Socio-Ecological Model

Physical Education  Unit 3 AoS 1

Note: Australian Government’s Department of Health replaced the National Physical Activity Guidelines with the Australia’s Physical Activity and Sedentary Behaviour Guidelines in February 2014
Approaches/Strategies to increasing PA

Individual approach to increase PA:

- These approaches focus on biological, cognitive, demographic & behavioural factors.
- Need to modify thought and behaviour processes of a person.
- Method of delivery includes face to face interactions as well as the use of online and print media.

Examples include:
- Counselling
- Self help programs
- Educational courses
- Brochures
Approaches/Strategies to increasing PA

Environmental approach to increase PA:

• Take a broader perspective to modifying behaviours.
• Involve both individual’s demographic factors as well as the social and physical environment.
• Sometimes referred to as a community based intervention
**Socio Ecological Model**

- The Socio-ecological Model (SEM) provides a framework to understand the barriers acting on PA.
- Subsequently the SEM allows for more effective interventions to be implemented.
Identify the four levels of the SEM.
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- Physical Activity
- Individual influences
- Socio-cultural environment
- Physical environment
- Policy
Individual level

- This level includes personal factors that increase or decrease the likelihood of an individual being physically active.

- Can be broadly defined as psychological, behavioural and demographic factors.

- Factors include:
Describe a possible method to overcome feelings of low self-efficacy.
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**Example Response:**
Firstly the definition of self-efficacy is having confidence in the ability to complete the task.

Therefore any of the following could be acceptable responses:

- *Pick an activity that success has been achieved before in*
- *Work with a partner or friend who can provide motivation and support.*
- *Look to family for encouragement.*
- *Plan program so success can be achieved.*
Individual level

• Strategies or Interventions:

• These tend to focus on changing individuals knowledge & attitude etc.
  • Eg. Improving cycling ability, frequency & duration of exercise

• Include education programs and mentoring programs
  • Eg. Step classes, counselling, personal trainer
Social Environmental Level

• Also known as the interpersonal level, it is essentially what is happening around the individual.
• Looks at factors within the different settings that can impact on an individual's PA levels.
Concept Explorer

Which of the following is not an example of a social environment factor?

A. Cultural backgrounds
B. SES of community
C. Pet ownership
D. Dietary habits
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B. SES of community
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D. Dietary habits
Social Environmental Level

The social environment includes:

- Family, peers, partner, teachers
- Schools, workplace, community organisations
- Social network
- Community norms
- Cultural backgrounds
- SES of community
- Influence of health and other professionals
- Social isolation
Social Environmental Level

Strategies which can elicit change at this level include:

- Community education
- Support groups
- Peer programs
- Workplace incentives
- Social Marketing campaigns
**Physical Environmental Level**

Refers to both natural and man made settings.

Physical Environmental factors include:

- Weather
- Availability & access to facilities
- Aesthetics or perceived qualities of facility
- Safety
- Community design & land use
- Public transport

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Physical Environmental Level

Interventions that can assist in increasing PA focus on improving access to the environment.

Examples include:

- Improved wheelchair access
- Facilities built near housing estates
- Slowing of traffic around schools.

It is important to consider the type of PA to promote so you can target the appropriate physical environment.
Policy Level

- This level relates to rules, legislation, regulatory or policy making actions that could affect PA.
- Can take place on a local, state or federal level, or local policies in settings such as schools or workplaces.
Policy Level

Examples of intervention strategies at this level are:

- Inclusion of green spaces
- Compulsory PE & sport until Yr 10
- NPAG’s
- Setting gym times for certain groups
- Minimum standards for workplace health & fitness
- Subsidised gym memberships

Note: Australian Government’s Department of Health replaced the National Physical Activity Guidelines with the Australia’s Physical Activity and Sedentary Behaviour Guidelines in February 2014
The most common reason for lack of participation in physical activity is lack of time. To overcome this, a suitable workplace policy to encourage physical activity during work hours is to:

A. Provide an on-site gymnasium for employees.
B. Provide showers and changing rooms for employees.
C. Extend lunch breaks for employees who participate in a work walking group.
D. Make employees participate in half an hour of physical activity each work day.
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Key principles of SEM

- Environments are multidimensional and complex.

- For greater success, interventions need to be across two or three levels if change is to be lasting.

- Effectiveness of intervention depends on human-environment interaction, and the need to target different sub groups.
Key principles of SEM

• There is a reciprocal relationship b/w the individual & the three outer rings of the model.

• The social, physical and policy environments influence behaviour of the individual.
  • Eg: Access to swimming pool – limits people swimming
  • Eg: More people riding bikes – new bike lanes created
Role of Government/NGO’s

Government Agencies:

- Promote the benefits of an active and healthy lifestyle
- Provide funding for interventions to take place
- Maintain existing programs within the community or school setting

Non-Government Agencies:

- Differ in funding.
- Provide interventions across all three settings
Settings where Strategies can be implemented

A settings approach to improving PA has the initiative occurring in a specific section of the wider population.

There are three settings where the strategies can be implemented to create a change in PA:

• School
• Community
• Workplace
Community setting

- A community setting approach targets a group of people from the same suburb, the same cultural background, the same demographic and have the same barriers to overcome.

- Interventions target change within the neighbourhood, specifically the environment, as well as the individual.
Community setting

Programs or initiatives include:

- 10,000 Steps
- Healthy Spaces and Places
- Heartmoves
- Streets Ahead
Workplace setting

- Workplace interventions are policies, strategies or actions that aim to promote, educate and facilitate an increase in PA.
- They are generally successful as they elicit the support of friends and colleagues.
- Benefits for the employer for implementing PA interventions are enormous.
Workplace setting

Typically strategies within this setting can target each level of the SEM:

- Individual
- Social
- Physical Environment
- Policies

Some examples of specific workplace interventions include:

- Find Thirty
- Travel Smart
Drill It Out

The local YMCA is trying to increase the patronage by women to its gym and swimming pool facility.

Using the Socio Ecological model, suggest interventions at each of the four levels that could contribute to an increase in usage by the designated population.
Drill It Out (Answer)

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Using the Socio Ecological model, suggest interventions at each of the four levels that could contribute to an increase in usage by the designated population.

Example Response:
Need to be able to identify correctly the four levels of the SEM, answers need to target correct level.

**Individual:**
Education programs, counselling session on the importance of being physically active.

**Social Environment:**
Create classes pitched at exercising with friends, provide free instructors, encourage family members discount rates.

**Physical Environment:**
Create female only classes, child care facilities, female only competitions, changing spaces (brighter colours, less mirrors).

**Policy:**
Free council health checks for those who attend a class. Discount fees for regular attendees.
Drill It Out

In a workplace where most staff sit at computer workstations, a program sends a message every 15 minutes to each computer screen instructing the user to stand and walk around. Which component of the social-ecological model is this physical activity initiative aimed at?

A. Individual  
B. Population  
C. Social environment  
D. Physical environment
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The average Australian adult needs to exercise for about 30-minutes a day to maintain good health. An easy way to build this into a daily routine is by cycling to work. CycleSmart is a multifaceted online tool that can be used to encourage people to change their travel behaviour. It was developed by TravelSmart Victoria to specifically encourage employees to cycle all or part of the way to work. CycleSmart requires participants to use a cycle computer to calculate their daily kilometers. Cycle computers are great motivators because individuals can see how far they have cycled and track their progress over time. Anyone with a cycle computer can register on the CycleSmart website and enter the kilometers they have travelled. Participants can set daily or weekly email prompts to remind them to enter their kilometers and also elect to receive regular news updates, handy tips and useful advice.

TravelSmart Victoria encourages the use of CycleSmart at Victorian workplaces that are part of a travel planning program by
• Creating an account or internal site on the CycleSmart website
• Assisting workplaces to develop site-specific information
• Surveying participating staff on their current travel behaviour
• Measuring how this behaviour changes over time
• Reporting on overall staff cycling performance
• Providing information on purchasing cost-effective cycle computers.
Identify the three remaining components in the social-ecological model, and provide an outline of an example of each component, accounting for how that component may influence an employee’s involvement in the CycleSmart initiative.

The first component has been completed for you as an example:

**Individual**
Motor skills – an individual’s level of competence in riding a bike will influence their ability to participate in this program.

**Example Response:**
**Social environment** – social support from friends/work colleagues, etc. may influence an individual’s decision to participate in the program. If they have someone to ride with they may be more likely to participate.

**Physical environment** – bike racks/shower/change facilities. If these facilities are available at the destination then an individual may be more likely to be involved.

**Policy** – Incentives for employees participating in the program such as flexible work hours for those who cycle to and from work may encourage people to be involved in the initiative.

- Must have identified the three levels – social, physical environment and policy.
- Logic example of each must have been provided linking back to bike program.
Discuss the relationship between the multiple levels of influence of the social-ecological model using the CycleSmart initiative as an example.

There needed to be clear links between each level in response and how that may make the program successful. The first sentence of the answer below needed to be highlighted.

*Example Response:*
The multiple levels of influence interact with each other and no single factor will lead to a change in an individual’s behaviour. An initiative that targets all four levels of influence is more likely to change a person’s behaviour. The individual may have the required skills and fitness to ride to work, but without the support of his/her spouse/peers/work colleagues, access to bike and other cycling accessories, and a flexible starting time for work they may not make a change to their behaviour.
When critiquing strategies used to promote physical activity at the population level, which strategy would be considered least effective?

A. Introduction and implementation of resources and facilities
B. Removal of barriers and other impediments
C. Adoption of a one size fits all approach
D. Inclusion of educational programs and policies to support environmental change
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