Evaluating Physical Activity Programmes for Children and Young People

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Learning Outcomes

• What we need to consider when collecting data from children and young people
• Ethics and consent when working with children
• Safeguarding children and young people
• What suitable measures are available for children and young people
  – Physical Activity
  – Wellbeing
• Collating and analysing the data
Exercise 1

• Work in groups to complete the logic model

Types evaluation

• Outcome evaluation
  – Did the intervention achieve its objectives?

• Process evaluation
  – Looks at how well the project was designed and implemented

• Formative evaluation
  – Used for planning and developing a new intervention
Types of data

- **Quantitative**
  - Required to measure the outcomes
  - Uses statistical techniques to determine outcome
- **Case studies**
  - Participant stories which highlight the impact of the intervention
- **Qualitative**
  - Captures the experiences of the participants
  - Uses words as data collected by interviews and focus groups

Logic Model Framework

- **Context**
  - What is the problem?
  - What does the evidence show?
- **Inputs**
  - Human, financial or material resources used in the intervention
- **Activities**
  - What activities were carried out for the intervention?
- **Outputs**
  - What did you see happen?
- **Outcomes**
  - What was the effect of this intervention?

Process Evaluation
Outcome Evaluation
Inputs, outputs and outcomes

• Inputs – these are your resources
• Activities – What did you do for the intervention?
• Outputs – monitoring data e.g. how many people participated?
• Outcomes – Short, medium and long term effects of your intervention.

Example logic model
Measurement areas

- Physical activity levels
- Wellbeing
- Self confidence
- Self esteem
- Mental and emotional development
- Resilience
- Behaviour

When choosing measures – consider:

- Does it link with your SMART objective(s)?
- Validity – does the tool measure what it is supposed to measure?
- Reliability – is the measurement reproducible under the same conditions?
- Feasibility – is the tool easy to use and the data easy to interpret?
- Cost and Practicality – is it easily available and affordable?
Collecting data from children

• Literacy skills will vary between children
  – Dependant on age
  – Dependant on ability
• Attention span can be limited
• To avoid comprehension problems
  – Interview children and write down answers
• However, be mindful of the child – adult relationship
  – Responding to an adult can bias their answers

Data collection cont....

• Children may feel they have to give the answers that adults want.
  – Their perception of the ‘right’ answer
  – They may be concerned they could get into trouble for giving the ‘wrong answer’
• Allow for some privacy when children are answering the questions
• Take care over vocabulary and grammar
  – Don’t use technical terms
Questionnaires

• Break down questions into two steps
  – Agree or Disagree
  – How strongly do they feel about this
• Replace Likert scales with a “Smiley Scale”

• Consider using pictures
• Be aware of children’s understanding of time
  – Minutes or hours when recording physical activity

Discussion

• Take 5 minutes to discuss your experiences of collecting data from children
• Work in groups of 3 or 4.
• Note down a couple of points to find back to the main group
Measuring wellbeing in children

• Wellbeing – accounts for life satisfaction and happiness.
  – how someone perceives their own situation and experience
  – It includes self-esteem, resilience, emotions and satisfaction with life, family and friends
• Children are capable of considering the above from around 7-8 years old
• Need to understand the difference between a ‘good’ and a ‘bad’ life

Pre-school children

• Too young to answer questionnaires
• Cannot quantify time
• Need to use observational measures
  – Strengths & Difficulties Questionnaire
    • 2 – 4 years – filled in by the parent/carer
    • 25 questions
    • Measures conduct, emotions, physical and social behaviour
  – Family Star (Early Years)
    • For children aged 0-5
    • 7 outcome areas
Young children

• Observation
• Understanding time is still difficult
• Strengths and difficulties Questionnaire (SDQ)
  – 4 – 17 year old version
  – Measures conduct, emotions, physical and social behaviour
• My Star
  – looked after children
  – Children in receipt of social services
  – Aimed at ages 7 to 14
  – Can be used with children from 4 years
Older children

• YP – CORE (12+ years)
  – 10 item measure

• Strengths and Difficulties Questionnaire
  – Age 11 – 17 version – to be filled in by the child

• LAWSEQ self esteem scale – (9+ years)
  – Used to inform the Health Related Behaviour Survey

• Heubners Brief Multidimensional Life Satisfaction Scale (BMSLSS)
  – Ages 11 to 18
  – 6 item measure

Older children cont...

• NPC – The Wellbeing Survey (11-16 years)
  – Measures the self, relationships and environment
  – Data has been collected on a national level
  – Free to use but must register on their website
  – Optional paid version for more features
    • E.g. tools for calculating your data and comparing to national data
Teenagers and young people

- SWEMWBS – aged 13+
  - 7 item wellbeing questionnaire
  - Currently very popular
- YP – CORE – aged 12+
  - 10 item questionnaire
- Shooting Star
- Youth Star
  - Aimed at vulnerable young people
  - Looks at 6 areas of their lives

Physical activity subjective measures

**Self report questionnaires**

**Advantages**
- Cost effective
- Provide information on the type of physical activity
- Puts the physical activity in context

**Disadvantages**
- Recalling activity from memory can be problematic for children and young people.
### Physical activity objective measures

<table>
<thead>
<tr>
<th>Method</th>
<th>Description</th>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pedometer</td>
<td>Small unit worn on belt which counts each step</td>
<td>Inexpensive and non-invasive. Good more measuring walking</td>
<td>Only measures walking activity, can be tampered with. Not so accurate when running</td>
</tr>
<tr>
<td>Accelerometer</td>
<td>Small unit worn on belt, measures duration &amp; intensity of exercise</td>
<td>Non-invasive, measures frequency, intensity and duration</td>
<td>Expensive, poor for detecting upper body movement &amp; cycling. Requires specialist software to analyse data</td>
</tr>
<tr>
<td>Heart Rate Monitor</td>
<td>Measures heart rate to determine intensity &amp; duration of exercise</td>
<td>Non-invasive, measures frequency, intensity &amp; duration</td>
<td>Expensive and affected by gender, fitness and temperature</td>
</tr>
</tbody>
</table>

### Physical activity measures

- **The Physical Activity Questionnaire for older children/Adolescents (PAQ=C/PAQ-A)**
  - C = Age 8-14
  - A = Age 14-20
  - Takes 20 minutes to completed
  - Does not record exercise intensity

- **Youth Risk Behaviour Surveillance Survey (YRBSS)**
  - Age 10-21
  - Also records data on sedentary behaviour
  - Similar to the Heath Related Behaviour Survey
More physical activity measures

• The Teen Health Survey
  – Age 14-17
  – Measures moderate to vigorous physical activity in the last week
  – 2 item
• The Adolescent Sedentary Activity Questionnaire (ASAQ)
  – 2 questions to record time spent on sedentary activities
• Motion sensor devices
  – Pedometers

Measuring healthy lifestyle

• Day in the Life Questionnaire (DILQ)
  – 7 to 9 years
  – 9 to 11 years
• SNAP – Synchronised Nutrition and Activity Program
  – 7 to 16 years
  – Web based tool
  – 30 minutes to complete
Special Education Needs (SEN)

- Based on NPC’s Wellbeing Measure
- Currently two versions available
  - Level 1
    - Medium needs - 11-16 years
    - 21 questions
  - Level 2
    - Medium/Complex needs – 11-16 years
    - Medium needs – 7-10 years
    - 14 questions
Outcomes Stars - additional/special needs

- Student Star – for young people with:
  - Autism
  - Learning Disabilities
  - Behavioural needs
- Life Star
  - For young people with learning disabilities
- Attention Star
  - For children and young people aged 5-18 diagnosed with ADHD

Ethics

- Ethics is about the control of power
  - This is particularly relevant with children
- It is about being responsible
- Explain clearly:
  - what you are doing
  - Why you are doing it
  - How it may affect the participant
- Enable the participant to make an informed decision
Participant consent

• When collecting data from participants you should get their consent.
  – You need to let them know
    • Why you are collecting the data
    • What the data will be used for
    • The information they give will be kept anonymous
    • The data will be stored securely
    • They may withdraw their consent at any time
      – before, during or after the project/course
      – Let them know how to do this.
  – Participants have the right to say no!

Consent and children

• Children are considered to be a vulnerable group
• Remember there is a power imbalance between the children and the adults collecting the data
• Children’s understanding of data collection will be different to an adults understanding
• Consider if there will be any negative experience during data collection.
Consent and children cont...

- Do they have the capacity to give consent?
  - Are they under 16?
  - Are they considered to have special education needs?

- Participants must be able to understand what you are doing and why.
  - Use language suitable for children

- Consent will be required by:
  - Parent or legal guardian
  - The school in school based projects

Safeguarding

- Promoting the welfare of children and young people
  - Protecting children and young people from maltreatment.
  - Preventing impairment of children’s health or development
  - ensuring that children grow up in circumstances consistent with the provision of safe and effective care
  - taking action to enable all children to have the best outcomes.

- Make sure you are aware of your internal policy
CAMHS

- **Hertfordshire CAMHS Review 2015 / National CAMHS Review 2015 (Future in Mind)**
- **Findings**: early intervention, better communication between CAMHS / Schools, mental health training for universal staff
- **Current work**: better communication with schools & CAMHS and GPS, peer supervision, case surgeries, infant mental health & MHFA Youth training, Kooth, extra staff to help reduce waiting times, developing community eating disorder services
Emotional Health & Wellbeing Work

• Time to Change training
• Self-Harm training
• Pastoral Leads Groups – Secondary Schools
• Girls Active Project
• Supporting the CAMHS Transformation
• Health Related Behaviour Survey
• MHFA Youth training
• Boys/Young Men Stigma Campaign
• RSPH Youth Health Champions
• Support for primary schools - Daily Mile / Pastoral Networks

Exercise 2

• Evaluation of the Daily Mile
  – What is the aim of the intervention?
  – What is the age range of the children?
  – What is the evaluation question?
  – What are the objectives (SMART)?
  – What measures will be used to test if the objectives are met?
  – How will you capture unintended consequences?
  – What do you need to consider before collecting any data?
Collating the data

- Put the data from the questionnaire forms into a spreadsheet
  - Create clear headings for each question along the top. Include:
    - Participant ID/Code
    - When the data was collected (e.g. pre, post, follow up, date)
  - Enter one questionnaire per row
  - The data in each column must be consistent
    - Check for spelling mistakes and variations
    - Watch out for errors made by participants
    - All numbers formatted as numbers

Example of data in Excel

Each participant is given a unique ID

Clearly labelled columns

1 row per completed questionnaire

Data is consistent in every column
Scoring the data

• Check the instructions with the questionnaire

All responses to the questions are converted to a value of 1 to 5 (except Q10)

Example of scored data step 1
Example of scored data step 2

<table>
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<tr>
<th>ID</th>
<th>Stage</th>
<th>Age</th>
<th>Gender</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Q5</th>
<th>Q6</th>
<th>Q7</th>
<th>Q8</th>
<th>Q9</th>
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<td>1</td>
<td>2.39</td>
<td>1.39</td>
<td>PAQ-C Score</td>
</tr>
</tbody>
</table>

- Once you have a value from 1 to 5 for each of the 9 items (items 1 to 9) used in the physical activity composite score, you simply take the mean of these 9 items, which results in the final PAQ-C activity summary score.
- A score of 1 indicates low physical activity, whereas a score of 5 indicates high physical activity.

Analysing and comparing data

- Compare the same group at different points in time.
  - Pre and post intervention
  - Pre, mid and post intervention
  - Pre, mid, post intervention and follow up
- Compare two different groups
  - E.g. men compared to women
- How often you measure will depend on the size and length of your intervention
Interpreting the data

• What does the data mean?
• Are the results surprising?
• Did you expect these results?
• Can you see any patterns in the results?
• How did the results change over time?
• Can you compare to any national averages?
  – E.g. SWEMWBS, NPC Wellbeing

Summary

• Reviewed the evaluation components
• Collecting data from children
• What suitable measurements are available for children and young people
  – Physical Activity
  – Wellbeing
• Ethics and consent when working with children
• Collating and analysing data
Questions??

References and Resources

• Measuring Well-being: A guide for practitioners

• Guidance on scoring WEMWBS and SWEMWBS
  – http://www2.warwick.ac.uk/fac/med/research/platform/wemwbs/researchers/guidance/

• Evaluation guides by PHE
  – http://www.noo.org.uk/core/Frameworks

• Example evaluation reports and measures
  – http://www.noo.org.uk/core/eval_reports
  – http://www.noo.org.uk/core/search

• Outcome Stars
  – http://www.outcomesstar.org.uk/

• SHEU the schools and students health education unit
  – http://sheu.org.uk/content/page/free-resources-children-young-people-health

• PAQ-C and PAQ-A
References and Resources

• Core Outcome measures
  – http://www.coreims.co.uk/About_Measurement_Tools.html
• Strengths and Difficulties Questionnaire
  – http://www.sdqinfo.com/
• NPC Wellbeing measure
  – http://www.well-beingmeasure.com/
• NPC Wellbeing measure for young people with SEN
• Synchronised Nutrition & Activity Program (SNAP™)
  – http://www.snapproject.co.uk/
• Safeguarding
• Hertfordshire Health Evidence
  – http://www.hertshealthevidence.org/