



# Computerised cognitive behavioural therapy for prevention and early intervention in anxiety and depression

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## Who we are

### Amy McKeown

1. Honorary Research Assistant at University College, London, CHIME
2. Founder and developer of Xanthis preventative cCBT tool  
prizewinning MSc dissertation on its use in prevention



[amy.mckeown@xanthis.ltd.uk](mailto:amy.mckeown@xanthis.ltd.uk)

[www.xanthis.ltd.uk](http://www.xanthis.ltd.uk)

+44 7931 385 944

### Henry Potts

1. Lecturer / Researcher at University College, London, CHIME
2. Research interests include:  
online peer support  
Web 2.0  
health belief systems



[h.potts@chime.ucl.ac.uk](mailto:h.potts@chime.ucl.ac.uk)

+44 207 288 3383





- Background and Introduction
  - Mental health
  - Cognitive Behavioural Therapy (CBT) and cCBT
  - Prevention
- Realist methodology
- Results
  - Literature review
  - Real life case studies
- Discussion
  - Lessons learnt
  - Core themes
  - Implementation and Commercialisation



# Mental Health Problems

- **Psychological and mental health problems are increasing:**
  - By 2020 WHO indicates depression the 2<sup>nd</sup> most long term condition worldwide
  - In UK stress, anxiety and depression largest reasons for absenteeism
    - £26 billion in lost working time (not including treatment)
- **Prevention and careful management needed**
- Nearly half of depressed people never seek professional help:
  - Do not recognise they have a problem
  - Unaware of support services
  - Stigmatised against seeking help
- Individuals use the internet for finding health information
- 40% users look up a mental health issue
- Depression in top 10 searched terms in a number of user analyses

# Cognitive Behavioural Therapy (CBT) and computerised Cognitive Behavioural Therapy



- UK NHS recommends stepped care for treatment of anxiety and depression:
  - different levels of treatment based on need
  - includes CBT and cCBT
- CBT recommended for many conditions
  - face to face, bibliotherapy, through a computer
- **CCBT packages seen to work in the treatment of a number of mental health conditions in a variety of user groups**
  - confidential
  - accessible and available to all 24/7
  - repeatable – booster sessions possible
  - possible waiting list intervention
  - cost effective
  - used for prevention and treatment
- **Access to CCBT through a prescription - Primary Care**



## Our focus is on prevention not cure...

- Cheaper, easier and less suffering if problems prevented or treated early
- **CBT interventions may prevent onset of depression by up to 50%**
- Interventions that target specific, at risk populations better than universal
- **CCBT is promising new way to deliver preventative treatment**
  - cost effective
  - can be delivered to a large number of people – different population groups
  - accessible and confidential
  - repeatable and ongoing use
- **Preventative CCBT can be used in stepped care, chronic illness and occupational models**
- **Internet-based CCBT can be accessed spontaneously**

# A realist methodology was adopted for research as it:



- is more flexible and pluralistic
    - more suitable for new and complex research subjects
    - deconstructs interventions into component theories
    - **What works? For whom? In what circumstances?**
- 1. Systematic realist literature review**
    - includes all literature found, a much greater use of data source
    - sorts data by relevance and rigour, not by hierarchy of research
  - 2. Set of empirical data collected around Xanthis**
    - user numbers monitored; results now cover 3 years
    - interviews conducted with purchaser
    - before / after questionnaire of users

## Our structured search found 5 papers on use of cCBT in prevention



Paper	Problem	Type	Population	Results
Kenardy McCafferty Rosa 2003:2006	Anxiety	RCT + 6 month follow-up	Individuals with high anxiety sensitivity	Reduced anxiety-related cognitions & negative affect  Results held at 6 months
Patten 2003	Depression	RCT	Public	No difference between groups
Van Voorhees 2007	Depression	Process Evaluation	Primary Care Patients	Good results on mood Users liked package Willing to pay for use Primary care setting good
Christensen Griffiths 2002	Depression	Editorial Commentary		Good argument for CCBT Mentioned a few limitations

**One large RCT showed no effect, but the other papers do support CCBT as being effective in reducing symptoms.**





## Core themes from the papers found

- **Positive results for sub-clinical use of cCBT**
- Little research on preventative cCBT to date
- **cCBT can positively affect outcomes in a number of conditions at once**
  - stress
  - anxiety
  - depression
- **One package can be used in different ways in different populations**
  - different user groups
  - different entry points and environments
- **Maintaining good adherence remains a challenge**
  - especially in spontaneous internet users
  - long enough to be therapeutic, short enough to prevent attrition

# Xanthis Online



## Preventative cCBT tool

- **Questionnaires**
- **Information**
- **Skills**

- covers stress, anxiety, depression
- delivered over internet
- structured CBT tool
- clinically validated questionnaires
- tested content
- **written by Senior Consultant Psychiatrist**

Skills for Life: Relaxation

### Progressive Relaxation

	Initial settling down	
	Tensing the face muscles	
	Tensing upper body	
	Bending feet & curling toes	

Roll cursor over the small pictures to enlarge.

We can't cover progressive relaxation in great detail here, but the pictures above show some typical exercises. There are many books and tapes on progressive

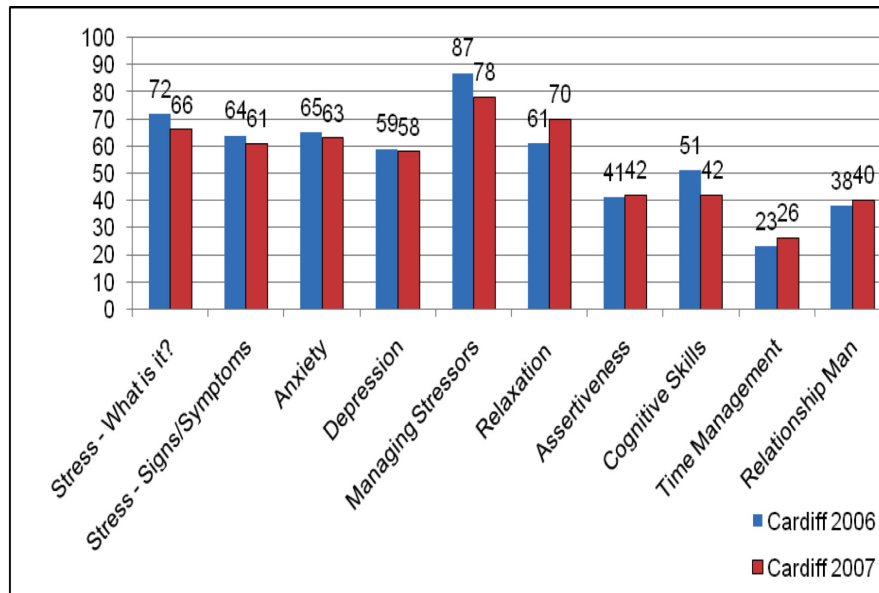




# Cardiff University



**Occupational Health**  
5500 staff  
launched 2005  
**prevention**



- 3 years of user results
- consistent and regular use
- peaking at 10% staff use (2-5%)
- use everyday and at weekend
- use declines slightly each year
- 'Managing Stressors' used most
- increase in high risk users (1/4)
- skills most frequently accessed
- good feedback
- Site to be repackaged



## **Human resources**

9000 staff

launched 2008

## **preventative tool**

supports new stress policy  
additional confidential resource  
prevents a lot of conditions

- good levels of consistent and regular use
- peaking at 15% staff use (2-5%)
- use everyday and at weekend
- accessed all times of day
- use declines as site embedded
- 'Depression' 'Stress' used most
- highest scores for depression
- questionnaires most accessed
- renewal for year 2



# Dyfed Powys Police Force



**Occupational Health**  
2000 staff  
wide geography  
launched 2007  
**prevention**

- 2 years of user results
- initial peak reducing to small consistent and regular use base
- peaking at 5% staff use (2%)
- one of many force support services
- use everyday and at weekend
- use declines slightly each year
- 'Stress' 'Depression' 'Relaxation'
- Questionnaires used most (1/4)

- positive feedback on site use
- considered good prevention and early treatment tool
- positive culture change
- force absenteeism reduced
- stress audit improvement

Occupational Health Lead Interview:

- good package
- best used as preventative tool

**'Suicidal individual, currently being supported, accessed Xanthis as a first step to reach direct help'**

# Dyfed Powys Police Force



- **User Before After Questionnaire**
- conducted on 27 call centre operators
- good user feedback

**‘Xanthis has given me confidence in what I am doing’**

**‘Xanthis has made me ask questions’**

- increases perception of **managing** emotions better (normalises)
- increases self reported **knowledge**
- increases **understanding** of own and others psychological issues
- considered **more accessible** than any other source of support
- use extended for another year

The poster features the Xanthis logo at the top left and the Dyfed-Powys Police crest at the top right. The main title is 'Operation Xanthis...'. Below it is a bulleted list of features: 'Launching in the New Year', 'Available from your intranet home page', 'In-depth Information', 'Help-yourself skills', 'Self-assessment questionnaires', 'Geared to officers and staff at all levels', and 'A new initiative for 2007'. A section titled 'So what is 'Operation Xanthis'?' explains it as a stress management programme accessible via intranet, practical, backed by health experts, confidential, and free. It also mentions that information leaflets will be going out over the next few weeks. At the bottom, there is contact information for Maria Vanderpas and a photo of a smiling woman. Logos for 'Healthy Minds at Work' and the European Union are also present.

**Operation Xanthis...**

- Launching in the New Year
- Available from your intranet home page
- In-depth Information
- Help-yourself skills
- Self-assessment questionnaires
- Geared to officers and staff at all levels
- A new initiative for 2007

**So what is 'Operation Xanthis'?**

It's a Stress Management programme that you can access through the intranet. It's practical, backed up by health experts, confidential and free.

If you wish you can follow it up through Occupational Health. Or you can get further information from outside the force. Or simply use what you learn without consulting anyone. **It's entirely up to you.**

Information leaflets will be going out over the next few weeks.

If you want advance info contact: [maria.vanderpas@dyfed-powys.pnn.police.uk](mailto:maria.vanderpas@dyfed-powys.pnn.police.uk)

Healthy Minds at Work  
Meddwl Iach yn y Gwaith  
CHALLER REWYSTRIAD

EUROPEAN UNION  
EUROPEAN UNION  
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## Lessons learnt

- **Preventative cCBT used differently in every organisation**
  - used for different purpose and in different way
- **Use peaks and then stabilises at a lower level (high risk users)**
  - how tool promoted internally was critical, especially launch
  - use might need to be made mandatory
- **Type of modules accessed and most commonly accessed varies depending on organisation**
- **Links up different support services**
  - directs some users to occupational health
  - used by some to avoid human contact\
  - used as a treatment by support services
- **Commercialisation constrained by Occupational Health resources**



## Preventative cCBT is an exciting new field....

- **Large public health potential for preventative cCBT**
  - international spontaneous web users
  - occupational health /community groups / schools
  - via primary care – use ‘therapeutic alliance’
- **cCBT used in different ways in different populations (many conditions)**
- **Technology offers a new delivery platform**
  - reach individuals at different illness stages, confidentially, accessibly
- **Challenge in commercialising and disseminating**
  - developing a sustainable funding model
  - many interventions fall down if reliant on NHS purchasing

**Overcoming cultural and commercial barriers, including developing a financial model and encouraging individuals, organisations and health systems to use it will take time and more research**





## So, what are we doing now?...

- Article submitted
- Continuing our other work with Xanthis – real world use
- Investigating different models of use
  - using Xanthis real world case studies
  - extending from occupational use
  - undertaking feasibility study, interviewing different potential users
  - developing sustainable implementation models
- Developing RCTs trials on Xanthis
  - effect on symptoms
  - proper preventative study – prevalence rates

Thanks for listening and we look forward to meeting you soon



**Amy McKeown**



[amy.mckeown@xanthis.ltd.uk](mailto:amy.mckeown@xanthis.ltd.uk)

[www.xanthis.ltd.uk](http://www.xanthis.ltd.uk)

+44 7931 385 944

**Henry Potts**



[h.potts@chime.ucl.ac.uk](mailto:h.potts@chime.ucl.ac.uk)

+44 207 288 3383





A video of this presentation is available at:

<http://guru.kuluvalley.com/KVServer/player.html?pguid=EA163244-B429-3B3E-82F9-1B1E34696DB5&vtguid=956F0704-CA5B-6E63-3144-8DBCBE0A3A1F>