

**"For those who love E.R.
...but hate the idea of going to medical school."**

Dr. Arnold Peters

Winning or Losing your Mind:

Serious Games in Mental Health

**A Reference
for the
Rest of Us!**

**By Dr Daniel Fung
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IMH**

*Includes full color
pull-out guide to
the human brain!*




Child
Guidance
Clinic

- *Financial* – Receives no honorarium and sponsorship from commercial and pharmaceutical companies in the last 3 year
- *Nonfinancial* – President, Singapore Association for Mental Health, Board PLMGS, Receives no compensation as member of boards

Mental Healthcare

Traditional

- Specialist knowledge driven
- Labor-intensive
- Focused on person-centered therapeutic alliance
- A relational science that requires individualized care
- Technology only serve to hinder its practice and take away the holistic element of illness recovery centered around the person

Technology Integrated

- Computerized screening instruments such as structured diagnostic interviews
- Clinical rating scales available for purchase and download online
- Websites established by reputable agencies offering materials about mental health issues
- **Electronic Interventions**
- Reduced stigma and increased accessibility to services

Review of E-Interventions



Eliza (1966)

**cCBT
For depression**

Selmi (1990)

Alive

ACTIVE FEEDBACK GAMES & TOOLS

Alive is the foundation platform that includes the Somatic Vision Games.

Alive gives you an array of engaging software games designed to help you build mental performance and the ability to better manage daily stress while having fun.

Using the same proven training technologies used by winning athletes and in clinics worldwide, Alive includes effective coaching tools and individual performance tracking.

[Learn more about Alive >](#)

[Alive Home](#) [Alive Clinical with unlimited users](#)

[About the Alive sensor hardware >](#)

iom powered by **HeartMath**



**Biofeedback games
(2003 onwards)**

Re-mission (2008)

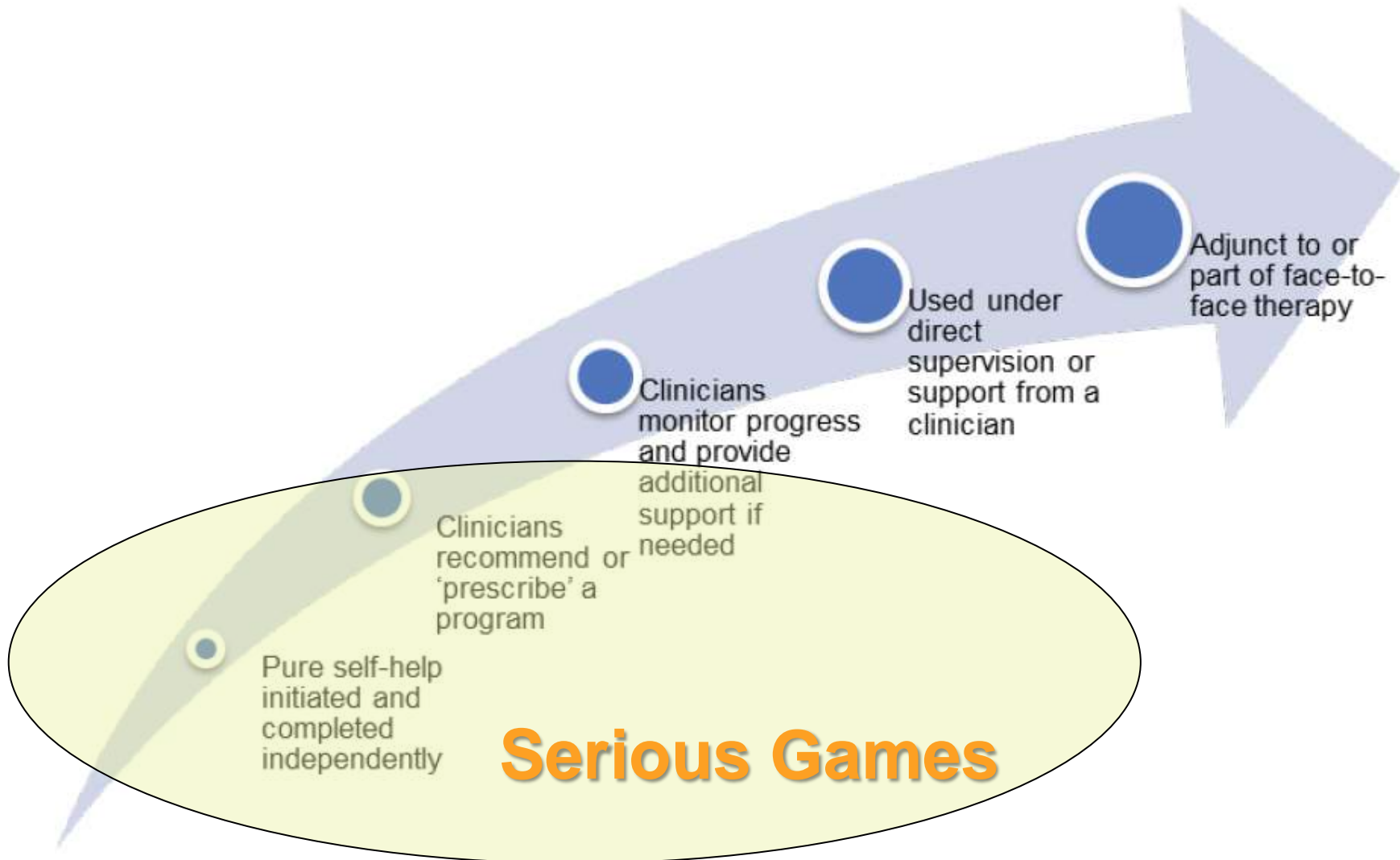


Definitions

- eHealth: Use of Information and communication technology in health
- eTherapy: Psychological therapies using ICT means
- Serious Games: ICT Games with a purpose other than pure entertainment

*Serious games are defined as
'entertaining games with non-
entertainment goals' (Prensky, 2001)*

Therapist involvement



Intention of Serious Games

- Create a fun way to achieve certain goals or targets
- Specific aims such as
 - Education about illness
 - Learn specific skills e.g. relaxation
 - Treatment interactions in psychiatry

Human Subject



Interface Devices



Game



The Human Subject

The Environment



(ACG)
Attention

(Amygdala +LS+STS+OFC)
Emotions and Socialising

The Brain

(Cortex)

Executive Functions

Planning
Organising
Monitoring
Evaluating behaviour

Input

(Hippocampus)
Memory

Behaviour

The Genes



Interface Devices: Game Consoles & Mobile Devices



Interface Devices: Feedback devices & VR



Biofeedback devices

- Pulse rates
- Movements of muscles, eyes
- Electrical data from the body: EEG, ECG



Virtual reality:
Immersive
environments for
simulating social
environments

NAO



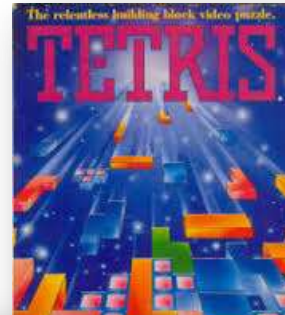
Games:

Educational, Casual and Advergames

Educational Games



Casual Games



Advergames



<https://exp.psy.uq.edu.au/socialanxiety/>

Games: Serious Games



SPARX

SPARX

Serious Games by IMH



Anxiety and Attention



Selective Mutism



Attention and Concentration

One Example- Regnatales



Game Attributes

(Derryberry, 2007)

- Backstory and storyline
- Game mechanics
- Rules
- Immersive physical environment
- Interactivity
- Challenge / Competition
- Risks and consequence



Game Mechanics

Identifying
feelings

Coping with
Feelings

Problem Solving
and Perspective
Taking

Anger Management Programme

- Lesson 1: Identification of feelings
- Lesson 2: Identification of angry feelings
- Lesson 3: Anger Control Techniques I
- Lesson 4: Anger Control Techniques II
- Lesson 5: Empathy and Perspective-taking
- Lesson 6: Social Problem-solving Steps
- Lesson 7: Fighting Fair
- Lesson 8: Building Prosocial Skills
- Lesson 9: Integrative Session

Game Mechanics



Disappointed



Frustrated



Bored



Scared



Embarrassed



Furious



Surprised

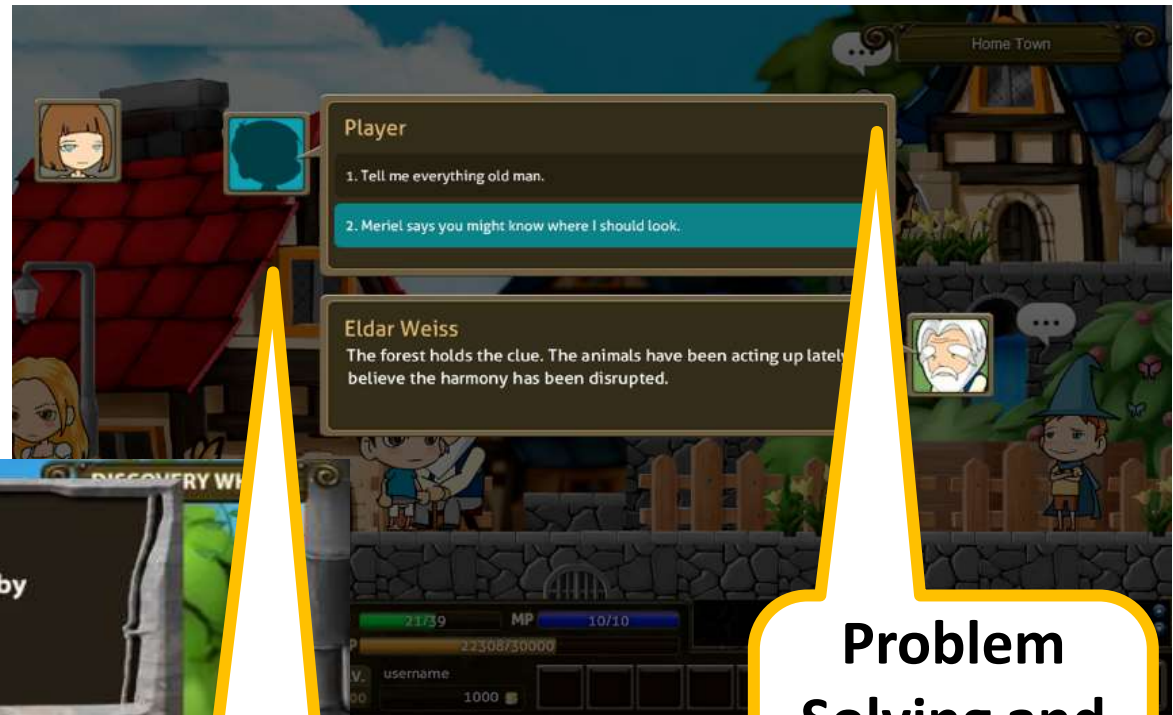


happy



Identifying
feelings

Game Mechanics



Assessing
baseline
and
progress

Problem
Solving and
Perspective
Taking

Game Rules

Behavior Modification Framework

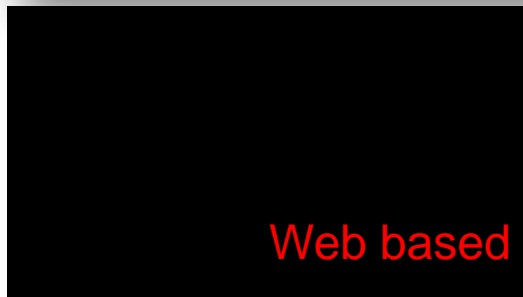


Immersive Environments

Personalization Features



Interactivity & Challenge



Thank you for your Attention



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