Choosing Evidence-based Interventions: Considerations for Mental Health Promotion Programming

February 27th, 2014  1:30 – 3:00 PM EST

Hosted by the CAMH Health Promotion Resource Centre
About the CAMH HPRC

• Provide system support, capacity building, content expertise and access to information and research for Ontario health promotion and public health audiences related to:
  ➢ Mental health promotion
  ➢ Substance misuse
  ➢ Tobacco

• Consult with CAMH colleagues from across the organization (PSSP, clinical, research, etc.)

• Funding provided by the Health Promotion Division of MOHLTC
Facilitators

Novella Martinello
Equity and Engagement Lead
East Region Team
Provincial System Support Program

Dr. Ilene Hyman
Evaluation Lead
DTFP Implementation Team
Provincial System Support Program

Linda Yoo
Health Promotion Consultant
Health Promotion Resource Centre
Provincial System Support Program
Objectives

 To raise awareness of the importance of evidence in practice and decision-making processes

 To raise awareness of the current state of mental health promotion evidence

 To increase knowledge of the types of evidence and the ways to obtain evidence

 To increase knowledge of ways to use evidence in practice or decision-making processes
Definitions: Evidence

“The available body of facts or information indicating whether a belief or proposition is true or valid.”

[Source: Online Oxford Dictionaries, 2014
 http://www.oxforddictionaries.com/definition/english/evidence]
"Mental health is not just the absence of mental disorder. It is defined as a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community."

“The process of enhancing the capacity of individuals and communities to take control over their lives and improve their mental health. Mental health promotion uses strategies that foster supportive environments and individual resilience, while showing respect for culture, equity, social justice, interconnections, and personal dignity.”

Two Key Concepts

✓ **Power:** a person’s, group’s or community’s sense of control over life and the ability to be resilient (Joubert & Raeburn, 1998)

✓ **Resilience:** “the ability to manage or cope with significant adversity or stress in ways that are not only effective, but may result in an increased ability to respond to future adversity” (Health Canada, 2000, p. 8)

Advantages to Using Evidence in Mental Health Promotion Planning

Moves us away from...

- History, status quo
- Anecdotal stories or testimonies of success

Advantages to Using Evidence in Mental Health Promotion Planning

- Need to strengthen decisions, processes and practices with evidence
- Demonstrate benefits and efficacy of health interventions
- Common Indicators and knowledge exchange
- Up-to-date and reliable information on what works or not
- Public health standards on using evidence to support decision-making
State of Evidence in MHP

Risk Factors

Protective Factors
Upstream Evidence Needed
Examples of MHP Programming

- Triple P: Positive Parenting Program
- Strengthening Families Program
- The Fourth R: Strategies for Healthy Youth Relationships
7 Steps to Increase Use of Evidence

1) Identify the issue
2) Acquire the evidence
3) Critically appraise the evidence
4) Link the evidence
5) Prioritize program or policy option
6) Develop an action plan and implement
7) Evaluate
Step 1: Identifying and Defining the Issue
Determine/ Define the Question

P = population/problem

I = intervention/item of interest

S = setting

O = outcome
Your Public Health Unit is working with the local school board to reduce disordered eating in the high school population.

You want to compile evidence on interventions to improve body image and self-esteem among students.
Example Cont’d

- P (population/problem) = students/disordered eating habits
- I (intervention) = mental health
- S (setting) = high schools
- O (outcome) = improved body image and self-esteem

Question: What are effective school-based mental health promotion interventions to improve body image and self-esteem among high school students?
Your Turn

What are some key words/terms you have used or seen when searching for mental health promotion evidence?
Step 2: Searching for and Acquiring Evidence for Mental Health Promotion
Acquiring the Evidence

1. Select evidence sources
2. Identify key concepts and terms
3. Conduct the search
4. Select documents for review
5. Abstract relevant information from the various evidence sources
6. Summarize and apply the literature review
Sources of Evidence

- Theses and dissertations
- Journal literature
- Newsletters
- Government reports
- Conference proceedings
- Surveillance data
- Listserves
- Abstracts
- Books
- Grey literature
- Policies, laws and regulations
- Health Impact Assessments
- Internet sources
- Expert knowledge (clients, clinicians, researchers)
- Webcasts and teleconferences
Hierarchy of Evidence

- **Systematic Reviews & Meta-analysis**: Summary of best available research on a specific question. Synthesis of results of several studies.
- **Randomized Control Trials (RCTs)**: Study with participants randomly assigned to an experimental or control group.
- **Cohort Studies**: Study that follows cohorts with particular conditions over time to track outcomes and risk factors.
- **Case-Control Studies**: Compares patients who have an outcome of interest with those who do not and looks back retrospectively to compare exposure frequency to risk factors.
- **Cross Sectional Surveys**: Observation of a population at one specific point in time.
- **Case Reports**: Articles that describe and interpret individual cases.
- **Expert Opinion, Anecdotal Information**: Opinion and observations from individuals with expertise in a particular field.

Mental Health Promotion Evidence: Limitations

- RCTs are not always feasible given the cost and ethics of randomly assigning individuals into mental health promotion intervention or control groups
- RCTs are less applicable to interventions addressing social determinants of health
- Conceptualization and measurement of mental health promotion outcomes are often complex and/or long-term
Hierarchy of Evidence – 6S

1. Systematic Review Databases

- Identify, appraise and summarize the best available research evidence for a clearly articulated research question
- Methods used are systematic, explicit, transparent
- Collaboratively conducted by trained ‘experts’
- Many systematic review databases are ‘accessible’
- Variation in ease of use, advanced search options, use of lay language summaries etc.
Example: Health Evidence – simple search

Your Current Search:
school interventions self esteem body image

Returned 2 results

- Article 1
  - Title: The effectiveness of primary prevention of eating disorders (Report)
  - Authors: Ciliska, D., et al.
  - Date: 2001
  - Rating: Strong

- Article 2
  - Title: School-based health education strategies for the improvement of body image and prevention of eating problems: An overview of safe and successful interventions
  - Authors: O'Dea, J.A.
  - Date: 2005
  - Rating: Weak

Need help?
- Search tips
- Tutorials
- Glossary of terms

Results Options:
- Export references
- Save articles
- Save this search
- Print

Hoping for more results?
- Contact our Knowledge broker

Update My Profile
- My Saved Articles
- My Saved Searches
- Logout

Language: EN FR

Share / Save:
Example: Health Evidence – advanced search
**Example: Health Evidence – advanced search**

Your Current Search:

```
[(self esteem) AND (body image)] AND Limit:
  Setting = School
```

**Returned 4 results**

<table>
<thead>
<tr>
<th>Article</th>
<th>Authors</th>
<th>Date</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevention programs for body image and eating disorders on University campuses: A review of large, controlled interventions</td>
<td>Yager, Z., et al.</td>
<td>2008</td>
<td>Moderate</td>
</tr>
<tr>
<td>School-based health education strategies for the improvement of body image and prevention of eating problems: An overview of safe and successful interventions</td>
<td>O'Dea, J.A.</td>
<td>2005</td>
<td>Weak</td>
</tr>
</tbody>
</table>

**Need help?**
- Search tips
- Tutorials
- Glossary of terms

**Results Options:**
- Export references
- Save articles
- Save this search
- Print

**Hoping for more results?**
- Contact our knowledge broker

© 2014 Health Evidence | Health Evidence Terms of Use | Contact Health Evidence
© 2014 McMaster University | 1200 Main Street West, Hamilton, Ontario L8S 4L8 | 905-525-9140 | Contact Us | Terms of Use & Privacy Policy
2. Best Practice Databases

- Summarize evidence on existing public health programs and interventions
- All interventions included in the databases undergo rigorous selection process
- Evidence is appraised and summarized
- Most BP databases have advanced search options
- Most BP summarize interventions with respect to effectiveness but also core elements, resources needed, implementation advice, training needs, etc.
Example: Canadian Best Practices Portal – PHAC

Search the Best Practices section of the Canadian Best Practices Portal

What you’re searching

The Best Practices Section of the Portal is a searchable list of 339 chronic disease prevention and health promotion interventions which provides program planners and public health practitioners with easy and immediate access to successful public health programs, interventions and policies that have been evaluated and have the potential to be adapted and used.

How to search

Using the input fields on this page, enter your search term(s) and choose which section of the site you would like to search.
Example: SAMHSA’s National Registry of Evidence-based Programs and Practices (NREPP)

NREPP's National Registry of Evidence-based Programs and Practices

Refine Your Search Results
Select additional criteria below to refine your search results.

Ages
Areas of Interest
Settings
Outcome Categories
Races/Ethnicities
Geographic Locations
Genders
Study Designs
NIH Funding/CER Studies
Implementation
Language Translations
Keywords

Basic Search
Advanced Search
View All Interventions

2 Intervention(s) Found
Search criteria: 6-12 (Childhood), 13-17 (Adolescent), Mental health promotion, School, body image

To refine your results further, select additional criteria on the left.

Compare

<table>
<thead>
<tr>
<th>Compare</th>
<th>Intervention Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ATHENA (Athletes Targeting Healthy Exercise &amp; Nutrition Alternatives)</td>
<td>The ATHENA (Athletes Targeting Healthy Exercise &amp; Nutrition Alternatives) program uses a school-based, team-centered format that aims to reduce disordered eating habits and deter use of body-shaping substances among middle and high school female athletes.</td>
</tr>
<tr>
<td></td>
<td>New Moves</td>
<td>New Moves is a school-based physical education (PE) intervention aimed at preventing weight-related problems in adolescent girls by increasing their physical activity, improving their body image and self-worth, and improving their diet.</td>
</tr>
</tbody>
</table>

Compare
New Moves is a school-based physical education (PE) intervention aimed at preventing weight-related problems in adolescent girls by increasing their physical activity, improving their body image and self-worth, and promoting healthy eating habits.

The primary component of New Moves is an all-girls PE class that is designed to provide participants with a noncompetitive, supportive environment in which they are encouraged to be physically active regardless of their current level. The intervention’s theoretical model of change is based on social cognitive theory and addresses a combination of socioenvironmental, personal, and behavioral factors.

New Moves is typically implemented over a two-semester, 9-month school year (but can be used over quarters or trimesters):

- During the first semester, the New Moves curriculum is delivered by a teacher through 50-minute classes that are held each weekday and target eight behavioral objectives: (1) aim to be physically active for 60 minutes per day, (2) limit sedentary time to no more than 1 hour per day, (3) increase intake of fruits and vegetables (up to at least five servings per day), (4) limit intake of sugar-sweetened beverages, (5) eat breakfast daily, (6) portion sizes and personal signs of hunger and fullness, (7) avoid unhealthy weight control behaviors, and (8) focus on personal positive traits. On 1 day each week, the class consists of nutrition or social support activities. On the other 4 days, participants attend the girls-only PE class.
- During the second semester, girls participate in maintenance activities, such as "lunch bunches," which are weekly get-togethers held over lunch, at which girls are served healthy food and engage in informal discussions.

Throughout the entire school year, each girl also schedules five to seven individual counseling sessions with a New Moves coach (i.e., a teacher, a guidance counselor, or a student who completed New Moves in a previous year). Each girl sets personal goals for behavioral change on the basis of the eight objectives; explores how to best achieve her goals; and, if ready for change, makes an action plan. The coach also engages in motivational interviewing strategies to assist each girl in moving toward change. Also during the school year, the curriculum is reinforced through parent outreach activities; for example, six postcards are sent home with each parent, and a parent-daughter retreat day is held at a local community center.

In the study reviewed for this summary, New Moves coaches received training and ongoing support in motivational interviewing techniques.

### Descriptive Information

| Areas of Interest | Mental health promotion  
<table>
<thead>
<tr>
<th></th>
<th>Substance abuse prevention</th>
</tr>
</thead>
</table>
| Outcomes | Review Date: September 2013  
|         | 1: Physical activity  
|         | 2: Eating patterns  
|         | 3: Unhealthy weight control behaviors  
|         | 4: Body image  
|         | 5: Self-worth |
| Outcome Categories | Mental health  
|                   | Quality of life |
| Ages            | 13-17 (Adolescent) |
| Genders         | Female |
| Races/Ethnicities | American Indian or Alaska Native  
|                  | Asian  
|                  | Black or African American  
|                  | Hispanic or Latino  
|                  | White  
|                  | Race/ethnicity unspecified |
| Settings        | School |
| Geographic Locations | Urban  
|                  | Suburban |
| Implementation History | New Moves was first implemented in 2002 and has since been implemented in 25 schools in Minnesota, serving approximately 5,000 students. |
| NIH Funding/CER Studies | Partially/fully funded by National Institutes of Health: Yes  
|                               | Evaluated in comparative effectiveness research studies: Yes |
| Adaptations | No population- or culture-specific adaptations of the intervention were identified by the developer. |
| Adverse Effects | No adverse effects, concerns, or unintended consequences were identified by the developer. |
| IOM Prevention Categories | Universal |
3. Guidance Databases

- Developed by government agencies, professional organizations and expert panels to address a health behavior or condition.
- Include a systematic review of research evidence for a clinical service or program
- Can be searched to identify guidelines for different conditions/treatments/interventions
- May include graded levels of evidence
- May include graded recommendations
Example: National Institute for Health and Care Excellence (NICE)

- Social and emotional wellbeing in primary education (PH12)
  - The summary of the published public health guidance on social and emotional wellbeing in primary education. It links to the published guidance and key documents.
  - View the summary and implementation tools, 26 March 2008

- Social and emotional wellbeing in secondary education (PH20)
  - The summary of the published public health guidance on social and emotional wellbeing in secondary education. It links to the published guidance and key documents.
  - View the summary and implementation tools, 23 September 2009

- Managing overweight and obesity among children and young people (PH47)
  - The summary of the published public health guidance on managing overweight and obesity among children and young people. It links to the published guidance and key documents.
4. Grey Literature

- Everything, except peer-reviewed books and journals
- Produced by a wide range of organizations including: government health agencies, non-profit organizations, universities, research centers, international agencies, health agencies, professional organizations and special interest groups
- Good for evidence on alternative perspectives, client and agency experiences, emerging issues and program evaluations
- More timely
- Lack of peer review limits validity and reliability of grey documents
Public Health Grey Literature Database: Overview

What is Grey Literature?

Grey literature is "information produced on all levels of government, academia, business and industry in electronic and print formats not controlled by commercial publishing i.e. where publishing is not the primary activity of the producing body."\(^1\)\(^2\)

Grey literature is produced by government agencies, professional organizations, research centers, universities, public institutions, special interest groups, associations and societies whose goal is to disseminate current information to a wide audience. Grey literature can be challenging to track down as it is not "searchable" via traditional mechanisms.

Why a Grey Literature Database?

This database of grey literature has been compiled to increase the accessibility of grey literature from Ontario’s 36 public health units and other provincial knowledge-producing public health organizations.

Find grey literature on ...

- Alcohol & Other Substance Use Prevention
- Annual Reports from Ontario Public Health Units
- Child Health
- Chronic Disease Prevention
- Dental Services
- Environmental Health
- Healthy Eating and Healthy Weights
- Health Emergency Planning
- Health Administration
- Health Promotion
- Health Protection
- Infectious Diseases
- Injury Prevention
- Population Health Status
- School Health
- Sexual and Reproductive Health
- Tobacco Control
- Miscellaneous
It is important to remember that every body is different. We all have different genetics. If everyone ate the same thing and did the same amount of physical activity, we would not all look the same. Your genetics influence your facial features, body shape, height, and weight.

There is no ideal body weight. A body weight that is right for you is the weight that allows you to feel strong and energetic and lets you lead a healthy life. For example, when your body is healthy, you have the energy to spend time with your friends, participate in sports and concentrate on school or work. Don’t rely on charts, formulas or tables to dictate what’s right for you. Every shape can be healthy if you eat balanced meals full of nutritious foods and enjoy regular physical activity.

Self esteem is the confidence or satisfaction that you feel about yourself. It comes from inside you. Things that may help you feel good about yourself include intellect, a sense of humour, physical abilities and artistic talents. These factors are more important than your body shape because they help you feel more positive about yourself.

Create variety!
We are all different. Look at body weight and shape from a positive point of view. Remember that weight gain is normal during teen growth spurts and this weight gain will cause changes to your body shape.

Strive for a healthy lifestyle!
- Get hooked on healthy eating! Choose whole grain breads, cereals, pasta and rice. Enjoy vegetables and fruit, lower fat milk products and leaner meat and alternatives every day. Have treats once in a while – not at every meal.
- Be physically active. You are more likely to feel good about your body and have better self esteem if you are active every day. Pick activities that you find fun to do.
- Avoid strict weight loss programs or crash diets. If you think you need to lose weight, talk to your family doctor and get a referral to a registered dietitian.
Evidence Search Decision Tree

PISO

Secondary Sources
(pre-appraised)

Primary Sources
(not appraised)
Searching for Primary Evidence

Key Considerations:

- Prior experience/training in library searches?
- Access to commonly used databases (e.g., Medline, Pubmed, Scopus)?
- Access to expert ‘search’ professionals?
- Level of evidence is needed (e.g. systematic, experiential, grey literature)?
- How soon is the evidence needed?
- Experience/training in critical appraisal?

Library and online training is available!
Available Training

- National Collaborating Centre for Methods and Tools (NCCMT) Learning Centre
  http://www.nccmt.ca/learningcentre/index.php#main2.html

- Public Health Ontario (PHO)
  http://www.publichealthontario.ca/en/LearningAndDevelopment/Events/Pages/default.aspx#.Uwe8WuNdWAh

- Critical Appraisal Skills Programme (CASP, UK)
  http://www.casp-uk.net/#!e-learning/cd70

- EPPI Centre
Select Documents for Review

Key Steps:

- Screen relevance based on title and abstract or summary
- Attention to PISO
- Full text review for relevance
Step 3: Appraising the Evidence
Appraising the Evidence

1. Select evidence sources
2. Identify key concepts and terms
3. Conduct the search
4. Select documents for review
5. Abstract relevant information from the various evidence sources
6. Summarize and apply the literature review
1. **Strength of Evidence**

- What type of evidence was obtained?
- How well does the evidence address your PISO?
- Was the evidence valid?
- Were appropriate methods used to combine and/or compare evidence across studies?
Key Questions for Critical Appraisal of Evidence

2. **Consistency of Findings**
   
   - Was there variation in results/effects of the intervention across sources of evidence?
   - Did the effect size vary across studies?
   - What may have contributed to these differences in effect?
3. **Applicability**

- Is the evidence relevant? Can the results be applied to your PISO?
- Are all important public health outcomes of the intervention considered?
- What are the limitations of the evidence presented? Can anything be learned from what didn’t work?

<table>
<thead>
<tr>
<th>Type of Resource</th>
<th>Author</th>
<th>Year</th>
<th>Title</th>
<th>Location</th>
<th>Purpose/Population</th>
<th>Key Findings/Summary</th>
<th>Comments</th>
</tr>
</thead>
</table>
Step 4: Link the Evidence
Making the Links

Best Evidence/Intervention

Context, community needs, values, historical background, demographic, geographic location, etc.
Decision Making in Population Health

“The absence of excellent evidence does not make evidence-based decision making impossible; what is required is the best evidence available, not the best evidence possible.”

Additional Resources


Public health interventions to promote positive mental health and prevent mental health disorders among adults: evidence briefing. (NHS National Institute for Health and Clinical Excellence, Jan 2007)


Science advisory report on effective interventions in mental health promotion and mental disorder prevention. (Institut National de Santé Publique Quebec, May 2008)

http://www.inspq.qc.ca/pdf/publications/1116_EffectiveInterMentalHealthPromoMentalDisorder.pdf
Contacts and Coming Up….

Linda Yoo: linda.yoo@camh.ca
Novella Martinello: novella.martinello@camh.ca
Ilene Hyman: ilene.hyman@camh.ca

Stay tuned for HPRC Implementation Science webinars….