to better understand whether interventions and initiatives achieve both their stated policy outcomes **and** improve national wellbeing.

Life satisfaction is an important component of personal subjective wellbeing. Measures of life satisfaction are widely used in many countries and have been for decades. It is particularly important as an economic measure, a way of combining outcomes across policy areas and as a measure of lived experience. In the UK, the Office for National Statistics includes a life satisfaction measure in its four chosen measures to understand national personal subjective wellbeing¹.

Given its widespread use, life satisfaction is often used by policymakers to understand the wellbeing impacts and social value of different policy options. In the UK, the Treasury Green Book² uses life satisfaction measures to monetise wellbeing impacts in Wellbeing Adjusted Life Years (WELLBY).

The Levelling Up White Paper³ uses this economic methodology and it sets out Mission 8: wellbeing, as both a mission in itself but also one of the overall outcomes of all other missions - do people across the UK live happy and fulfilling lives - demonstrating the central importance of wellbeing outcomes like life satisfaction in national policy making.

It is therefore crucial that policymakers have a strong understanding of the current evidence base into what works to improve life satisfaction and how the current evidence base must be developed and improved in the future.

¹ <https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing>

² <https://www.gov.uk/government/publications/green-book-supplementary-guidance-wellbeing>

³ <https://www.gov.uk/government/publications/levelling-up-the-united-kingdom>

This strategy:

1. **Maps current life satisfaction interventions and longitudinal evidence into a simple policy framework** to provide insights for the commissioning of future evaluations, trials and studies
2. Identifies the **next steps needed to improve the life satisfaction evidence base** in different policy areas
3. Identifies **key gaps where there is minimal evidence** about what improves life satisfaction in a given policy area
4. Makes a series of recommendations to further develop the **research infrastructure and methodological improvements** needed to deliver higher quality and more impactful life satisfaction trials in the future.

The strategy is informed by evidence generated in two rapid reviews⁴ of longitudinal and experimental studies into life satisfaction.

The findings of the two reviews have been mapped into 13 different themes relevant to policymakers. These are:

- economic and financial situations; employment; adult education; relationships; communities and neighbourhoods; health; health behaviours; environment; arts and culture; children and young people; university students; older adults; and military personnel.

For each theme we have highlighted relevant determinants of life satisfaction and effective interventions to improve life satisfaction.

We have then assessed the quality of the evidence and made recommendations about the next steps needed to strengthen the evidence base further and highlighted opportunities about promising policy areas that could benefit from an evaluation, trial or other study to help understand their impact on wellbeing.

Figure 1 below summarises each thematic area, its evidence base and recommendations. It includes a summary of key recommendations to improve future life satisfaction evaluation and trials and notable policy gaps identified during the production of this strategy. It also maps the themes against the levelling-up missions to aid policymakers in succeeding in these missions which are a governmental priority.

⁴ <https://whatworkswellbeing.org/projects/life-satisfaction-what-works/>

Figure 1: Summary of Trial Recommendations by policy theme/levelling up missions

Policy theme	Factors and interventions identified	Levelling Up Mission	Recommended future focus
<p>Improving Life Satisfaction Trials</p>	<p>Methodological Priorities Making progress in localised and regional measurement, delivering natural experiments, conversion between life satisfaction measures, and improvement of transparency, replication and sample size in trials would all contribute to improving the life satisfaction evidence base. Life course models and WELLBY development.</p> <p>Research Priorities Understanding mechanisms like: group work and individual delivery, online, face-to-face and community settings, frequency of intervention, and the skills and training of the practitioner and how these contribute to the effectiveness of life satisfaction interventions.</p>	<p>Foundational: Research capacity building and development: spanning all missions</p>	<p>Continue to support the development of the research infrastructure and methods to understand changes in life satisfaction at neighbourhood, community and regional levels and to deliver high quality research into natural experiments. This could include:</p> <ul style="list-style-type: none"> • Providing technical support for local areas and regions looking to establish high quality wellbeing surveys • Considering providing financial support to help set up new high quality surveys or boosters. • Publish available data at the lowest local level possible (whilst maintaining data quality) • Make it easier for stakeholders to benchmark their own wellbeing measurement against robust local data that can be easily modified to match sample populations etc. • Life Course models and WELLBY development including collating effect sizes. <p>Commission research into the different mechanisms identified in this review and an understanding of different intervention ‘pathways’ that appear promising in improving life satisfaction.</p> <p>Promote the use of single-item measures <i>alongside</i> the multi-item measures and improve methods to translate between scales.</p> <p>When commissioning future trials, register them and look to improve the quality of the evidence-base by addressing blinding, retention, reporting transparency and replication.</p>

<p>1. Personal finance and economy</p>	<p>Income, resource ownership, and fuel poverty</p>	<p>Mission 1: Living Standards Mission 3: Transport Mission 10: Housing</p>	<p>Natural experiments following changes in economic or personal finance policy interventions. Trials to establish wellbeing benefits of net zero (we expect there to be from energy efficiency interventions), small scale trials on personal financial education interventions.</p>
<p>2. Employment</p>	<p>Unemployment, job satisfaction, working hours, flexible working, retirement, public sector workforces</p>	<p>Mission 5: Education Mission 6: Skills</p>	<p>Evaluate intervention to support people into work, natural experiments to understand flexible working, government trials utilising the public sector workforce changes, trial interventions using occupational health models.</p>
<p>3. Adult education</p>	<p>Qualifications, in-work training adult education skills,</p>	<p>Mission 5: Education Mission 6: Skills</p>	<p>Trial adult education interventions, especially those linked to key work-related life events. Research the mechanisms and pathways for high quality curriculums for emotional skill development courses across the lifecourse. Trial education interventions in the public sector workforce to tackle key challenges, like retention.</p>
<p>4. Relationships</p>	<p>Close social relationships, social networks, family therapy interventions</p>	<p>Spanning multiple missions</p>	<p>Develop effective social interventions to expand and extend social networks. Trial couples counselling as a life satisfaction intervention. Research the impact of the introduction of no-fault divorce on wellbeing. Small scale trials targeted at relationships in challenging circumstances. Trials to develop effective interventions following a bereavement. Deliver small-scale trials that focus on improving parent-child relationships.</p>

<p>5. Community and neighbourhoods</p>	<p>Neighbourhood safety, participation in local organisations, effects of political events and volunteering interventions</p>	<p>Mission 9: Pride in Place Mission 11: Crime Mission 12: Local Leadership</p>	<p>Life satisfaction measurement around issues like littering, fly-tipping and town centre renewal. Small scale trials to explore the efficacy of community safety partnerships. Regional life satisfaction measurement to understand the impact of devolution deals and innovations in local government. Trials on volunteering and on integration. Research into life satisfaction during and after regeneration projects include current and former residents.</p>
<p>6. Health</p>	<p>Physical and mental health, disability, dentistry, vision, stress, palliative care, health workforce</p>	<p>Mission 7: Health</p>	<p>Trial psychosocial support for people with newly acquired conditions. Use a life satisfaction measurement to improve accessibility and participation for disabled populations. Accessibility trials in NHS dentistry. Develop social prescribing interventions at the point of diagnosis. Design multi arm trials where talking therapy/psychosocial support is mixed with other activities likely to have an impact on wellbeing, to understand priority mechanisms and pathways to impact.</p>
<p>7. Health behaviours</p>	<p>Healthy eating, problem drinking, exercise interventions, health education interventions, social media reduction interventions</p>	<p>Mission 7: Health Mission 4: Digital Connectivity</p>	<p>Develop a range of effective health education programmes in a range of contexts. Continue trials of healthy food / fruit programmes in schools, colleges and workplaces and design neighbourhood or community-level interventions to address food deserts. Pilot interventions in the context of addiction or problem drinking. Utilise changes in the regulation of social media to conduct natural experiments. Conduct small scale trials to explore the efficacy of positive use of social media. Develop a range of interventions to support exercise and sleep.</p>
<p>8. Environment</p>	<p>Proximity to green and blue spaces, moving home, perceptions of public transport, and commuting</p>	<p>Mission 3: Transport Mission 9: Pride in Place</p>	<p>High quality local and regional wellbeing datasets. Natural experiments on green and blue space changes and trials on the impacts of moving home. Quasi-experimental trials on changes to local transport.</p>

		Mission 12: Local Leadership	
9. Culture	Participation and regularly engagement in arts and culture, and music interventions	Mission 9: Pride in Place Mission 12: Local Leadership	Large scale trials of creative interventions for men, ethnic minority groups or working age adults. Use large-scale national and mega events to test and learn about the creative workforce skills, support and training that enable wellbeing. Research to understand the role of a creative education on wellbeing across the lifecourse Work with the education and skills sectors to understand how creative habits can be encouraged and supported across all ages and especially for people who are less likely to be creative.
10. Children and young people	Perinatal and early years: emotion based activities and emotional skills development Primary School: emotional based activities and health education Secondary school: emotion based activities and emotional skills development Children in challenging circumstances: therapy and multi-component interventions	Mission 5: Education Mission 7: Health	Larger-scale trials in schools to develop high quality emotional and health promotion skills programmes and on physical activity and diet interventions. Small-scale trials on: improving parent-child relationships; and in children’s social care; the perinatal period and early years; and specific pupil cohorts in schools or on challenges in the education system like bullying, transition or behaviour.
11. University students	Emotion-based activities, prosocial interventions, emotional skills development and multi-component interventions	Mission 5: Education Mission 7: Health	Convene the higher education sector to develop a strategy to scale trials and address evidence gaps with reference to key sector outcomes. Support additional arms of upcoming trials where these can be used to provide wider insight around mechanisms that work to improve life satisfaction.

<p>12. Older people</p>	<p>Retirement, emotion-based activities, emotional skills development, exercise, health promotion and music</p>	<p>Mission 7: Health Mission 10: Housing</p>	<p>Small scale trials in: adult social care to explore issues like post-surgery recovery, waiting list interventions etc; life-changes like down-sizing, home adaptation, retirement communities and end of life care. Given the large number of trials in this area future trials could also have a focus on wellbeing inequalities.</p>
<p>13. Military personnel</p>	<p>Interventions to improve sleep and reframe stressors</p>	<p>Spanning multiple missions</p>	<p>Trials to support military personnel across different roles and deployments and to support rehabilitation from injury or focused on poor mental health may have a range of benefits.</p>
<p>Evidence gaps</p>	<p>Re-offending, access to justice and the secure estate, terrorism prevention, crime prevention, fishing and farming communities, regional prosperity, freeports and other economic zones, devolution, and SEND reform.</p>	<p>Spanning multiple missions</p>	<p>Developing life satisfaction measures for children and adults with SEND. Life satisfaction as an outcome measure for existing interventions for individuals experiencing homelessness, in the justice sector, and anti-terrorism interventions. Natural experiments to understand rollout of new digital technologies and trials for digital literacy, access and behaviour interventions. Add life satisfaction measures to existing initiatives and interventions that support fishing and farming communities.</p>

The strategy concludes by setting out three key priorities for government to improve policy evidence about what works to improve life satisfaction:

Priority One:

Focus resource and capacity on addressing the most difficult methodological challenges in life satisfaction intervention research so that these methodologies can be used more widely at lower cost. By supporting efforts to evaluate the effectiveness of interventions at a neighbourhood, community or regional level, government could help generate insight and interventions that could drive improvements to life satisfaction at a population level.

Priority Two:

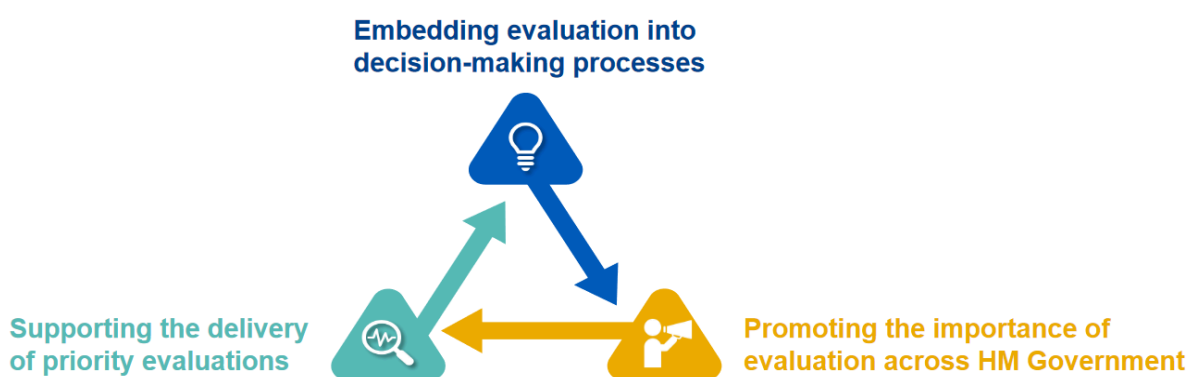
Many of the available interventions to improve life satisfaction share similar characteristics. These ‘mechanisms’ are the likely elements in the delivery of an intervention which are driving improvements in life satisfaction alongside the ‘focus’ of the intervention (i.e. exercise, making music, or learning emotional management skills). This means that understanding how to maximise improvements could have a wide ranging impact. Mechanisms we identified included group work and high quality facilitation for example. Research which explores how these mechanisms work and how to deploy them most effectively would help accelerate the design of effective interventions across a range of issues.

Priority Three:

There are many areas we have identified that are ready for small-scale, or even large-scale trials. By encouraging, supporting and commissioning trials and evaluations to include life satisfaction measures, government could significantly accelerate the production of evidence. Whilst doing so, government must simultaneously look to improve the quality of trials by addressing issues like blinding, retention, reporting transparency and sample size.

Introduction

The Cabinet Office and other central government departments aspire to use high quality evidence to inform, deliver and improve public policy across the UK. The Evaluation Task Force's strategy outlines three key outcomes that all its activity is focused on securing across Government⁵:



This Trials Strategy is intended to assist the Evaluation Task Force in achieving these three objectives in relation to supporting the evaluation of policy interventions which improve life satisfaction.

Funding research can be expensive and departmental budgets for evaluation are often constrained. Consequently, making the most of the evaluations that are funded really matters. This strategy has been produced to ensure that decisions around life satisfaction evaluations, trials and other types of study are as efficient and effective as possible.

The strategy is informed by evidence generated in two rapid reviews⁶ of longitudinal and experimental studies into life satisfaction.

The key finding of the two reviews is the evidence gap identified between the broad and powerful determinants of life satisfaction found in longitudinal research and the individual-focused and relatively short interventions that have been found to be effective in improving life satisfaction.

⁵ Taken from: Evaluation Task Force Strategy 2022-2025:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1147573/2023-03-22_-_Final ETF_strategy.pptx.pdf

⁶ <https://whatworkswellbeing.org/projects/life-satisfaction-what-works/>

Future decisions about evaluations, trials and other types of studies (like natural experiments) will need to bridge these two evidence bases and build connections between them. To do so we have focused on identifying:

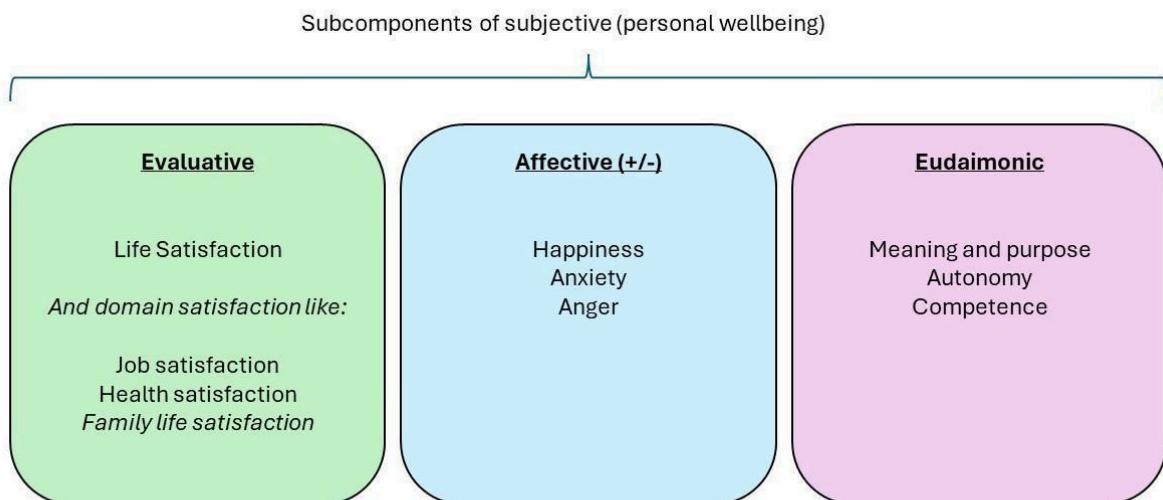
1. where the evidence base indicates robust trials are the best next step
2. contexts where methodological support and development is needed make trials more viable and result in future economies
3. evidence gaps where it is likely that interventions could improve life satisfaction

Why life satisfaction?

The ultimate outcome of good government is the improved wellbeing of the population. As such, policy interventions that can demonstrate a strong evidential basis for improved wellbeing are of significant interest to policymakers.

In the field of wellbeing, one of the most established and widely used measures of wellbeing is 'life satisfaction'. Life satisfaction measures how people feel about their lives as a whole and is thought to be a strong evaluative judgement of people's lives 'in the round'. Life satisfaction is only one element of subjective wellbeing but it is one that is most regularly measured.

A simple model of subjective (personal) wellbeing



Wellbeing inequality can be understood as the extent to which people's experiences of life vary. Identifying differences in life satisfaction within and between communities and groups can help policymakers target those in most need, closing the gap between those who are thriving and those who are struggling by reducing inequalities and increasing wellbeing.

Life satisfaction is a particularly useful measure of wellbeing for policymakers as it is not as sensitive to day-to-day challenges and one-off events as affective wellbeing. The counterpoint to this however is that it is difficult to improve and can be 'sticky'.

The widespread use of life satisfaction in studies has resulted in life satisfaction data being used in wellbeing economics as one of the primary measures of understanding the monetary value that improved individual wellbeing has for society at large.

Factors like widespread data collection, relative stability in the measure and life satisfaction's utilisation in the field of wellbeing economics all mean that policy interventions that can improve life satisfaction are highly valued.

Part One: Life satisfaction rapid reviews

This strategy has been informed by two rapid reviews into life satisfaction. These reviews were commissioned by the Department for Transport, the Department for Digital, Culture, Media and Sport and the Cabinet Office and were delivered by the What Works Centre for Wellbeing and Kohlrabi.

The research questions for the two reviews were:

1. What is the **effectiveness of interventions** aimed at improving life satisfaction across the life-course?
2. What are the **long-term determinants** of life satisfaction?

We refer to these reviews throughout this document as the ‘intervention review’ and the ‘determinants review’

Briefings on the findings⁷ of both reviews and the full technical report⁸ is available on the What Works Centre for Wellbeing website. There are also supplementary resources including reference lists⁹ and lookup tables of all studies¹⁰, and reference lists of studies excluded because they were outside the UK (determinants review) or because they explored determinants or interventions linked to COVID-19¹¹.

Intervention review - key findings

The intervention review identified interventions to improve life satisfaction that had been subject to a randomised controlled trial or experimental conditions in high-income OECD countries, since 2011.

The key findings following synthesis of the 234 interventions identified were:

- Emotional skills development, exercise, therapy, mindfulness, and gratitude interventions were effective at improving life satisfaction.
- There was mixed evidence for most intervention types including: meditation, positivity, prosocial, resilience, emotional regulation, and multi-component interventions.

⁷ <https://whatworkswellbeing.org/projects/life-satisfaction-what-works/>

⁸ https://whatworkswellbeing.org/wp-content/uploads/2024/04/Life-Satisfaction_what-works_Full-technical-report_Final-april-2024.pdf

⁹ https://whatworkswellbeing.org/wp-content/uploads/2024/04/AppendixA_intervention_study-list.pdf and https://whatworkswellbeing.org/wp-content/uploads/2024/04/AppendixC_observational_study-list.pdf

¹⁰ https://whatworkswellbeing.org/wp-content/uploads/2024/04/AppendixB_LS_intervention_look-up-table.xlsx and https://whatworkswellbeing.org/wp-content/uploads/2024/04/AppendixD_LS_observation_look-up-table.xlsx

¹¹ https://whatworkswellbeing.org/wp-content/uploads/2024/04/ObservationalReview_excluded-lists.pdf and https://whatworkswellbeing.org/wp-content/uploads/2024/04/InterventionReview_excluded-lists.pdf

- Some other areas, like music and social media interventions, appeared promising but there was insufficient evidence to draw strong conclusions.
- Interventions based on reflection, visualisation and social emotion-based activities were not effective at improving life satisfaction

The intervention review also identified a number of mechanisms or elements of life satisfaction interventions that were common in the design of interventions. These were:

- Number of participants - interventions were usually delivered to groups or individuals.
- Facilitation - some interventions were taught by a teacher, others were facilitated activities and some were completed by an individual on their own.
- Setting - interventions were delivered in a variety of settings including at home and in the community. Many were delivered in-person but some were delivered online.
- Duration and intensity - intervention activities varied in duration from a few minutes to a few hours and were delivered over shorter and longer time periods.

We were unable to do comprehensive analysis on these mechanisms or elements and developing our understanding of optimal intervention design could be a priority. Further synthesis of the existing evidence identified in the review to explore relationships between effectiveness and participant numbers, facilitation style, setting, duration and intensity would be a first step. This would generate testable hypotheses to explore in any future life satisfaction trials.

In total, we identified 18 different types of interventions that were delivered to improve life satisfaction. The table below summarises future research priorities to help further develop our understanding of each.

Figure 2: Findings of intervention review and suggested next steps for research

Theme	Intervention Type	Research priority
Intrapersonal emotion-based activities:	Mindfulness	Large trials focused on wellbeing inequalities and calibration to understand the most cost effective length and intensity.
	Gratitude	Developing and evaluating a gratitude intervention that improves life satisfaction in close familial or romantic relationships

	Therapy	Understanding the trade-offs for life satisfaction and cost for delivering therapeutic activities to groups and individuals
	Positivity	Larger-scale trials focused on reframing stressors in lives of individuals experiencing wellbeing inequalities.
	Meditation	Further small-scale trials to develop the evidence base which is promising but not strong.
	Other¹²	Trialling effective interventions to improve eudaimonic wellbeing and researching their effect on life satisfaction.
	Reflection	Reviewing wider research and evaluations without a control group to develop an effective intervention
	Visualisation	Reviewing wider research and evaluations without a control group to develop an effective intervention
Interpersonal emotion-based activities	Prosocial	Large scale trial of kindness interventions in school as an anti-bullying intervention. Small scale trials with adult populations.
	Social	Reviewing wider research and evaluations without a control group to develop an effective intervention
Emotional Education	Skills development	Large scale trials with adults to identify features of a quality emotional skills development programme.
	Resilience	Small scale trials with adult populations. Suggested focus on the workplace in high-stress occupations.
	Regulation	Further trials could focus on intensity of intervention to identify what intensity of delivery is most effective.
Health promotion	Exercise	Large trials focused on wellbeing inequalities and calibration to understand the most cost effective length and intensity.

¹² Includes interventions categorised as personal emotion-based activities (i.e., focus on the mind and the self) but which do not fit into the other sub themes - often focused on identifying values or goals

	Health Education	Large scale trials with adults to identify features of a quality emotional skills development programme.
Social Media		Small scale trials exploring positive use of social media and larger trials looking at reduction of use/abstinence
Music		Small scale trials, but not with older adults. Suggested focus on working age adults and children and young people
Multi-component		Multi-armed trials to test relative contributions of interventions and any multiplier effects. Suggest therapy and exercise as a priority.

Figure 2 key

	Evidence Strength
	Strongest evidence base. Ready for large-scale trials or specific populations
	Mixed evidence - Ready for targeted trials to fill evidence gaps
	Poor evidence - Do small trials to understand if it can be effective
	Limited evidence - Do small scale trials to build understanding

Determinants review - key findings

The determinants review identified 49 longitudinal studies that had explored life satisfaction and its determinants. These were all UK studies, published since 2011. The review also identified 548 international studies¹³ that met the inclusion criteria but these were not reviewed due to resource constraints. These studies could be examined in detail for a more comprehensive understanding of the international evidence.

Figure 3 below summarises the key findings for each of the thematic areas identified.

¹³ https://whatworkswellbeing.org/wp-content/uploads/2024/04/ObservationalReview_excluded-lists.pdf

Figure 3: Key findings of the determinants review

Theme	Subtheme	Description	Evidence summary
Financial situations (n=12)¹⁴		The effect of income, resource ownership and social mobility	Significant with consistent associations across different cohorts
Education and employment (n=14)	Employment (n=9)	The effect of job transitions and working conditions	Significant with consistent associations across different cohorts
	Education (n=5)	The effect of qualifications and learning	Significant with consistent associations across different cohorts
Social capital (n=12)	Community (n=7)	The effect of belonging including citizenship, internal migration, neighbourhood participation, loneliness	Inconclusive Only change of address (internal migration) had a significant positive association
	Social support (n=5)	The effect of relationships, social networks, informal caregiving, parenthood and cohabitation	Significant with consistent associations across different cohorts
Health (n=11)	Physical and mental health (n=6)	The effect of poor health	Significant but with inconsistent associations across different cohorts
	Health behaviours (n=5)	The effect of diet and exercise	Inconclusive Fruit and vegetables intake (positive association) and problem drinking (negative association).
Environment (n=4)		The effect of infrastructure, access to blue and green spaces, commuting	Inconclusive Perception of public transport access was significantly associated
Arts and culture (n=5)		The effect of participation and engagement	Significant but with inconsistent associations across different cohorts

¹⁴ n = number of studies in each theme/sub-theme. n does not sum to 49 as many studies explored multiple factors.

Learn about life satisfaction trials from the intervention review

The intervention review generated a range of specific insights for different policy areas that we explore in detail in Part Two of this document. The review also generated a range of strategic insights and learning for governments, researchers and wider stakeholders to apply when conducting future trials into life satisfaction.

In this section we summarise those insights to help inform future work.

Moving from individuals to communities

The 234 interventions identified were delivered to individuals, couples, families, small groups or classes. None were offered at a neighbourhood, community or regional level. To deliver life satisfaction improvements on a larger scale, research infrastructure, methodologies and commissioning practices will need to change so that we can baseline or measure change over larger social-units.

Although the intention was that natural experiments would not be excluded from the rapid review, the outcome of our criteria for both pre- and post-control group measures, alongside all our other search criteria, resulted in none being included. Some natural-experiments were included in the observational review - for example the introduction of flexible working policies for mothers.

The exclusion of natural experiments was unavoidable but disappointing given their ability to explore the impact of broad policy changes. By facilitating high quality natural experiments, governments could generate important insights into the efficacy of high-level policy changes that affect large populations.

Examples of policy gaps identified in the two reviews which could be addressed through natural experiments and/or localised wellbeing measurement included:

- The extent to which interventions to reduce commuting times or invest in local public transport networks improve wellbeing.
- Effective interventions for improving neighbourhood safety - a factor we found to be positively associated with life satisfaction.
- Effective interventions that strengthen close relationships and social networks. Whilst we did identify one family therapy intervention we did not identify any effective emotion-based interventions that promoted social interaction.

To overcome challenges like these will require localised and high quality wellbeing measurement:

- Changes in local transport networks would likely require regional measurement of life satisfaction that provided enough detail to differentiate by commuting patterns for example.
- Neighbourhood measurement would likely support research to understand how high-street regeneration or anti-social behaviour policies are related to life satisfaction. .
- Detailed measurement of social connections may support better understanding of interventions focused on the forming and functioning of friendships, family units and other relationships.

These methodological challenges are the most complex that we have identified and government has a role to play in supporting researchers to address them.

There are some useful examples to aid progress in this area - particularly at the local and regional level. Beewell¹⁵ in Greater Manchester and in Hampshire, Isle of Wight, Portsmouth and Southampton provide a good example of how to embed regional measurement across secondary schools. Coventry's local household survey¹⁶ has provided wellbeing data that has been utilised in evaluating the impact of its year as City of Culture. Born in Bradford¹⁷, a birth cohort study, will provide important wellbeing data for children and parents in the city in coming years.

For central government to drive change, support for establishing surveys like these - whether financial, or through technical advice - could be crucial in helping to operationalise these complex research infrastructures. Other innovations could include ensuring that existing data is published in ways that makes robust local data accessible and provides ways to benchmark evaluations against local wellbeing scores. Over the long-term, the Government must continue to invest in sophisticated and regular measurement of population wellbeing and, wherever possible, advocate for simple wellbeing measures, like single-item life satisfaction questions, to be added to a range of national studies and surveys.

¹⁵ <https://beewellprogramme.org/>

¹⁶ <https://coventry-city-council.github.io/citywideintelhub/>

¹⁷ <https://borninbradford.nhs.uk/>

Mechanisms, intervention elements and pathways

The life satisfaction intervention review identified a number of common mechanisms employed in interventions that could be the subject of further research so that the mechanisms and pathways best placed to improve life satisfaction can be identified. This will be of particular use to policymakers and commissioners working in areas where there are not established interventions with a strong evidence base.

Key mechanisms identified included:

- Group Work and individual interventions
- Online and face-to-face interventions
- Frequency
- Setting
- Skills and training of the practitioner delivering the intervention

We would recommend a prioritisation of these mechanisms. Research into **group work, frequency and the skills and training of the practitioner delivering the intervention could be prioritised.** Exploration of online interventions are best pursued cautiously. Of the 37 interventions delivered online only seven were effective. Most of these effective interventions were also in areas where evidence was already more robust like therapy and mindfulness.

Multi-component interventions

Related to the mechanisms identified above, the rapid review identified a number of multi-component interventions. These interventions used two or more different types of activity to improve life satisfaction. A large-scale trial with multiple intervention arms would allow researchers to understand the relative contributions of different components of an intervention and crucially whether delivering components in combination creates a wellbeing “boost” over and above the impacts of each individual component.

Measures

The life satisfaction intervention review found researchers utilising a variety of validated life satisfaction measures. In future, useful work could be undertaken to create new measures for underserved populations and to develop our ability to translate between different measures in order to improve comparability and maximise impact.

Development of new measures

In the life satisfaction intervention review, clinical populations were excluded from our search. As a result, further reviews would be required to identify effective life satisfaction interventions for populations with pre-existing health conditions. Priorities might be long-term conditions, cancer, end of life care and

conditions that cause high levels of pain. All of these conditions may require the development of new validated measures to adequately capture life satisfaction in these specific circumstances.

The What Works Centre for Wellbeing has consistently found gaps in the measurement of wellbeing of populations who are neurodivergent or have a learning disability. These groups could also be prioritised for the development of new validated measures.

Single and multi-item measures

Currently the Green Book¹⁸ (2022) understands the social value of wellbeing using wellbeing scores and effect sizes that have been measured using the ONS' preferred 11-point scale of life satisfaction.

The wide range of single-item and multi-item measures identified in this review pose a significant challenge in developing a standardised understanding of the relative impact of different determinants and interventions.

Whilst the Green Book does provide a formula to support the translation of wellbeing scores on single item scales (for example from a seven point scale to the ONS 11 point scale) further work is needed to understand how to translate scores on multi-item scales into single item scales.

This work would best be commissioned using a large dataset. The most commonly used multi-item scale we found was the five-item satisfaction with life scale. Work on this scale could be prioritised as it was used in 60% of the interventions identified in the life satisfaction intervention review.

Improving life satisfaction trials

The inclusion criteria for the intervention review meant that the studies included were of relatively high quality. Most were randomised controlled trials and scored highly on the Joanna Briggs Institute checklists we used to assess quality. Despite this, there are still a number of areas in which methodological improvements could be made. Future trials could prioritise:

- Transparency in reporting findings

20% of interventions did not report their findings in ways that enabled us to include them in our quantitative synthesis of findings - either through our approach to meta-analysis or our descriptive approach for subthemes that we did not consider suitable for meta-analysis.

¹⁸ <https://www.gov.uk/government/publications/green-book-supplementary-guidance-wellbeing>

It is important that future trials always report on their outcomes regardless of whether they are statistically significant or not. In the rapid review, we adopted a frequentist statistical approach through the dichotomy of studies that either were, or were not, statistically significant. Our use of meta-analysis however, demonstrates that every high-quality study can be useful in assessing effectiveness. As such, studies which report no significant change in life satisfaction between intervention and control groups should not be interpreted as having no effect at all. Instead, they may provide useful insights, but we must not over emphasise their utility.

- Replication

Very few trials have been replicated successfully. Indeed there were examples of trials that were re-run with minimal alterations and did not produce significant results on the second occasion.

- Sample size

Relatedly, many of the trials identified in the intervention review had only small samples. Only three trials operated with samples of more than 1000, and none of them were effective at improving life satisfaction. As such the review only identifies what has worked to improve life satisfaction in small-scale trials and so scaling trials must be a priority. Not least to provide more robust results, but also so that participant characteristics can begin to be properly explored. While improving reporting, increasing sample size and developing replicable trials would be the priorities, we also recommend, where feasible, future trials also look to improve blinding and attrition/retention.

- Blinding

Given the nature of interventions, blinding trials appropriately is challenging. Over 75% of interventions failed to meet the criterion that those delivering the intervention were blinded to treatment assignment, and approximately two-thirds of studies failed to meet the criteria that participants were blind to treatment assignment. A total of 57 studies failed to meet criteria that assessors were blind to treatment assignment. Improving on these figures may prove challenging but where improvements can be made they should be pursued.

- Attrition/Retention

A small number of studies (n=11) failed to meet the retention criteria. This was most commonly because there was loss to follow-up throughout the intervention and it was not adequately described.

Recommendations for future trials

- A priority must be for governments to support the development of the research infrastructure and methods to understand changes in life satisfaction at neighbourhood, community and regional levels and to deliver high quality research into natural experiments. Government is uniquely placed to support this and it would have a significant impact on evidence-based policy making. This could include:
 - Providing technical support for local areas and regions looking to establish high quality wellbeing surveys
 - Considering providing financial support to help set up new high quality surveys and boosters
 - Ensuring that available data is published at the lowest local level possible (whilst maintaining data quality)
 - Ensuring that stakeholders can benchmark their own wellbeing measurement against robust local data that can be easily modified to match sample populations etc.
- Governments might accelerate understanding into what works to improve life satisfaction by commissioning research into the different mechanisms identified in this review that appear promising in improving life satisfaction.
- Policymakers could promote the use of single-item measures alongside the multi-item measures that researchers tend to prefer. Commissioning research into methods to improve translation from multi-item and differing lengths of single-item scales into the 11-item ONS life satisfaction scale would have significant impact.
- When commissioning future trials, government could look to improve the quality of the evidence-base by addressing registration, blinding, retention, reporting transparency and replication.

Part Two: Life satisfaction evidence - informing future trials

The following section organises the evidence identified in both reviews into broad public policy areas. It is intended to support policymakers in understanding the available evidence base in their policy area and makes recommendations for future life satisfaction trials in that area.

By public policy we mean: ‘decision making about what the public sector does and doesn’t do, and how it does it¹⁹’ and how it affects the welfare and wellbeing of the entire population²⁰.

Method

To organise the evidence into relevant policy areas and make recommendations for the future we followed a four stage approach:

1. Compiled a long-list of government policy areas from public sources
2. Organising the evidence from both reviews into relevant public policy domains
3. Assessing the collated evidence under each part of the framework to identify priorities for future trials and research
4. Compared our list of government policy areas with the evidence collated in our policy framework to identify key gaps in life satisfaction evidence.

Stage one: compiling a long-list of government policy areas

Before assessing any of the evidence collated by either review we generated a list of public policy areas relevant to the UK government using:

- Stated priority areas of the Cabinet Office Evaluation Task Force²¹
- A review of Departmental Outcome Delivery Plans²²

¹⁹ <https://www.instituteforgovernment.org.uk/publication/report/policy-making-real-world>

²⁰ <https://www.gov.uk/government/publications/green-book-supplementary-guidance-wellbeing>

²¹ <https://www.gov.uk/government/publications/priority-areas-for-the-evaluation-task-force-sr21-period/priority-areas-for-the-evaluation-task-force-sr21-period>

²² For example see:

<https://www.gov.uk/government/publications/department-for-work-and-pensions-outcome-delivery-plan/department-for-work-and-pensions-outcome-delivery-plan-2021-to-2022> or <https://www.gov.uk/government/publications/department-for-education-outcome-delivery-plan/dfe-outcome-delivery-plan-2021-to-2022>

- Examination of government spending on different policy areas²³

The list was for use in conceptualising a public policy framework we could utilise to organise the life satisfaction evidence and to help us in identifying gaps in the evidence base.

Stage two: organising the evidence

The list of public policy areas was broadly organised by UK Government Departments. We have not chosen to organise the life satisfaction evidence by department for two reasons. Firstly, we wanted this trials strategy to be relevant across all forms of local and national government. Secondly, a Departmental analysis suggests siloed policy solutions instead of recognising the broad and cross cutting nature of efforts to improve national wellbeing.

We explored a range of frameworks to organise the evidence including the ONS²⁴ and OECD²⁵ wellbeing frameworks. We also considered the thematic structures developed in both the rapid reviews through an inductive mapping process. Whilst the thematic structure of the intervention review did not feel relevant in a policy context the thematic structure from the determinants review had significant crossover with existing wellbeing frameworks and government policy areas.

We mapped all the interventions into the nine themes from the determinants review with the addition of five 'population' themes of populations who were commonly participants in the intervention research.

This resulted in a total of 13 themes which we have used to map out all the life satisfaction evidence identified in the two reviews. Those themes are:

Economic and financial situations; employment; adult education; relationships; communities and neighbourhoods; health; health behaviours; environment; children and young people; university students; older adults; and military personnel.

²³ For example see:

<https://www.gov.uk/government/statistics/public-spending-statistics-release-july-2023/public-spending-statistics-july-2023#departmental-budgets>

²⁴<https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/articles/ukmeasuresofnationalwellbeing/dashboard>

²⁵<https://www.oecd.org/wise/measuring-well-being-and-progress.htm>

Stage three: assessing the collated evidence

We reviewed all the evidence under each theme and made recommendations for future research into life satisfaction.

The key informing the recommendation is the strength of the existing available evidence. Reflecting on the types of trials and evidence presented in the intervention review we broadly divide up the evidence base into five categories:

- Areas where there are numerous effective small scale trials. These areas are ready for large scale trials or further targeted small trials seeking to understand specific policy challenges or populations.
- Areas where there are a small number of effective trials but further work is needed to refine the interventions and build the evidence base
- Areas where there are trials but they have not proved effective. Future research must review the evidence base and design new interventions. These interventions will then need to be evaluated.
- Areas where there is longitudinal evidence but no intervention evidence. These areas are ready for the design and evaluation of new interventions.
- Areas where no evidence was identified. Future research here could be focused on understanding the determinants or small scale evaluations.

In making recommendations about priorities for future trials we have also considered factors like:

Risk and uncertainty

- Is there evidence that policy interventions or circumstances may be reducing life satisfaction/wellbeing?
- Could an intervention be used to mitigate other risks to wellbeing?

Impact

- Does an intervention represent significant value for money for the government due to spillover effects and co-benefits through improved health, propensity for employment etc?
- Could the intervention have an impact on wellbeing or other inequalities?

Sector ready and available to trial

- Are there delivery partners, evaluators and existing data and evidence infrastructures to support a trial?
- How challenging will it be to recruit enough participants to support a robust trial?

Contextual Conditions

- Is there a discrete policy change, intervention or programme that provides an opportunity for a trial or natural experiment?

- Are there a cluster of similar interventions used across the country which could be used as different intervention arms in a trial?
- Is there data available for a retrospective study to be undertaken?
- Could a robust trial be delivered at low cost?

Adaptation and innovation

- Could existing trials or evaluations be easily adapted to include life satisfaction measures?

Stage four: identifying key gaps

Using the long-list of UK Government policy areas we reviewed all 13 themes to identify gaps where the list had identified public policy activity but no life satisfaction evidence had been identified in the reviews.

Thematic policy review

The following sections address each of the 13 policy themes in turn. They provide:

- a summary of the longitudinal and intervention evidence,
- a discussion of the evidence base and its implications,
- a short set of recommendations

The 13 themes are:

Economic and financial situations; employment; adult education; health; health behaviours; relationships; communities and neighbourhoods; environment; children and young people; university students; older adults; and military personnel.

1. Personal finance and the economy

The determinants review identified eight papers looking at a variety of aspects of income, three papers exploring resource ownership and a further three papers looking at intergenerational social mobility. Key findings included:

- Strong positive association between improved income (covering income changes, absolute income and relative perceptions) and life satisfaction
- In one study, there was evidence to suggest that the effect was non-linear such that the association weakened and then turned negative at very high-income levels (Charles et al., 2019).
- Home ownership (mortgage or outright) is associated with higher life satisfaction. Renting used to be positively associated with life satisfaction before the 2008 financial crash but more recent data suggests it is now negatively associated.
- Car ownership negatively associated with life satisfaction for the first five years after purchase
- Fuel poverty was negatively associated with life satisfaction
- The findings in full can be found at pages 59-63 of the technical report²⁶.

There were no interventions that produced a statistically significant improvement in life satisfaction under this theme.

²⁶https://whatworkswellbeing.org/wp-content/uploads/2024/04/Life-Satisfaction_what-works_Full-technical-report_Final-april-2024.pdf

Discussion

Given that income and financial situations (sometimes called ‘financial wellbeing’²⁷) are powerful determinants of life satisfaction it is disappointing that no interventions were identified in this area - statistically significant or otherwise. Natural experiments looking at the impact of welfare and benefit changes on life satisfaction, especially where they relate to health and employment, could be a priority alongside experiments and RCTs into personal financial interventions like benefits and pensions advice, budgeting, and financial literacy.

In the future, policymakers may also like to consider natural experiments and trials to build the evidence base for less well understood interventions like direct cash transfers such as universal basic income. The current evaluation of a basic income for young people leaving care in Wales does include wellbeing measures and may provide useful evidence in the future²⁸. Other models like Housing First²⁹ programmes for people who have experienced street homelessness may also provide important opportunities³⁰.

Given the complex association of renting with wellbeing, any future changes to the private rental market could provide opportunities to understand how more secure tenure, better quality housing stock and homes tailored to an individual's needs, for example extra-care housing, are associated with life satisfaction.

Net zero is a stated government priority, a cross-cutting policy objective and an area of priority for the Cabinet Office in improving evaluation. There is important evidence that changes to achieve net-zero could be associated with life satisfaction. For example, measures of fuel poverty were strongly linked to life satisfaction, and existing evaluations have shown that energy efficiency interventions can improve wellbeing measured using the ONS4 measures³¹.

Policymakers working on net-zero policy initiatives could consider how measurement of life satisfaction might support them in capturing the wellbeing benefits of the shift towards a low carbon economy. For example, existing research³² has explored residents' perceptions of retrofitted homes on their health but did not ask validated life satisfaction measures - these could

²⁷ <https://maps.org.uk/en/our-work/uk-strategy-for-financial-wellbeing>

²⁸ <https://www.gov.wales/sites/default/files/statistics-and-research/2024-02/basic-income-care-leavers-wales-pilot-evaluation-annual-report-2023-2024.pdf>

²⁹ <https://www.gov.uk/government/publications/housing-first-pilot-national-evaluation-reports>

³⁰ <https://whatworkswellbeing.org/blog/housing-for-vulnerable-people-what-works/>

³¹ <https://whatworkswellbeing.org/resources/ons-personal-wellbeing-findings-in-impact-evaluations/>

³² <https://assets.publishing.service.gov.uk/media/65b225caf2718c000dfb1cf5/shdfd-whr-outcome-and-economic-evaluation-report.pdf>

have been a simple addition to evaluations that would have provided important insights into social value.

As such, including life satisfaction measures in the evaluation of future programmes to retrofit homes (for example by improving insulation) or switching away from gas boilers or towards electric vehicles would be a priority. Even if these programmes only have small wellbeing benefits, the population-scale challenge they are addressing could result in sizeable wellbeing benefits for the country as a whole.

Recommendations:

- Prioritise conducting natural experiments that explore changes in life satisfaction as a result of significant policy change that affects the economy or personal financial wellbeing. Examples could include:
 - Changes in minimum wage/living wage
 - Introduction of freeports and development zones
 - Renters and leasehold reform
 - Help to buy housing schemes
- Establish a range of trials to establish the efficacy of net zero interventions at improving life satisfaction - for example retrofitting, boiler exchanges, electric vehicle use etc.
- Conduct small scale trials on personal financial interventions like benefits maximisation, pensions advice, financial literacy programmes. Also consider small trials on access to, and use of, personal financial products like workplace pensions, private pensions, savings accounts, ISAs, building societies and credit unions

2. Employment

The determinants review identified four papers exploring the impact of unemployment on life satisfaction, three papers looking at working conditions and two papers looking at retirement transitions. Key findings included:

- Unemployment is negatively associated with life satisfaction for the individual and sometimes their partner. Other reviews confirm this³³.
- Some studies suggest unemployment has long-term scarring effects on life satisfaction

³³ <https://whatworkswellbeing.org/resources/unemployment-reemployment-and-wellbeing/>

- Job satisfaction and life satisfaction are positively associated. The association is also bidirectional.
- Mismatch between desired working hours and actual working hours negatively associated with life satisfaction
- Evidence on flexible working policies is unclear - a study of mothers after the introduction of the Flexible Working Act 2003 found no association.
- Both retiring, but also returning to the workforce in retirement were positively associated with life satisfaction. Other reviews have also explored this area and provide more nuance to these findings³⁴.
- The findings in full can be found at pages 64-67 of the technical report³⁵.

Interventions³⁶ related to employment that produced a statistically significant improvement in life satisfaction:

Malmberg-Heimonen (2011) Therapy: long term recipients of social security receiving a 14-week programme of Family Group Conferencing (average of 24.3h total work with facilitator)

Milot (2019) Therapy: adults from two different workplaces receiving up to 12h face-to-face sessions over 12 months (average 6.7h over 6 months), free counselling as part of the Canadian Employee Assistance Programme

Morgan (2016) Resilience: hotel employees read a 45-60 minute written educational document distributed and read by hospitality staff one-time: "A new intervention model and measuring instrument, the Hotel Orientation to Satisfaction in Tourism (HOST), was designed to elevate employee intrinsic motivation and life satisfaction perceptions"

O'Neill (2022) Health education: national guard receiving x1 one hour supervisor support training online to train them to provide support. Test subjects wore an actigraph watch for 21 days at baseline and 9 months to receive personalised feedback & goal-setting based on actigraph-collected sleep reports. Health-promotion programme.

³⁴ <https://whatworkswellbeing.org/blog/retirement-and-wellbeing-what-works/>

³⁵ <https://whatworkswellbeing.org/wp-content/uploads/2024/04/Life-Satisfaction-what-works-Full-technical-report-Final-april-2024.pdf>

³⁶References for all interventions can be found here:

https://whatworkswellbeing.org/wp-content/uploads/2024/04/AppendixA_intervention_study-list.pdf and further information about intervention characteristics can be found in this lookup table:

https://whatworkswellbeing.org/wp-content/uploads/2024/04/AppendixB_LS_intervention_lookup-table.xlsx

Kaspereen (2012) Mindfulness: Teachers and school staff receiving 4 sessions of 30-45 minutes, weekly for 4 weeks. Guided meditation audio including relaxing music.

Rahm & Heise (2019) Multi-component: Teachers receiving 10h face-to-face training + 3h exercise over 6 weeks. Consisted of: 6h training day, followed by 2 weeks of positive psychology intervention. Then x2 2h booster session, followed by another 2 week positive psychology intervention each for total of 6 weeks

Discussion

The area of employment should be a key priority for trials. Working-age adults make-up the largest sub-population and mid-life is known to be a period of life where wellbeing dips. A notable gap in the evidence base from the interventions review was the small number of studies looking at interventions based in organisations and/or focused on working age populations.

Unemployment in particular is strongly associated with lower life satisfaction. The Malmberg-Heimonen (2011) study is a relatively intense intervention (especially when compared to a statistically insignificant intervention (Dambrun and Dubuy, 2014) which was delivered in two weeks) and suggests that significant resources are needed to bring about improvements for the long-term unemployed.

The Malmberg-Heimonen (2011) study is also of note because it was not focused on getting people into work but rather on strengthening and securing individual's social networks. Further research may allow the development of a clear theory of change which links strengthened social networks to improved wellbeing and employment outcomes.

Given the importance of employment and the government's role in delivering Universal Credit, Job Centres, the National Careers Service and other employment support, there are a range of opportunities and settings the government could utilise to develop trials in this area and yield more actionable policies in comparison with other areas. Current programmes like Supporting Families programme³⁷, or Restart³⁸, alongside other interventions for individuals with long-term health conditions or disabilities could be used to build further evidence about what works to improve wellbeing and address unemployment.

³⁷ <https://www.gov.uk/government/publications/supporting-families-programme-guidance-2022-to-2025>

³⁸ <https://www.gov.uk/government/publications/restart-scheme>

Job satisfaction was positively associated with life satisfaction (although the relationship is bidirectional) but the determinants review found mixed evidence about the importance of flexible working and workplace-based factors.

Given the significant changes in working patterns since the pandemic, more recent observational studies, and future evaluations and trials could look to improve our understanding of how changes in the hours, location and flexibility of our work affect life satisfaction. Areas of focus might include the impact of parental leave, job-share arrangements, the four day week³⁹, hybrid working, and other flexible working practices.

The intervention evidence on the workplace, whilst limited, does provide some useful areas for further exploration. Given the widespread availability of Employee Assistance Schemes⁴⁰, the Canadian Milot (2019) study and future evaluations could be used to improve the efficacy of these schemes at improving wellbeing. The Milot (2019) study based in the hospitality industry demonstrates how sector-specific interventions can be effective and could provide a model for use in other sectors - perhaps particularly where pay is relatively low and part-time or seasonal work is common.

The intervention review produced a number of effective interventions to support the life satisfaction of older adults. Whilst only one of these interventions was focused on working older adults (Diachenko et al, 2021), and did not produce statistically significant results, this study and others still provide a range of insights into the types of activity, the mechanisms, and outcomes we might expect from interventions to support this group.

There were also two effective interventions delivered to teachers and school staff. These, alongside effective interventions for healthcare professionals and military personnel highlight the opportunities for the government to make meaningful improvements to the life satisfaction of individuals working in the public sector.

Finally, given the importance of health as a determinant of life satisfaction it is likely that health interventions that support employment will be effective at improving life satisfaction. Initial research in this area could look at occupational health services provision and add wellbeing measures to understand impact.

³⁹ <https://whatworkswellbeing.org/blog/findings-from-four-day-work-week-trial/>

⁴⁰ <https://whatworkswellbeing.org/blog/measuring-the-impact-of-employee-assistance-programmes/>

Recommendations:

- Add life satisfaction measures to existing interventions to support people into work
- Develop a range of natural experiments to understand the impact of increased hours, progression etc. for different groups like parents of young children, single parents, men & women etc.
- As a large employer, the government could directly trial interventions around factors like flexible working (including hybrid working, compressed hours and job share arrangements), the right to switch off, four-day weeks and improved management practices. These trials could explore how they affect different groups utilising a wellbeing inequality lens - be aware of possible protective factors masking areas of wellbeing risk.
- Pilot trials to explore the efficacy of occupational health interventions at improving life satisfaction and enabling individuals to work.

3. Adult education

The determinants review identified three papers exploring educational qualifications and their relationship with life satisfaction and three papers that looked at participation in education and work training for working adults. The key findings were:

- Educational qualifications have a positive association with life satisfaction but it is nuanced by generation, gender and age.
- Having a university degree was associated with higher life satisfaction for men and women from older generations. This was not the case for women born in 1989/90.
- Obtaining adult accredited learning qualifications in later life was associated with subsequent higher life satisfaction.
- Work based training appears to be associated with higher life satisfaction although these were moderated by age and the type of training.
- The findings in full can be found at pages 68-70 of the technical report⁴¹.

There were no interventions that produced a statistically significant improvement in life satisfaction under this theme.

⁴¹https://whatworkswellbeing.org/wp-content/uploads/2024/04/Life-Satisfaction_what-works_Full-technical-report_Final-april-2024.pdf

Discussion

Given the importance of adult education as a factor linked to life satisfaction in the determinants review it is surprising that we did not identify any interventions in this area.

Based on the findings of the determinants review, interventions to help improve the skills and productivity of the workforce could make important contributions to improving life satisfaction⁴². Policy priorities like adult education and lifelong learning could be examined to understand if they produce improvements in life satisfaction. Moreover, workplace training opportunities like continuing professional development, educational sabbaticals, and regular training opportunities across all sectors might also be used to conduct initial evaluations and small scale trials to further build the evidence base.

Policymakers should be relatively confident that education interventions will improve life satisfaction. The intervention review's strongest finding was the efficacy of taught emotional health interventions at improving life satisfaction. These interventions were more powerful than those which just saw adults take part in emotional-based activities. It is likely that their delivery as an educational offer, with a taught curriculum, played a role in this. Learning is regularly identified as a key activity we can undertake to improve our wellbeing⁴³.

Given the evidence, identifying, trialling, and delivering high quality emotional skills education programmes at scale is a clear priority. For the government, embedding well designed and quality-assured emotional skills courses into the training requirements for key public sector workforces could provide a useful way to further trial these interventions and understand how they might relate to other important public sector workforce challenges like poor mental health, high burnout, and stress. Existing evidence reviews from the What Works Centre for Wellbeing could support this⁴⁴.

Indeed, throughout the intervention review, the very small number of workplace related interventions identified were usually delivered in the public sector. These included teachers, school and university staff, healthcare professionals and military personnel (see below) Other relevant workforces that the government could explore include children and adults social care professionals, the civil service, local authority officials, jobcentre staff, first responders and other public sector workforces.

⁴² <https://whatworkswellbeing.org/resources/adult-learning-and-life-satisfaction/>

⁴³ <https://neweconomics.org/2008/10/five-ways-to-wellbeing>

⁴⁴ <https://whatworkswellbeing.org/resources/learning-at-work-and-wellbeing/>

Recommendations:

- Trial of a range of adult education interventions, linked to improved productivity and career prospects, to understand what types of adult education interventions are most impactful on wellbeing.
- Trial adult education interventions focused on key work-related life events. These could include parental leave, being made redundant or returning to work after long illnesses, retirement, or unemployment.
- Research the mechanisms and pathways needed to produce quality curriculums for emotional skill development across the lifecourse.
- Trial education interventions in the public sector workforce to develop understanding whilst also tackling public sector challenges like retention, burnout etc.

4. Relationships

The determinants review identified five papers exploring social support and life satisfaction. These papers examined factors like marriage and relationships, parenthood, friendship networks, informal caregiving and bereavement. Key findings were:

- Marriage, cohabitation and parenthood were all positively associated with life satisfaction
- Loss of spouse was associated with a decline in life satisfaction
- Size and contact with social network were both associated with increased life satisfaction
- Two years of informal care for a close relative was associated with lower life satisfaction but those who begin caring for a close relative did have higher life satisfaction than those with no caring responsibilities.
- The findings in full can be found at pages 75-76 of the technical report⁴⁵.

Interventions⁴⁶ related to relationships that produced a statistically significant improvement in life satisfaction:

Malmberg-Heimonen (2011) Therapy: long term recipients of social security receiving a 14-week programme of Family Group Conferencing (average of 24.3h total work with facilitator)

⁴⁵https://whatworkswellbeing.org/wp-content/uploads/2024/04/Life-Satisfaction_what-works_Full-technical-report_Final-april-2024.pdf

⁴⁶ References for all interventions can be found here:

https://whatworkswellbeing.org/wp-content/uploads/2024/04/AppendixA_intervention_study-list.pdf and further information about intervention characteristics can be found in this lookup table: https://whatworkswellbeing.org/wp-content/uploads/2024/04/AppendixB_LS_intervention_lookup-table.xlsx

Fegg et al (2013) Therapy: informal carer of palliative patients receiving x6 group sessions (total 22h) of Existential Behavioural Therapy.

There were a number of other interventions focused on relationships that did not produce statistically significant results but may be of use to researchers looking to develop effective relationship-focused intervention in the future. Antoine et al., (2020) and Ragan (2012) both looked to improve life satisfaction among couples in romantic relationships and Roepke et al (2018) focused on adults who had been bereaved in the last five years. Whilst these studies did not produce statistically significant results they may have still improved life satisfaction and could have produced other important outcomes. The learning should be used to inform more effective interventions in the future.

Discussion

Strong relationships were a key life satisfaction factor in the determinants review but very few interventions were found that were focused on close, usually familial or romantic relationships.

When examining this area, it is important to consider a theory of change. It is unlikely that a short intervention could result in the lasting and foundational life satisfaction that many people derive from their family or close friends. It is the case however, that interventions could improve and strengthen our individual social networks. This is important given our romantic partners and close friends are ultimately drawn from our wider social networks.

Across the intervention review, many of the most effective interventions were delivered to groups of individuals and so are likely to have important social dynamics that have contributed to their effectiveness. Meeting new people through exercise classes, participating in group therapy interventions, or taking part in music lessons with others all provide opportunities for individuals to meet new people and forge new friendships, or build their confidence and skills in mixing with others. As such, any intervention which makes use of group settings could help to improve the quality of our relationships.

We identified two interventions, utilising therapeutic models, that improved life satisfaction for families facing particularly difficult circumstances. The interventions for long term receipt of benefits and informal care for a loved one requiring palliative care suggest that relatively intensive therapeutic models can be effective in environments where close relationships are likely to be strained.

More broadly there are a number of wider policy areas and interventions that could be examined. Provision of childcare, access to couples counselling⁴⁷, no-fault divorce and parenting support could all have important impacts on life satisfaction. The evidence, at this time, is less well developed however. Reviewing existing support and any evaluations without a control group (excluded from this review), alongside some small scale trials of promising interventions would be the next step in the development of this evidence base.

Recommendations:

- Developing effective social interventions that help individuals to expand and extend their social networks and improve life satisfaction.
- Trialling couples counselling as a life satisfaction intervention.
- Research the impact of changes like the introduction of no-fault divorce on wellbeing.
- Small scale trials targeted at relationships in challenging circumstances. This could include support following bereavement (particularly suicide), interventions to end intimate relationship violence, relationships where one person is providing informal care to a spouse, child or other family member, relationships where one individual is receiving support due to addiction, or where one partner is in prison.
- Trials to develop effective interventions following a bereavement.
- Deliver small-scale trials that focus on improving parent-child relationships and life satisfaction - potentially as part of an employee assistance programme (EAP)

5. Communities and neighbourhoods

The determinants review identified 13 papers exploring community factors including gaining citizenship, Brexit, community participation, voluntary participation, and neighbourhood perceptions. The key findings were:

- Perceptions of neighbourhood safety and disorder were associated with life satisfaction.
- Participation in political and non-political organisations was not associated with higher life satisfaction, with the exception of older adults.
- Brexit and gaining citizenship were not associated with life satisfaction.
- The findings in full can be found at pages 71-74 of the technical report⁴⁸.

⁴⁷ <https://whatworkswellbeing.org/practice-examples/bringing-wellbeing-evidence-into-the-appraisal-process/>

⁴⁸ https://whatworkswellbeing.org/wp-content/uploads/2024/04/Life-Satisfaction_what-works_Full-technical-report_Final-april-2024.pdf

Interventions⁴⁹ related to communities and neighbourhood that produced a statistically significant improvement in life satisfaction:

Jongenelis et al (2022) Prosocial - formal volunteering. Retired adults 60 minutes sessions weekly for 6 months of formal volunteering.

Discussion

Neighbourhood safety was linked to life satisfaction in the determinants review but we did not find specific interventions addressing this issue. Reviewing the evidence base of existing policy areas like town-centre renewal, urban regeneration, anti-social behaviour interventions, and community safety partnerships to understand wellbeing impacts and adding life satisfaction measures to future evaluations should be a priority.

Participation in voluntary, political and religious organisations had complex associations with life satisfaction in the determinants review that appeared to strengthen with age. Indeed, the effective intervention identified was volunteering for older adults. There are however a range of evaluations and evidence about community participation and volunteering on other elements of subjective wellbeing. Larger trials would help to improve understanding of the impact on life satisfaction and the mechanisms and pathways that support this. It is likely that these types of activities improve the eudaimonic aspects of wellbeing and whether you feel what you do in life is worthwhile.

Whilst the determinants review did not find gaining citizenship to have an impact on life satisfaction it may be the case that there are specific inequalities within migrant populations that mediate this. The experiences of European Union nationals, or highly educated and mobile individuals are likely to be different from refugee, undocumented or low-income migrants who may find that the benefits of citizenship significantly improve their life satisfaction.

Recommendations:

- Conduct life satisfaction measurement alongside local interventions for issues like littering, fly-tipping and town centre renewal.
- Establish small scale trials to explore the efficacy of community safety partnerships and associated initiatives.
- Use regional life satisfaction measurement to understand the impact of devolution deals and innovations in local government

⁴⁹ References for all interventions can be found here:

https://whatworkswellbeing.org/wp-content/uploads/2024/04/AppendixA_intervention_study-list.pdf and further information about intervention characteristics can be found in this lookup table: https://whatworkswellbeing.org/wp-content/uploads/2024/04/AppendixB_LS_intervention_lookup-table.xls

- Focus trials on volunteering on groups that are less likely to volunteer or experience significant wellbeing inequalities
- Conduct small scale trials to understand how integration, routes to citizenship and regularising immigration status are linked to life satisfaction.
- Conduct studies into how life satisfaction changes during regeneration projects - with a particular focus on established and newcomer communities⁵⁰

6. Health

The determinants review identified six papers exploring relationships between health and life satisfaction covering topics including oral and eye health, disability acquisition, overall health and mental health. The key findings were:

- Declining physical health associated with lower life satisfaction.
- Disability acquisition was associated with lower life satisfaction but this was strongly mediated by experiences of accessibility and participation.
- Oral health was not generally associated with life satisfaction, unless individuals were experiencing tooth loss.
- Declining vision was associated with life satisfaction. Improvements in visions had a positive association with life satisfaction.
- Mental health and life satisfaction have a complex relationship between the ages of 17 and 21. Poor mental health is linked to lower life satisfaction but the relationship is bidirectional and its strength varies as young people mature.
- The findings in full can be found at pages 77-79 of the technical report⁵¹.

Interventions⁵² related to health that produced a statistically significant improvement in life satisfaction:

Bojanowska et al (2022) Mindfulness: 4-week online mindfulness-based stress reduction course for adults in which participants receive a 10-min guided meditation each week (student population)

⁵⁰ <https://www.burohappold.com/projects/brent-cross-town-flourishing-index-baseline-report/>

⁵¹ https://whatworkswellbeing.org/wp-content/uploads/2024/04/Life-Satisfaction_what-works_Full-technical-report_Final-april-2024.pdf

⁵² References for all interventions can be found here:

https://whatworkswellbeing.org/wp-content/uploads/2024/04/AppendixA_intervention_study-list.pdf and further information about intervention characteristics can be found in this lookup table:

https://whatworkswellbeing.org/wp-content/uploads/2024/04/AppendixB_LS_intervention_lookup-table.xlsx

Hoover et al (2022) Mindfulness: Physician assistant students (trainee healthcare workforce) receiving a series of 5 interactive in-person lectures + associated exercises for skill development delivered in first 10 weeks of curriculum (virtual delivery was not effective)

Nye (2011) Mindfulness: Adults receiving 6 weekly 2h group classes + 1 6h intensive workshop (total 18h), stress reduction programme

Fegg et al (2013) Therapy: informal carer of palliative patients receiving x6 group sessions (total 22h) of Existential Behavioural Therapy.

Veloso-Besio et al (2015) Emotional skill development: employees of a public hospital receiving x12 60-90 min sessions (2 presentations, followed by 10 workshops). Workshops for the supervisor took place twice a week on leadership, personal strengths, positive social skills, optimism, gratitude, forgiveness, etc

Discussion

Interpretation of our findings around health should be read with the important caveat that clinical populations were excluded from both the rapid reviews due to resource constraints. An important priority therefore is to conduct a rapid review of life satisfaction interventions and determinants for clinical populations. The picture we present here is partial but still instructive.

The determinants review identifies dental and eye health as important factors in life satisfaction. Many populations face wide ranging inequalities in access, affordability and outcomes in dental care. Interventions to support populations who are less able to access dentists and opticians could support important improvements in life satisfaction. These findings are likely to translate into hearing loss which has been linked to loneliness and social isolation.

The determinants review also identified disability acquisition and the complex relationship it has with life satisfaction. Working with disabled populations to explore and design interventions that improve accessibility should make a significant contribution to reducing the dip in life satisfaction experienced after acquisition of a disability.

The intervention review found a number of useful interventions that focused on responding to stress that improved life satisfaction. These could be used in

primary healthcare for those reporting high levels of stress but could also be useful in high-stress workplaces to improve experiences of employment.

As we found when considering the effective interventions in education, there were a number of effective interventions aimed at the healthcare workforce. These small scale but effective trials could be adapted and scaled to support the healthcare workforce in the NHS and beyond.

The intervention aimed at informal carers of palliative care patients could be scaled quickly through hospice providers, likely at relatively low cost.

A key finding of the intervention review was the effectiveness of therapy at improving life satisfaction. Talking therapies are already widely available through the NHS and the addition of life satisfaction or other well being measures to the existing outcome frameworks would allow for a large scale trial at an accelerated pace and with relatively small investment.

Although no social prescribing studies were identified in the intervention review, this is likely to be because so far they have used other wellbeing measures to evaluate impact⁵³. Our recent review of interventions using WEMWBS⁵⁴ found growing evidence of positive wellbeing outcomes of a range of social prescribing interventions. It is highly likely that approaches like social prescribing which connect people to practical and emotional support in their communities and beyond could also deliver improvements in life satisfaction. Specifically, determining whether social prescribing is effective in modifying the determinants of chronic diseases, promoting healthy behaviours and supporting people at the point of diagnosis of a serious health condition, is limited by the current evidence and warrants further rigorous studies.

Another important finding relevant to health concerns the effectiveness of multi-component interventions. Whilst the review could not draw strong conclusions in this area, it was noted that multi-component interventions that mixed therapy with other activities did appear promising. Future trials to pair talking therapies with social prescribing and with loneliness interventions in multi-component offers could provide a mechanism for testing which combinations of activities work best together. Given the widespread availability of these components within existing healthcare systems, this could be done at relatively low cost.

⁵³<https://whatworkswellbeing.org/resources/rapid-evidence-assessment-of-wellbeing-impact-evaluations-using-ons4-personal-wellbeing-measures/>

⁵⁴<https://whatworkswellbeing.org/resources/what-works-to-improve-mental-wellbeing-in-the-uk-insights-from-wemwbs/>

Recommendations:

- Expand, improve and trial provision of psychosocial support for people with newly acquired, chronic and long term health conditions. Understand differential impacts of specialised (ie condition specific) vs generic psychosocial support; peer support programmes, information advice and guidance.
- Use a life satisfaction measure alongside clinical and financial metrics to evaluate interventions to improve accessibility and participation for disabled populations.
- Explore opportunities for accessibility and affordability trials with embedded life satisfaction measures in NHS dentistry.
- Develop social prescribing interventions at the point of diagnosis and seek to understand the extent to which signposting and connecting people to interventions can buffer the effects of a diagnosis. In addition to pathways within the NHS, this could be rolled out to other healthcare providers for example highstreet opticians and hearing care services.
- Design multi-arm trials where talking therapy/psychosocial support is mixed with other activities likely to have an impact on wellbeing, to understand priority mechanisms and pathways to impact.

7. Health behaviours

The determinants review identified six papers exploring factors like exercise and leisure, alcohol consumption, healthy diet and sleep. The key findings were:

- Fruit and vegetable consumption was positively associated with life satisfaction. Other evidence confirms this relationship⁵⁵ but also demonstrates challenges in delivering effective interventions⁵⁶.
- Sleep and exercise were not found to be associated with life satisfaction but the wider evidence base shows improvements in wellbeing using different measures and methodologies⁵⁷
- Whilst alcohol consumption was not generally found to have an association with life satisfaction, the development of a drinking problem was negatively associated.
- The findings in full can be found at pages 80-81 of the technical report⁵⁸.

⁵⁵ <https://www.nber.org/papers/w18469>

⁵⁶ <https://whatworkswellbeing.org/blog/what-can-we-learn-from-40m-invested-into-wellbeing/>

⁵⁷ <https://www.mentalhealth.org.uk/explore-mental-health/publications/sleep-matters-impact-sleep-health-and-wellbeing>

⁵⁸ https://whatworkswellbeing.org/wp-content/uploads/2024/04/Life-Satisfaction_what-works_Full-technical-report_Final-april-2024.pdf

Interventions⁵⁹ related to health behaviours that produced a statistically significant improvement in life satisfaction:

Cruz-Ferreira et al (2015) Exercise: older women doing x3 weekly 50-min creative dance classes over 24 weeks

Edwards & Loprinzi (2017) Exercise: young adults undertaking a week of sedentary behaviour followed by a week of normal levels of exercise. Sedentary behaviours reduced life satisfaction.

Hui et al (2022) Exercise: Healthy adults undertaking 1-4 classes of 90-minute hot yoga per week for 6 weeks. Mean: 2.8 classes per week

McGrath et al (2022) Exercise: Adult men undertaking 10-week intervention. Weekly physical activity sessions, weekly healthy eating sessions for 6 weeks, 1 mental health workshop at "Men's Sheds"

Welford et al (2022) Exercise: older adults undertaking 3 sessions, 60 minutes, weekly, 12 weeks, Hatha yoga which consists of gentle physical postures and breathing exercises.

Sok et al (2021) Exercise: older adults undertaking 2 weekly 50-min sessions for a total of 20 sessions over 10 weeks, using an exercise program for balance, gait, lower extremity muscle strength, memory recall, and attention

Przybylko et al (2021) Health education: adults undertaking weekly sessions to promote mental health, with encouragement to engage in weekly challenges by practically applying lessons learnt, for 10 weeks, about the importance of exercise, diet, social connections, positive outlook, rest

Johansson & Bjorklund (2015) Health education: older adults undertaking 2h of health-promoting interventions per week for 4 months + max. 4h individual intervention

Sok et al (2022) Older people undertaking x2 60 min sessions per week, for a total of 16 sessions over 8 weeks, training on traditional medicine techniques and Qigong exercises, acupuncture

⁵⁹ References for all interventions can be found here: https://whatworkswellbeing.org/wp-content/uploads/2024/04/AppendixA_intervention_study-list.pdf and further information about intervention characteristics can be found in this lookup table: https://whatworkswellbeing.org/wp-content/uploads/2024/04/AppendixB_LS_intervention_lookup-table.xlsx

O'Neill (2022) Health education: national guard receiving x1 one hour supervisor support training online to train them to provide support. Test subjects wore an actigraph watch for 21 days at baseline and 9 months to receive personalised feedback & goal-setting based on actigraph-collected sleep reports. Health-promotion programme

Lewis et al (2013) Health education: Children in USA grades 3-8 received 140 15-20 minute, sequenced lessons per grade taught 4 days per week for grades K-6 and 70 20-minute lessons taught 2 days per week for grades 7 & 8. Health promotion and social-emotional learning

Fioravanti et al (2020) Social media: adults taking a one week break from instagram

Brailovskaia et al (2022) Social media: adults either reducing, or having no smartphone use for seven days

Discussion

The findings of both reviews are rich providing detailed insights into how life satisfaction is linked to a wide range of health behaviours.

Healthy diet was identified as an important determinant and was also regularly addressed in the health education interventions. We did not find a diet specific intervention however and this could be an important area for future work. Exploring existing wellbeing evaluations that have not used a control group, alongside the wider evidence base for improving diet would be a useful first step in building robust dietary interventions to improve life satisfaction.

Those looking to design healthy eating interventions must keep in mind that community healthy eating projects have not performed well at improving wellbeing in the early evaluation evidence and are rarely reported as a result. For example the National Lottery's 2014 'Wellbeing 2' Fund funded a range of projects to improve wellbeing through healthy eating that did not prove effective⁶⁰. Government and research funders could help improve the efficacy of future trials by encouraging pre-registration so that researchers and

⁶⁰ <https://whatworkswellbeing.org/projects/what-works-to-improve-ones4-personal-subjective-wellbeing/>

policymakers can more easily identify both successful and unsuccessful trials and learn from them.

Whilst the determinants review had mixed findings around the importance of sleep - due to a number of confounding factors - we did find an effective intervention focused on sleep that utilised an actigraph. There are a number of populations where sleep hygiene is known to be poor and replicating an intervention like this at a larger scale could improve insights. Particularly if the intervention is delivered in a way that controls for or addresses some of the confounding factors identified in the determinants review.

We did not identify any interventions aimed at riskier health behaviours like problem drinking but populations who access drug and alcohol support services are known to be at risk of lower wellbeing. Reviewing the wider evidence base and any life satisfaction evaluations without a control group would be the next step in designing interventions that could be used in these specific contexts.

The intervention review suggests that breaks from social media and reduced use can have an impact on life satisfaction but these interventions need to be delivered on a larger scale to draw firmer conclusions. We did not find any interventions that looked at positive use of social media - this could be an important area for developing a more nuanced understanding of how social media affects life satisfaction.

The findings in the determinants review that exercise was not associated with life satisfaction were surprising. It is likely that the factor being measured - which included gym membership and baseline exercise - and the follow-up periods which were over three and ten years did not allow the relationship to be properly explored. It is possible that exercise is more likely to improve other subjective wellbeing measures - happiness and feeling worthwhile - and only sustains life satisfaction overtime by improving physical health⁶¹.

The intervention review is more helpful and provides a range of effective interventions focused on exercise. There are interventions for both working age and older adults. During the analysis phase of the rapid review the researchers commented that group exercise programmes with relatively high intensity (multiple sessions over a prolonged period) appeared to be most effective. Whilst larger scale trials for older and working age adults could likely be

⁶¹ https://whatworkswellbeing.org/wp-content/uploads/2018/06/sport-dance-sec-analy_0239640000.pdf

operationalised at pace to inform policy more detailed work is required to establish effective interventions for children and young people.

Given the intervention reviews finding that didactic emotional skills interventions are effective it is likely that health education programmes are also likely to be effective. The interventions identified were too few and not homogenous enough for a meta-analysis to be undertaken but as this body of evidence grows it is likely to prove effective. Policymakers could identify and build-on high quality health education programmes that can be delivered in a range of settings and particularly to those who experience significant health and wellbeing inequalities. We know that the Healthy Minds Curriculum improves the full ONS4 subjective wellbeing measures including life satisfaction as well as other outcomes including health⁶².

Recommendations:

- Prioritise the development of a range of effective health education programmes that can be successfully delivered in a range of contexts like schools, colleges, workplaces, hospitals etc.
- Continue trials of healthy food / fruit programmes in schools, colleges and workplaces to establish their effectiveness and design neighbourhood or community-level trials to address food deserts.
- Pilot a range of interventions to help improve life satisfaction in the context of addiction or problem drinking.
- Utilise any changes in the regulation of social media to conduct natural experiments to understand if regulation has improved life satisfaction
- Conduct small scale trials to explore the efficacy of positive use of social media
- Develop interventions to support exercise and sleep. These could be focused on groups who experience wellbeing inequalities.

8. Environment

The determinants review identified four papers exploring associations between environmental factors and life satisfaction. Key findings were:

- No association between coastal/freshwater proximity and life satisfaction but there was a positive association with access to green space

⁶² <https://bounceforward.com/healthy-minds-research-project/>

- Moving both locally, or long distances within the UK was associated with an initial increase in life satisfaction
- Poor perception of local public transport was associated with lower levels of life satisfaction
- Small associations between longer commutes and lower life satisfaction, but no differences by transport mode.
- The findings in full can be found at pages 82-84 of the technical report⁶³.

There were no interventions that produced a statistically significant improvement in life satisfaction under this theme.

Discussion

While the determinants review did identify some factors associated with life satisfaction it is likely that there are more detailed insights to be found in the international literature that was excluded from this rapid review. In the intervention review we did not find any relevant interventions - statistically significant or otherwise.

The lack of insight in this policy area is likely linked to some of the topics we explored in the introductory section of this strategy. A lack of natural experiments included in the reviews, difficulty measuring wellbeing in enough detail at a regional and local level and an over-emphasis in the literature on interventions for individuals rather than for communities or populations all likely explain the lack of interventions in this area.

It is therefore a key priority that the government engages in these methodological issues as it is uniquely placed to bring about some of the changes required to make this type of research more viable. Signalling that life satisfaction is a valid evaluation measure alongside traditional financial metrics, will enable local areas to include this measure in their business plans with confidence. By ensuring high quality, rich, local data, the government could provide the infrastructure needed to understand how changes in public transport, access to green and blue space, commuting and internal migration are connected to life satisfaction.

Recommendations:

- Prioritise the availability of high quality local and regional wellbeing datasets to enable researchers to explore how changes to the local environment affect life satisfaction. For example, better local data could enable:

⁶³https://whatworkswellbeing.org/wp-content/uploads/2024/04/Life-Satisfaction_what-works_Full-technical-report_Final-april-2024.pdf

- Research to explore changes in commuting patterns
- Efficacy of local public transport reform
- Conduct trials to establish which types of green and blue spaces have the biggest impact on life satisfaction
- Conduct trials to explore the impacts of moving home on life satisfaction with a particular focus on workforce mobility.

9. Arts and culture

The determinants review identified five studies exploring associations between arts and culture factors and life satisfaction. The key findings were:

- Any participation in music, arts, or evening classes was positively associated with life satisfaction
- Sustained engagement brought about stronger associations than infrequent engagement
- The findings in full can be found at pages 85-86 of the technical report⁶⁴.

Interventions⁶⁵ related to arts and culture that produced a statistically significant improvement in life satisfaction:

Cruz-Ferreira et al (2015) Exercise: older women doing x3 weekly 50-min creative dance classes over 24 weeks

Castillejos & Godoy-Izquierdo (2021) Music: older people in a residential home receiving x12 45-50 min group sessions (2/week) + x2 30-45 min individual session over 6 weeks, singing, using instruments, clapping

Discussion

The determinants review identified strong evidence, across a number of studies, that arts and cultural participation are associated with life satisfaction. Whilst the intervention review did not find a large number of interventions with a significant impact on life satisfaction it did identify a number of promising interventions - particularly focused on music for older adults.

⁶⁴https://whatworkswellbeing.org/wp-content/uploads/2024/04/Life-Satisfaction_what-works_Full-technical-report_Final-april-2024.pdf

⁶⁵ References for all interventions can be found here: https://whatworkswellbeing.org/wp-content/uploads/2024/04/AppendixA_intervention_study-list.pdf and further information about intervention characteristics can be found in this lookup table: https://whatworkswellbeing.org/wp-content/uploads/2024/04/AppendixB_LS_intervention_lookup-table.xlsx

The What Works Centre for Wellbeing has conducted systematic and scoping reviews into several intervention areas, including Music and Singing⁶⁶, Visual Arts⁶⁷, Heritage⁶⁸, and Dance⁶⁹. These confirm the determinants and interventions review findings that arts and culture are positively associated with wellbeing. More recently, a review of Creativity⁷⁰ uncovered the ‘Context-Mechanisms- Outcomes’ chains associated with wellbeing improvements. This identified both personal and relational pathways, inequalities in provision and access, and the importance of the creative workforce in delivering wellbeing. In order to move beyond generic support for arts interventions, government could focus on understanding the conditions and mechanisms which make art and culture wellbeing-enhancing for different groups. Nurturing creative habits may provide a cost-effective and strategic way to harness the benefits of arts and culture over the lifecourse, but little evidence exists on which interventions could support creative habits.

Given the existing evidence, scaling trials up to larger populations should be a priority. Given that older people are already over-represented in this area we would recommend a focus on other populations like men, ethnic minority groups and working age adults. Given the strength of the existing evidence a focus on wellbeing inequalities could be a priority.

The finding that sustained engagement is best for wellbeing suggests that a focus on developing creative habits and practices in children and young people should be a priority as they could have lifelong impact.

Recommendations:

- Develop large scale trials for men, ethnic minority groups or working-age adults to understand the barriers and benefits of creative interventions.
- Use large-scale national and mega events as opportunities to test and learn about the creative workforce skills, support and training that enable wellbeing
- Support research to understand the role of a creative education on wellbeing across the lifecourse, including longitudinal studies of creative students and graduates.
- Work with the education and skills sectors to understand how creative habits can be encouraged and supported across all ages and especially for people who are less likely to be creative.

⁶⁶ <https://whatworkswellbeing.org/projects/music-singing-and-wellbeing/>

⁶⁷ <https://whatworkswellbeing.org/resources/visual-art-and-mental-health/>

⁶⁸ <https://whatworkswellbeing.org/resources/heritage-and-wellbeing-2/>

⁶⁹ <https://whatworkswellbeing.org/resources/sport-dance-and-young-people/>

⁷⁰ <https://whatworkswellbeing.org/projects/creativity-and-wellbeing/>

- Research into the formation of lifelong creative habits in children and young people.

10. Children and young people

Interventions⁷¹ focused on children and young people that produced a statistically significant improvement in life satisfaction:

Pregnancy and Early years:

Perez-Blasco et al (2013) Mindfulness: Breastfeeding women receiving 8 sessions for 2 hours, weekly for 8 weeks. Mindful activities, learning about mindfulness, and meditation.

Shosani & Slone (2017) Emotional Skill Development: early years (average age 4.5) Weekly for 32 weeks. Focused on positive emotions, engagement, achievement, positive relationships, songs, games, and free play.

Primary School

Amundsen et al (2020) Mindfulness: Year 5 pupils receiving 6 weekly one-hour sessions delivered across 6 weeks, 'Living Mindfully Primary Programme': focuses on mindfulness coaching, covering topics such as emotions and thoughts.

Vassilopoulos et al (2018) Prosocial: Year six pupils x6 120 min sessions over 4 weeks practising forgiveness

Lewis et al (2013) Health education: Children in USA grades 3-8 (age 8 - 14) received 140 15-20 minute, sequenced lessons per grade taught 4 days per week for grades K-6 and 70 20-minute lessons taught 2 days per week for grades 7 & 8. Health promotion and social-emotional learning

Secondary School

Macais et al (2022) Therapy: secondary school students receiving 3x 60 minutes weekly sessions for 4 weeks, group sessions on ACT

⁷¹ References for all interventions can be found here:

https://whatworkswellbeing.org/wp-content/uploads/2024/04/AppendixA_intervention_study-list.pdf and further information about intervention characteristics can be found in this lookup table:

https://whatworkswellbeing.org/wp-content/uploads/2024/04/AppendixB_LS_intervention_look-uptable.xlsx

Marques et al (2011) Other: middle school students x5 weekly 60 min session after school, hope-based goal setting

Shosani & Steinmetz (2013) Emotional skill development: years 7, 8 & 9 receiving 15x2 hour fortnightly group workshops on topics including gratitude, reflections, goal-setting

Roth et al (2017) Emotional skill development: year seven students doing wellbeing lessons - 10 sessions for 50 minutes, weekly for 10 weeks. Activities focused on the past, present, and future aspects of emotional well-being. Involved both student and parent components.

Freire et al (2018) Resilience: year 9 students receiving 8 weekly sessions delivered across 2 months, 'Challenge to Be +' intervention: focused on positive emotions, life experiences, and development

Gomes & Marques (2023) Resilience: year 7 & 8 students receiving x34 training sessions total: x1 90 min session per week, over 8-9 months, sessions focusing on six different life skills: stress management, motivation, time management, problem solving, communication and team-work.

Proctor et al (2011) Resilience: students aged 12-14 receiving however many sessions (and session lengths) needed for teachers to go through 24 lessons of an exercise book with students over 6 months. Sessions focus on strengths-based character building and could vary from individual to collaborative.

Children in difficult circumstances

Malmberg-Heimonen (2011) Therapy: long term recipients of social security receiving a 14-week programme of Family Group Conferencing (average of 24.3h total work with facilitator)

Bird (2014) Multi-component: children in a low income neighbourhood attending middle school received 10 weekly 75 minute sessions delivered across 10 weeks, 'Leadership and Young Professionals' programme: focused on goal-setting, wellbeing, problem-solving, employability, and gratitude.

There were a number of other studies of interest - particularly in relation to children's social care and pregnancy.

Two interventions were focused on children in foster care (Silva et al., 2017)

and Taussig et al., 2019) and a further intervention focused on unaccompanied asylum-seeking boys (Meyer De Mott et al., 2017). Whilst these interventions were not statistically significant they may have still improved life satisfaction and could have produced other important outcomes. The learning from them could be used to inform more effective interventions.

Studies into interventions supporting women during pregnancy included Haga et al. (2021), Matvienko-Sikar & Dockray (2016), and Zilcha-Mano et al., (2016) Whilst these interventions were not statistically significant they may have still improved life satisfaction and could have produced other important outcomes. The learning from them could be used to inform more effective interventions.

Discussion

The number of interventions for children and young people, from early years through to secondary school is promising. The determinants review did not identify many relevant factors for children's life satisfaction. This was likely due to its longitudinal design and the fact that life satisfaction questions are rarely asked in the early years and during primary school. Reviews of longitudinal data that explores children's wellbeing (like the Millenium Cohort Study) are available and should be used in conjunction with the interventions identified above.

Two early years interventions were identified in the review and these serve as useful evidence that life satisfaction can be evidenced in young children and interventions can yield statistically significant results. Given the review's findings on the effectiveness of emotional skills development interventions, the identification and trialling at scale of an effective early years emotional development programme which can be delivered at scale should be a priority. Particularly given that it could have benefits throughout adult life.

Whilst the review did not identify any statistically significant interventions to improve life satisfaction in pregnancy there were a number of interventions which may have improved life satisfaction or other outcomes. Interventions during pregnancy would likely have impacts for parents and subsequent child development and should be pursued.

There were a number of effective interventions for pupils of both primary and secondary school age. Identifying the most promising interventions and scaling them through the RSE and PSHE curriculums, or with the support of Mental Health Support Teams in Schools should be a priority. Focus might also be brought on specific challenges in the educational system like bullying, the year six to year seven transition and post-GCSE transitions. A focus on wellbeing inequalities in childhood could reduce wellbeing inequalities later in life.

One of the interventions included emotional skill development for both children and parents. This could be an important area for further research given the importance of relationships in overall life satisfaction. Developing whole-family interventions that can support both parent and child could result in multiple improvements in life satisfaction thus increasing the intervention's social value.

Finally there were a number of interventions that would be relevant for children's social care and youth work which were focused on more vulnerable children in challenging circumstances. These could be used to develop early help interventions or support for "Children in Need" recovering support from children's social care and should be prioritised given the wellbeing inequalities experienced by vulnerable children.

Recommendations:

- Deliver a range of small scale trials during the perinatal period and early years to understand how to improve life satisfaction for both parents and children during this time.
- Focus small-scale trials in schools on specific cohorts or challenges in the education system like bullying, transition or behaviour.
- Deliver large-scale trials in schools to develop high quality emotional and health promotion skills programmes which improve life satisfaction.
- Deliver small-scale trials that focus on improving parent-child relationships and life satisfaction
- Deliver a range of small scale trials in children's social care to develop learning about how to improve life satisfaction for children with a social worker.
- Trial a large-scale school intervention on physical activity and another on diet.

11. University students

Interventions⁷² focused on university students that produced a statistically significant improvement in life satisfaction:

Ahmad et al. (2020) Mindfulness: Undergraduate students receiving 12 video-based mindfulness modules over 8 weeks - one group also received 20 min video conferences in the first four weeks.

Dvorakova et al (2017) Mindfulness: First year undergraduates receiving 8 sessions of 80 minutes, 2 sessions per week for the first 2 weeks and then 1 session per week for the remaining 4 weeks, a total of 6 weeks. Group sessions on mindfulness techniques and activities such as breathing, guided meditations.

Lever et al (2014) Mindfulness: University students receiving 20-30 mins sessions, weekly for 8 weeks. Read chapters from a book “Mindfulness: A practical guide to finding peace in a frantic world” then practise mindfulness. First four chapters: attend to the internal and external world. Last four chapters: practical ways to see thoughts as mental events and to cultivate acceptance, compassion, and empathy.

Atad & Russo-Netzer (2021) Gratitude: University students wrote and hand-delivered a letter of appreciation to someone they were grateful towards, but who they never thanked over a week.

Harlan (2016) Gratitude: University students 10 min per night for 1 week. Assigned to write down 3 good things to be grateful for.

Viskovich et al (2020) Therapy: university students receiving x4, 30-45 minutes, weekly, 4 weeks, exercises based on ACT principles such as Values, Committed Action, Acceptance, Cognitive Defusion, and Mindfulness and the observer self

⁷² References for all interventions can be found here:

https://whatworkswellbeing.org/wp-content/uploads/2024/04/AppendixA_intervention_study-list.pdf and further information about intervention characteristics can be found in this lookup table:

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Shinde et al (2021) Meditation: University students receiving x1 10-minute meditation after class once weekly for 3 weeks + 1 daily 10-min meditation at home over the 3 weeks

McKee et al (2020) Positivity: university students receiving 21 sessions taking 1 photograph daily for 21 days. Instructed to attend to moments of positive emotion and photograph those, record in nightly exercises, and share photos with friends/ family each week.

Ko et al (2021) Prosocial: university students performing, recalling and performing and recalling acts of kindness over three days

Shin et al (2019) Prosocial: university students performing kind acts to themselves and to others during one day. Effective in the USA but harmful in Korea

Mrazek et al (2021) Emotional regulation: university students 5.5h group sessions each weekday + a nightly journal entry for 6 weeks. Variety of lectures, discussions, and activities pertinent to self-regulation.

Marrero et al (2016) Multi-component: university students receiving 12 weekly 90 min sessions of CBT combined with training in happiness, setting life goals, mindfulness and gratitude

It is worth noting that many of these studies were not necessarily focused on students per se and that students may have been invited to be participants as they were an easy sample for a university-based researcher to obtain.

As such the interventions above may be of use for young adults outside university settings, children in school settings, and adults more generally. Universities are however specific contexts and so we can most confidently say that these interventions are more likely to be replicated in another university setting.

Discussion

The large number of interventions delivered to students provides a range of insights into what works to improve life satisfaction for this group. This is in addition to existing evidence already identified in this area⁷³. To move from the

⁷³ <https://whatworkswellbeing.org/projects/supporting-student-mental-health/>

current evidence base to a more consolidated and clearer set of interventions that are effective, both in terms of improving wellbeing and cost, will require a clear strategy from universities and policymakers to test a small number of interventions on a larger scale in a robust manner. These should be focused on priority outcomes for universities like access, participation, achievement, transition to university and student mental health.

Given the wider findings of the intervention review these should be in areas that we have strong evidence of effective interventions including: emotional skills development, therapy, exercise, mindfulness and gratitude.

Given the apparent ease with which interventions can be trialled in university settings, it is also worth considering how universities might support the development of understanding about the different mechanisms identified in the intervention review (like group work, in-person delivery, facilitator skills, and intensity) and how they might support the development of stronger insights into how multi-component interventions work.

Recommendations:

- Convene the higher education sector to develop a strategy to scale trials and address evidence gaps, particularly with reference to key sector outcomes like access, participation, achievement, transition to university and student mental health.
- Support additional arms of upcoming trials where these can be used to provide wider insight around mechanisms that work to improve life satisfaction.

12. Older people

Interventions⁷⁴ focused on older people that produced a statistically significant improvement in life satisfaction:

⁷⁴ References for all interventions can be found here: https://whatworkswellbeing.org/wp-content/uploads/2024/04/AppendixA_intervention_study-list.pdf and further information about intervention characteristics can be found in this lookup table: https://whatworkswellbeing.org/wp-content/uploads/2024/04/AppendixB_LS_intervention_lookup-table.xlsx

Smith & Bryant (2018) Gratitude: older adults providing written responses to a series of prompts. Savouring ageing: reflect on lessons they learnt over their life.

Cesetti et al (2017) Positivity: Older adults receiving 4x 2 hour weekly sessions over 4 weeks. Group sessions including reading of a fairy tale, discussion of the narrative plot, recollecting personal memories, and the creation of a new fairy tale focused on overcoming fearful situations.

Jongenelis et al (2022) Prosocial - formal volunteering. Retired adults 60 minutes sessions weekly for 6 months of formal volunteering.

Delhom et al (2020) Emotional skill development: older adults 90-minute session 1x per week for 10 weeks in groups of 8-12 to develop emotional intelligence

Cruz-Ferreira et al (2015) Exercise: older women doing x3 weekly 50-min creative dance classes over 24 weeks

Welford et al (2022) Exercise: older adults undertaking 3 sessions, 60 minutes, weekly, 12 weeks, Hatha yoga which consists of gentle physical postures and breathing exercises.

Sok et al (2021) Exercise: older adults undertaking 2 weekly 50-min sessions for a total of 20 sessions over 10 weeks, using an exercise program for balance, gait, lower extremity muscle strength, memory recall, and attention

Johansson & Bjorklund (2015) Health education: older adults undertaking 2h of health-promoting interventions per week for 4 months + max. 4h individual intervention

Sok et al (2022) Older people undertaking x2 60 min sessions per week, for a total of 16 sessions over 8 weeks, training on traditional medicine techniques and Qigong exercises, acupuncture

Castillejos & Godoy-Izquierdo (2021) Music: older people in a residential home receiving x12 45-50 min group sessions (2/week) + x2 30-45 min individual session over 6 weeks, singing, using instruments, clapping

Galhina et al (2021) Music: older adults receiving x34 two hour sessions twice per week, includes relaxation and vocal warm-up exercises, vocal technique,

rehearsal of repertoire, a social component, creation and presentation of a final show.

Chamorro-Garrido et al (2021) Multi-component: older people in a residential home receiving x11 weekly sessions of 60 minutes of duration delivered across 11 weeks, sessions focused on Autobiographical Memory, Forgiveness, Gratitude, and Sense of humour. Placebo group: session 1 was the same as the intervention group, in session 2, participants learned about Positive Psychology and were asked to spend 10 min before going to sleep, 2 days a week, to reflect on early experiences that may have influenced their adulthood. The remaining sessions were used to discuss experiences in a group with a psychologist.

Interventions focused on older adults were delivered in both residential and community settings. Whilst the interventions above are more likely to be effective for older populations they may also translate well into other populations who are living in residential settings or making use of community day centres. Consideration of how these interventions might be delivered in prison settings, hostels, residential school and colleges, and day centres for vulnerable adults should be a priority, particularly given that many of these groups are at risk of lower wellbeing.

Discussion

Like university students, there are a wide range of effective interventions available for older adults. As such the priority should be scaling, understanding cost implications, testing other promising interventions or exploring wider challenges like mechanisms or pathways in interventions which would be useful across a number of different areas of policy.

Consideration should also be made of how interventions might support policymakers and commissioners in tackling some of the wider challenges in adult social care. For example, exercise interventions might allow older adults to stay physically active for longer and could result in reduced time in hospital following an injury or medical procedure. Social interventions may reduce loneliness and isolation. Many interventions may also have cognitive benefits that could be explored.

Other than factors related to employment and retirement, and exploration of community participations the determinants review did not provide significant insights into other key life-changes facing older people like pensions management, down-sizing home, home-adaptations, transport access, entering

retirement communities or homes and palliative and end-of-life care. Many of these would benefit from small scale trials.

Recommendations:

- Small scale trials in adult social care to explore issues like post-surgery recovery, waiting list interventions etc.
- Small scale trials into life-changes like down-sizing, home adaptation, retirement communities and end of life care.
- Given the large number of trials in this area future trials should also have a focus on wellbeing inequalities.

13. Military personnel

Interventions⁷⁵ focused on military personnel that produced a statistically significant improvement in life satisfaction:

Hyun et al (2013) Positivity: Military cadets receiving 30 minutes writing time per week for 3 weeks. First week, participants describe a stressor from beginning to end while incorporating their perceptions and emotional reactions at the time. Second week, participants reflected on the cause of their stress and explored alternative ways of thinking to aid in coping. Third week, participants wrote about the positive aspects of the event for themselves, their personal relationships, and their worldview.

O'Neill (2022) Health education: national guard receiving x1 one hour supervisor support training online to train them to provide support. Test subjects wore an actigraph watch for 21 days at baseline and 9 months to receive personalised feedback & goal-setting based on actigraph-collected sleep reports. Health-promotion programme

Discussion

⁷⁵ References for all interventions can be found here: https://whatworkswellbeing.org/wp-content/uploads/2024/04/AppendixA_intervention_study-list.pdf and further information about intervention characteristics can be found in this lookup table: https://whatworkswellbeing.org/wp-content/uploads/2024/04/AppendixB_LS_intervention_lookup-table.xlsx

There were a number of interventions for military personnel or similar roles, two of which were statistically significant. The positivity intervention explored supporting military cadets to reframe stressors while a health education intervention focused on sleep for national guard in the USA.

The Ministry of Defence measures the subjective wellbeing of armed personnel and has access to a range of data about health and other factors. Trials and evaluations of interventions focused on military personnel should be prioritised because of wellbeing inequalities military personnel experience. Some learning from military populations may also be generalisable to other populations.

There is already evidence for some intervention that used the ONS4 wellbeing measures⁷⁶ and insights from research into loneliness⁷⁷.

Recommendations:

- Trials could be identified to support military personnel across different roles and deployments - from training and overseas deployment to military roles based in the UK and veterans.
- Trials to support rehabilitation from injury or focused on poor mental health may have a range of benefits.

⁷⁶ <https://whatworkswellbeing.org/blog/ons4-evaluations-what-works-to-improve-personal-wellbeing/>

⁷⁷ <https://covenantfund.org.uk/2022/10/05/evaluation-report-tackling-loneliness/>

General adult population

Interventions⁷⁸ focused on adults that produced a statistically significant improvement in life satisfaction:

Champion et al. (2018) Mindfulness: Adults receiving 30x 10-20 mins practise daily for 30 days of individual mindfulness activities including key principles behind mindfulness, and how one can apply mindfulness to their daily life, using techniques such as breath awareness, body scanning, and noting.

Kosugi et al (2021) Mindfulness: Healthy adults receiving x8 2h group sessions (1 weekly) + daily 30-60 min mindfulness meditation. Then, 1 monthly booster session for 2 months

Proyer et al (2013) Gratitude: Adults undertaking x5 sessions writing and outdoor activities related to curiosity, humour, zest, gratitude, hope

Sanders et al (2019) Gratitude: Adults randomised to 1-6 weeks of different happiness activities, (eg, writing a gratitude letter or savouring a beautiful day) (two studies presented)

van Agteren et al (2021) Other: Adults receiving x7 10-15-min activities delivered over 7 days. Prompted by an app to think about what makes life meaningful and identify personal values

LeBlanc et al (2020) Emotional Regulation: community dwelling adults weekly 1.5-2h workshop over 4 weeks on emotional regulation

Discussion

These interventions were all effective with adult populations and do not have obvious links to other areas of public policy. They should form the basis of work to develop specific wellbeing interventions for adult populations and will likely be of use across a range of policy areas.

⁷⁸ References for all interventions can be found here: https://whatworkswellbeing.org/wp-content/uploads/2024/04/AppendixA_intervention_study-list.pdf and further information about intervention characteristics can be found in this lookup table: https://whatworkswellbeing.org/wp-content/uploads/2024/04/AppendixB_LS_intervention_look-uptable.xlsx

Notable policy gaps

The following policy areas were identified in our desk-based review of governmental policy priorities. When we placed these policy areas against the evidence identified in both the determinants and the intervention reviews we did not identify any longitudinal studies or experiments in these areas that explored life satisfaction.

The areas without substantial evidence were:

- *re-offending, access to justice and the secure estate,*
- *farming and fishing,*
- *digital connectivity and skills,*
- *SEND reform,*
- *homelessness,*
- *crime & terrorism,*

It is likely that these policy areas will have evidence bases that explore wellbeing. Policymakers should consider the following:

They may not use life satisfaction and instead rely on other measures of subjective or objective wellbeing.

There may be longitudinal international evidence that would not have been included in these reviews.

The evidence might be less well developed and reliant on evaluations that have pre and post measures but no control group.

Quantitative measurement of wellbeing may not be appropriate and qualitative approaches might be preferred due to the complexity or vulnerability of the population in question.

Recommendations:

- Developing life satisfaction measures for children and adults with SEND should be a priority.
- Life satisfaction should be added as an outcome measure for existing interventions for individuals experiencing homelessness, in the justice sector, and anti-terrorism interventions.
- Utilise natural experiments to understand how roll out of new digital technologies affects life satisfaction and trials to understand how digital literacy, access and behaviour interventions affect life satisfaction.
- Add life satisfaction measures to existing initiatives and interventions that support fishing and farming communities

Next Steps

This strategy aims to accelerate the collective learning about what works to improve lives in a strategic way to make the best possible use of research, evaluation and monitoring resources.

Priority One:

Focus resource and capacity on addressing the most difficult methodological challenges in life satisfaction intervention research so that these methodologies can be used more widely at lower cost. By supporting efforts to evaluate the effectiveness of interventions at a neighbourhood, community or regional level, government could help generate insight and interventions that could drive improvements to life satisfaction at a population level.

In order to achieve this:

1. There is a clear need to accelerate learning from policy changes affecting the drivers of wellbeing that are not psycho-social or health promotion.
2. This is most likely to be achieved through natural experiments and high quality local and regional wellbeing measurement.
3. This could be done by:
 - a. Providing technical support for local areas and regions looking to establish high quality wellbeing surveys
 - b. Considering providing financial support to help set up new high quality surveys and boosters
 - c. Ensuring that available data is published at the lowest local level possible (whilst maintaining data quality)
 - d. Ensuring that stakeholders can benchmark their own wellbeing measurement against robust local data that can be easily modified to match sample populations etc.
4. In addition to natural experiments and regional measurement, other methodological improvements can have a disproportionate impact on accelerating the production of evidence:
 - a. Good examples of this include translation of survey questions, producing validated scales for specific populations and digital survey tools.

Priority Two:

Many of the available interventions to improve life satisfaction share similar characteristics. These 'mechanisms' are the likely elements in the delivery of an intervention which are driving improvements in life satisfaction alongside the 'focus' of the intervention (i.e. exercise, making music, or learning emotional management skills). This means that understanding how to

maximise improvements could have a wide ranging impact. Mechanisms we identified included group work and high quality facilitation for example. Research which explores how these mechanisms work and how to deploy them most effectively would help accelerate the design of effective interventions across a range of issues.

In order to achieve this:

1. Prioritise adding additional arms to existing trials which modify specific delivery mechanisms (for example delivering the same intervention but to both groups and individuals) to better understand the impact of different mechanisms
2. Conduct qualitative research following effective trials to identify why participants felt they were effective

Priority Three:

There are many areas we have identified that are ready for small-scale, or even large-scale trials. By encouraging, supporting and commissioning trials and evaluations to include life satisfaction measures, government could significantly accelerate the production of evidence. Whilst doing so, government must simultaneously look to improve the quality of trials by addressing issues like blinding, retention, reporting transparency and sample size.

In order to achieve this:

1. Encourage the production of life satisfaction evidence through use of Chapter 5 of the HMT Green Book Wellbeing Supplementary Guidance⁷⁹ in the evaluation of policy. This will drive behaviour change.
2. Look to build capacity across sectors to engage in wellbeing research. The Measuring Wellbeing microsite and measures bank⁸⁰ can support this alongside training and professional development
3. Supporting initiatives to pre-register trials will improve the quality of the knowledge base and collaboration across a multi-disciplinary and global field. This will also help identify ideas that fail early but continue to look innovative because early evidence is not identifiable.

A range of resources, reviews, and other materials to support wellbeing evaluations are available on the What Works Centre for Wellbeing website:

<https://whatworkswellbeing.org/>

⁷⁹ <https://www.gov.uk/government/publications/green-book-supplementary-guidance-wellbeing>

⁸⁰ <https://measure-wellbeing.org/>