# Our Communities, Our Health
# Digital tools for mental health



Guide
Tena koe, haere mai. Welcome to SPARX! I am going to be your Guide.
I'm here to show you how SPARX works and help you learn new skills.
I also hope that you'll have fun along the way.
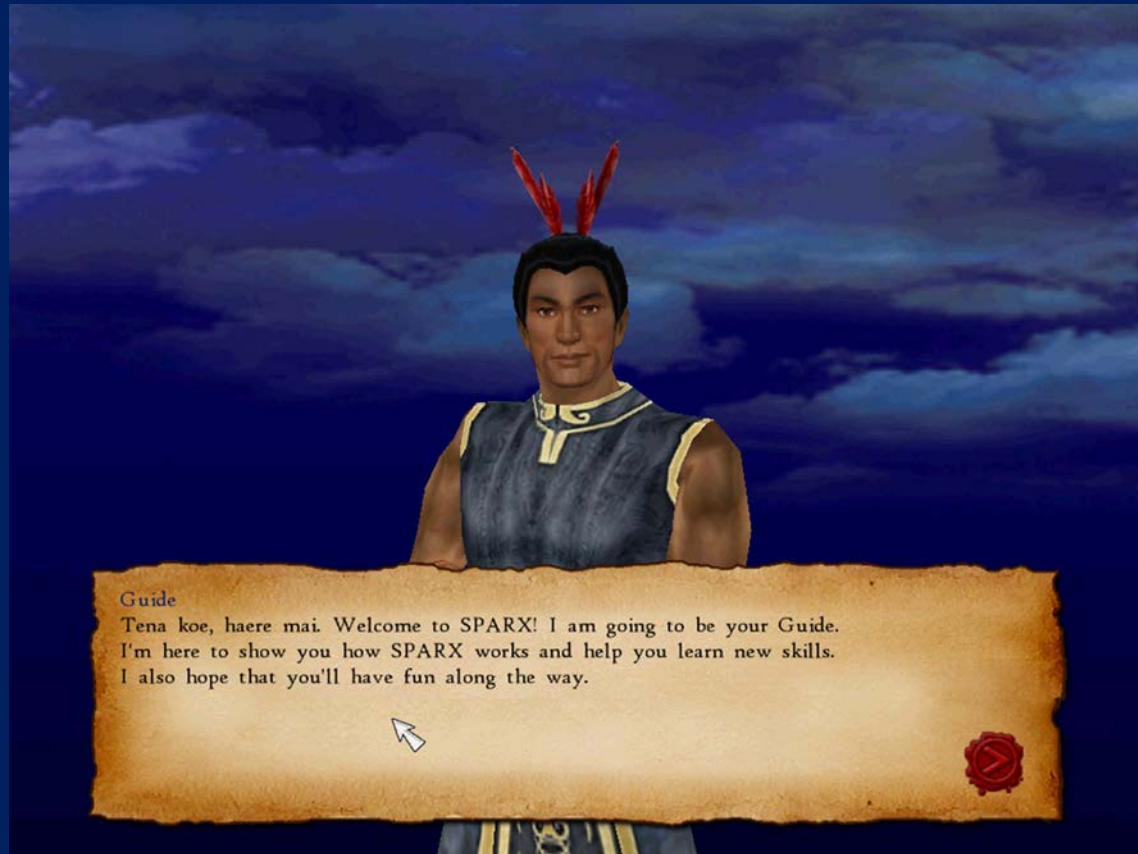
Dr Terry (Theresa Fleming)
School of Health, Victoria University of Wellington &
Dept of Psychological Medicine, University of Auckland

No coffee, No workee.

1. Digital mental health tools – varied & exploding area

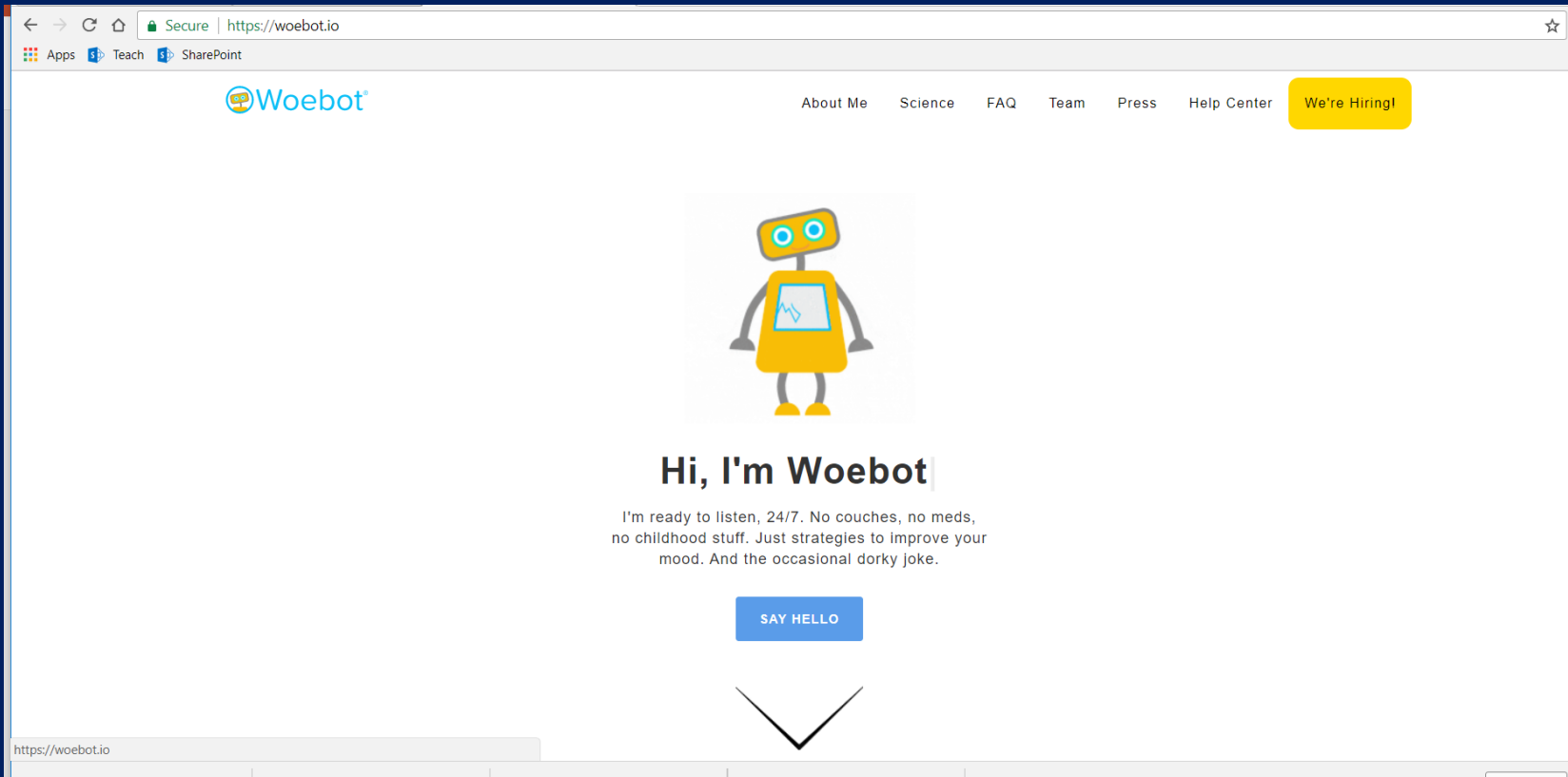2. PART of the way forward

3. If you are keen to do these…

- Try some first

- MUCH more effective to do these in a joined up way
- Smart Co-design is essential

# 1. What

- Apps, programs & websites
- Chat bots & Chat people
- VR and AR
- Repurposed games

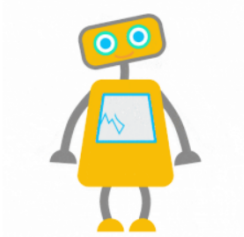For mental health & wellbeing

# Facebook's Woebot

## Woebot

12K people like this including Monique Faleafa and 26 friends

Mental Health Service

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OK

So here's how I work, I'm going to ask you about your mood and as I get to know you, I'll teach you some good stuff

Ok

I'll help you recognize patterns because.. (no offense) humans aren't that great at remembering things... 😏

Hey!

(sorry)... It's just that I

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(sorry)... It's just that I have a perfect memory 😇

so each week I'll give you insight on how your mood changes

OK

I'm gonna check in with you daily..

Daily?

Yup! It only takes 5 mins

Can you handle that?

yup

# VR for phobias...

# Tetris for Intrusive thoughts
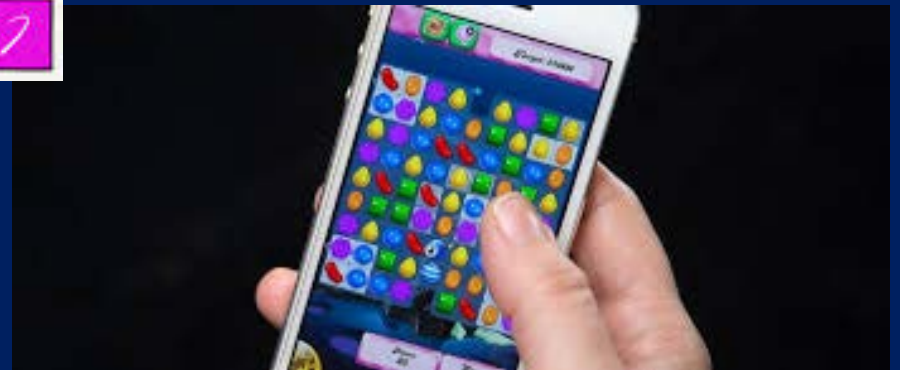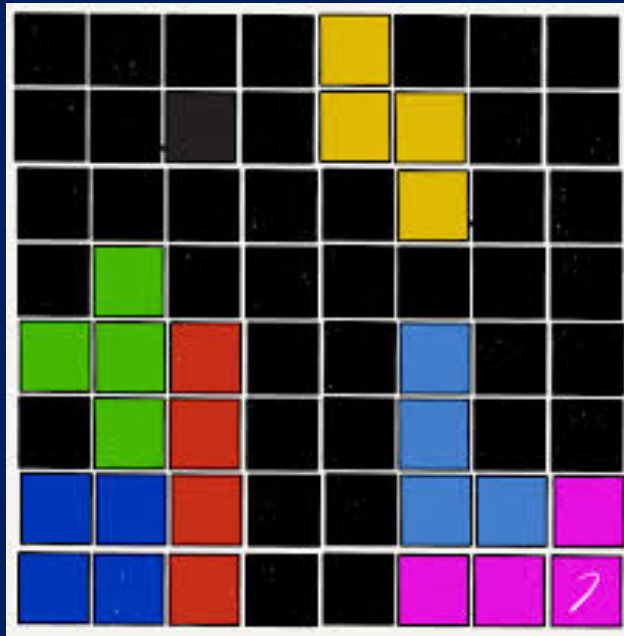
# Some of the Currently Available…

**Local**

- SPARX
- Ask Auntie Dee
- The Journal
- The Lowdown & Depression.org
- Beating the Blues
- Brave Online (CDHB)
- Big White Wall (ADHB)
  - & in development

**International**

- SuperBetter *
- Happify*
- Calm*
- Headspace*

- https://ecouch.anu.edu.au
- MoodGYM (AUD39)
- Biteback
- * Frenium

# Headspace 15 million users



## Happify
## 40 000 new users per month
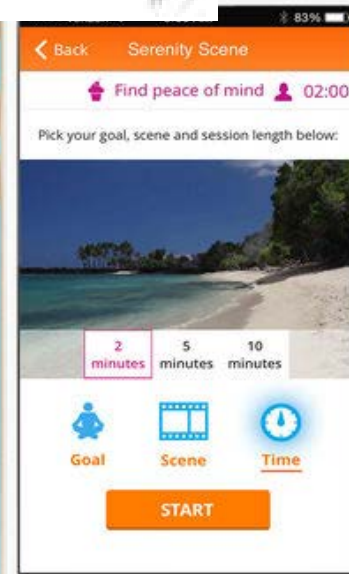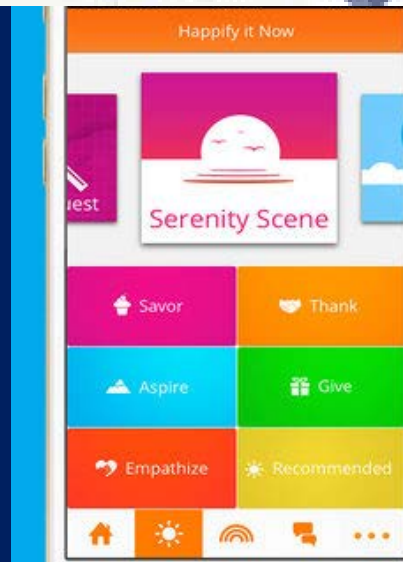
BITE BACK

Home | Things to do | Mental Fitness | Bookshelf | Blogs | Competition

LOGIN  SIGN UP    Emergency Help

Build stronger connections with people?

Amplify - "Good Times"
it really help me realise how good things dont seem so good when you have all...
Trundle Girl - 7 March

licious"
me appreciate food
Girl - 7 March

how I felt
I was stressed so with it.
Jack - 6

Thank Tank
Life's little chunks of awesome

Snap That!
Check out this week's theme: Gates

Follow us

Do our free challenges!
Reduce stress. Improve Focus. Expand Potential.
Join a new group each month and conquer our 6 Week Challenge to BITE BACK together.

SIGN UP

What's your personality?
Find out with our quiz.

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the MoodGYM
TRAINING PROGRAM / Mark III

BACK  NEXT

FEELINGS
THOUGHTS
UNWARPING
DE-STRESSING

PROGRESS

EXERCISE: "Activity Scheduling"

This EXERCISE provides a form set out to do that for you.
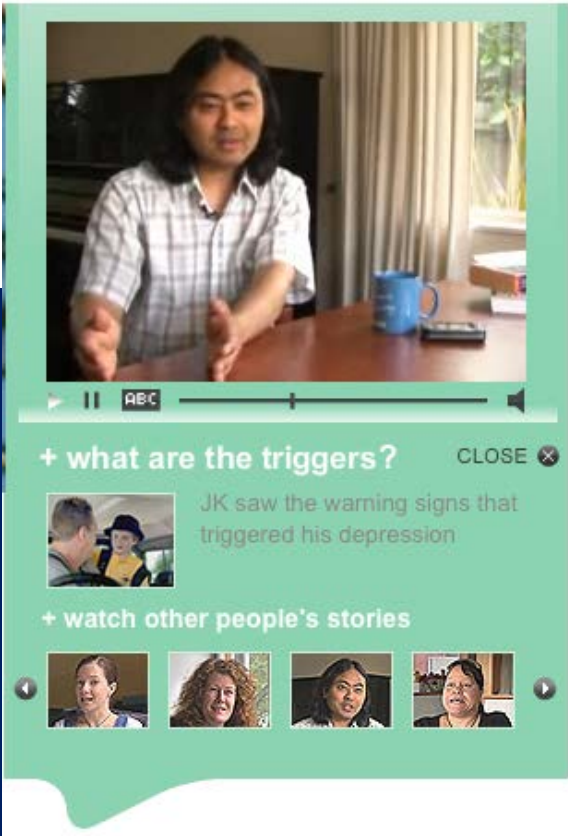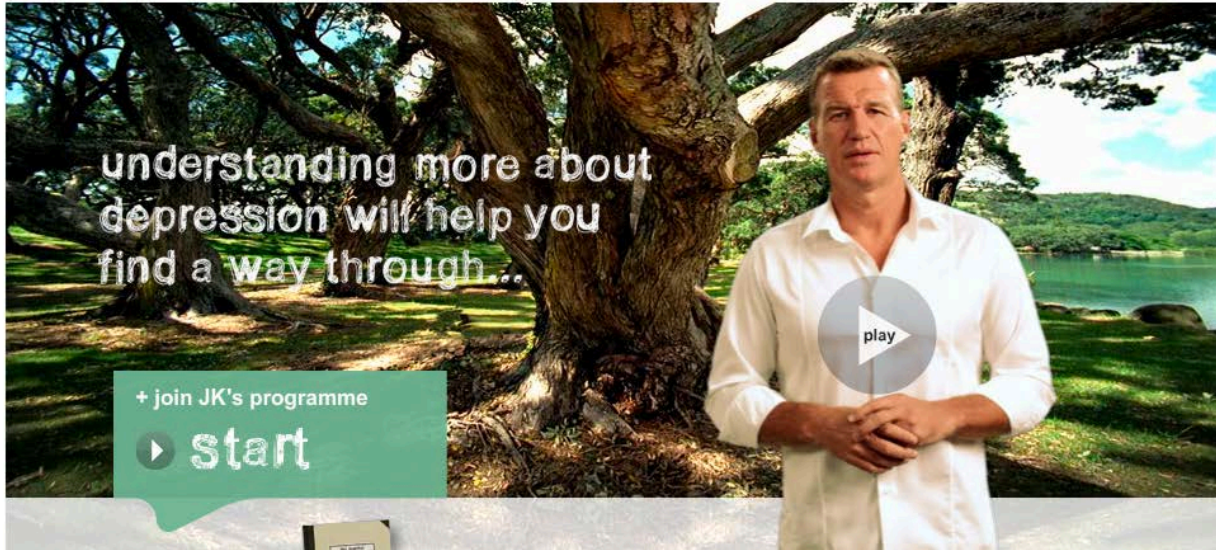But to give you an example, let's see what JANE has organised for herself.

JANE'S Activity Plan

"Hi, Well I did that Pleasant Events Schedule (and it took me quite a while I might say) and found that the following activities were fun for me: Being with children, rearranging my room, going on picnics and walks, and buying something for my self.

So... Well obviously I can't go picnicking everyday since I have to work, I've tried to schedule some of these activities into my daily roster. Also some of them are genuine one-offs, there is no point rearranging my room everyday...

I've booked these activities into my daily schedule, but I'm planning to rearrange my weekend to change my room. I'm also thinking about a part-time job working with kids."

| Friday 27 July | | |
| --- | --- | --- |
| HOUR | ACTIVITY | PLEASANT RATING (0-2) |
| 7-8 | Breakfast followed by 20 minute walk. | 2 – I'm glad I'm doing this. |

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E COUCH

Logged in User: Testyexamjoking (Logout) | Update Account Details | Print View

MY PROGRAM

Quizzes

My circumstances
My mood
Feedback
Social anxiety
More feedback
Choose my program

Still to come...

e-couch Armchairs
e-couch Toolkits
My Workbook

Emergency help

Some questions about you

To help you map your progress through e-couch and get a better understanding of your mood and emotional state, we're going to start with some quizzes.

Your answers to the questions in this section will help make your e-couch program as helpful and relevant as possible for the challenges that you may be facing in your life. You'll also receive feedback about how you are doing.

Let's start with some questions about your life circumstances:

| | Yes | No |
| --- | --- | --- |
| Are you married or in a defacto relationship? | | |
| Are you currently undergoing a divorce or separation? | | |
| Have you recently experienced the loss of someone or something very important to you? | | |

The next questions are about whether you experience anxiety and/or panic.

| | Yes | No |
| --- | --- | --- |
| In the last 4 weeks, have you had an anxiety attack - suddenly feeling fear or panic? | | |
| If yes, do these attacks bother you a lot or are you worried about having another attack? | | |
| Do you fear any of the following so much that you avoid them: eating or drinking with other people, being watched or stared at, talking to people in authority, being criticised, speaking or acting to an audience? | | |
| Are you frightened by spiders, snakes or other animals so much so that it interferes with your ability to function or cope? | | |

www.depression.org.nz

# Thelowdown.co.nz

# Beating the Blues
## beatingtheblues.co.nz

# 2. Why?

# The rationale and the evidence

Mental health problems are common

Most people do not get help

There are interventions which can make a difference

Some people are less keen on talking about feelings…

They can do new things.

# Fig 2. Forest Plot.



| Group by target condition | Study name | Statistics for each study | | | | Hedges´g and 95% CI |
|---|---|---|---|---|---|---|
| | | Hedges´ g | lower limit | upper limit | p-value | |
| Anx | Keller 2009 | 0.59 | -0.07 | 1.25 | 0.08 | |
| Anx | Khanna 2010 | 0.68 | -0.01 | 1.37 | 0.05 | |
| Anx | March 2009 | 0.47 | -0.04 | 0.98 | 0.07 | |
| Anx | Spence 2011 | 0.42 | -0.07 | 0.90 | 0.09 | |
| Anx | Storch 2011 | 0.96 | 0.23 | 1.69 | 0.01 | |
| Anx | Tillfors 2011 | 1.41 | 0.44 | 2.39 | 0.00 | |
| Anx | Wuthrich 2012 | 1.05 | 0.41 | 1.68 | 0.00 | |
| **Anx** | **Anx overall** | **0.68** | **0.45** | **0.92** | **0.00** | |
| Dep | Fleming 2012 | 1.16 | 0.37 | 1.95 | 0.00 | |
| Dep | Makarushka 2012 | 0.37 | 0.06 | 0.68 | 0.02 | |
| Dep | Stasiak 2012 | 1.07 | 0.36 | 1.78 | 0.00 | |
| Dep | Van der Zanden 2012 | 0.84 | 0.58 | 1.10 | 0.00 | |
| **Dep** | **Depr overall** | **0.76** | **0.41** | **1.12** | **0.00** | |
| Trans | Sethi 2010 | 1.30 | 0.28 | 2.32 | 0.01 | |
| Trans | Stallard 2011 | 0.61 | -0.39 | 1.60 | 0.23 | |
| **Trans** | **Trans overall** | **0.94** | **0.23** | **1.66** | **0.01** | |
| **Overall** | | **0.72** | **0.54** | **0.91** | **0.00** | |

Favours control — Favours eCBT

Ebert DD, Zarski AC, Christensen H, Stikkelbroek Y, Cuijpers P, et al. (2015) Internet and Computer-Based Cognitive Behavioral Therapy for Anxiety and Depression in Youth: A Meta-Analysis of Randomized Controlled Outcome Trials. PLoS ONE 10(3): e0119895. doi:10.1371/journal.pone.0119895
http://127.0.0.1:8081/plosone/article?id=info:doi/10.1371/journal.pone.0119895

Guide
SPARX has 7 levels and each takes about half an hour.
When you start a new level you'll meet me; we'll check out how you are going and I'll let you into the 'game world' where you'll be faced with different quests and puzzles.
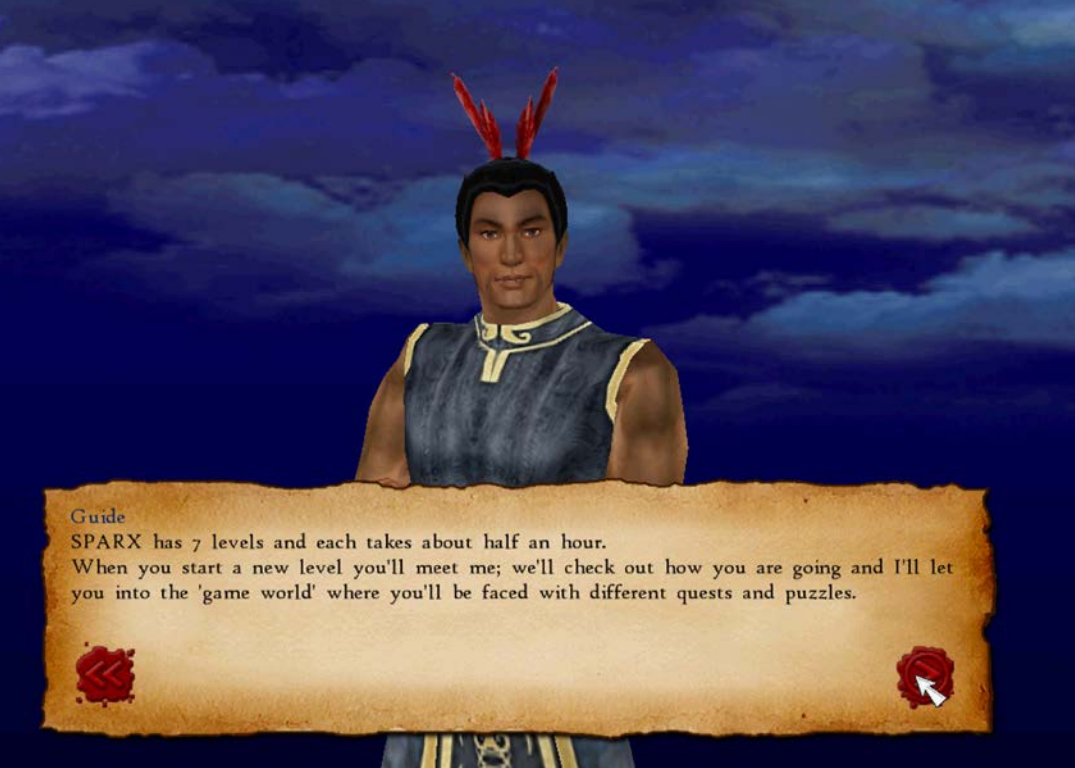
SPARX.org.nz

Bicentric frame of reference

Story telling

Play based learning

Social Learning

Downer

Mind Reader

Perfection

# Designing and testing





- Workshops, Focus Groups and interviews with
    - Young People
    - Cultural Advisors
    - Whanau
    - Service providers, CBT content experts & Learning technologists
    - Game designers
    - Researchers

- RCT in schools and PHC
- Smaller trials
- User feedback

# SPARX: national RCT



Merry et al, BMJ, 2012

Interviewer rated depression - CDRS-R
Intention to treat analysis

Merry et al, BMJ, 2012

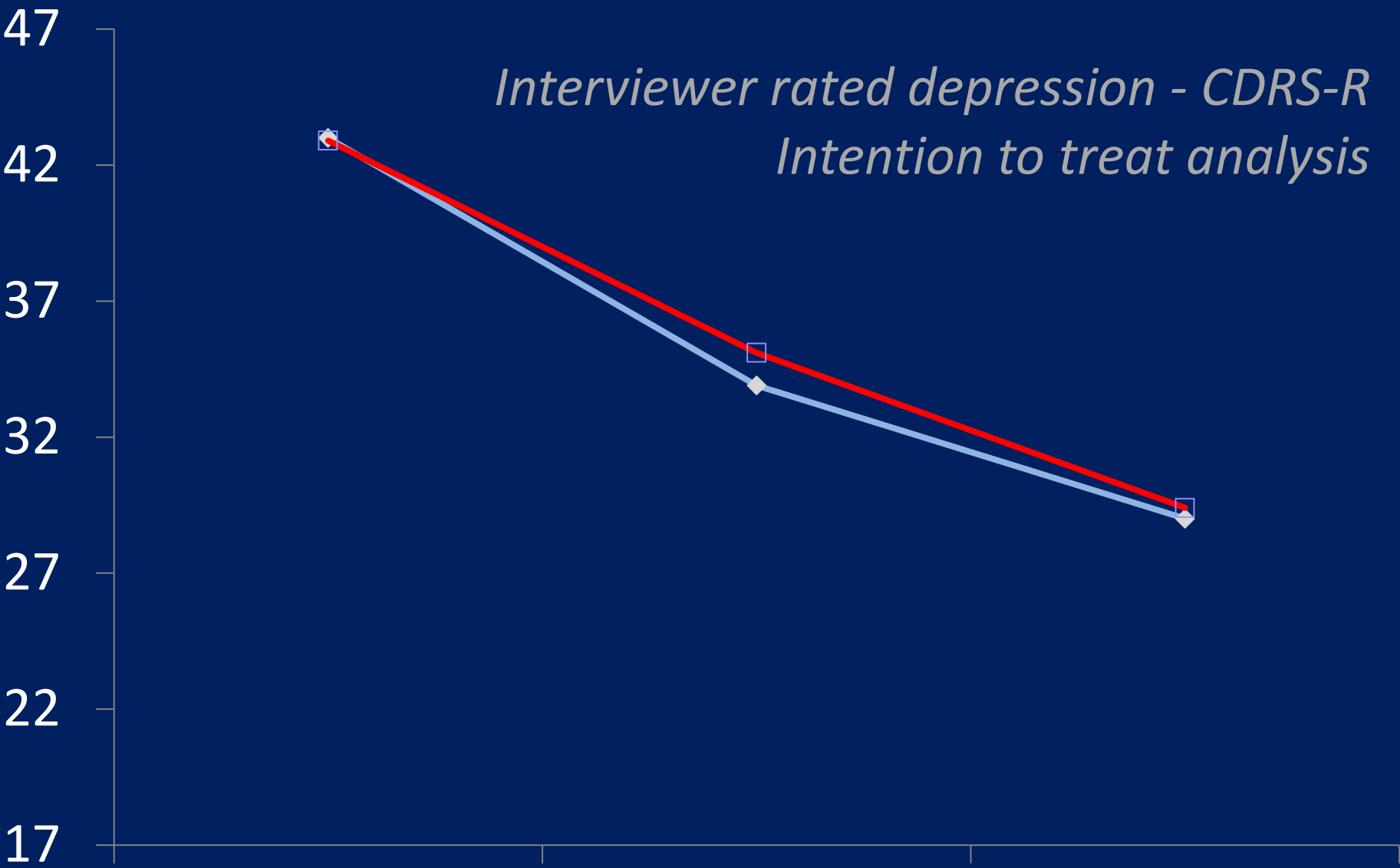- I didn't think I would enjoy it but actually I did… the guide said was really useful.

- The Bird of Hope is encouraging, it's like having someone next to you, by your side, it will be in my memory.

- It changed how frustrated I was, so I could understand what was going on. I was understanding what it was saying to me and I was solving problems.

- It has changed me, I don't hate now.

- Oh yeah, I used to get some of those Gnats – but now I am all positive. I am thinking positive, thinking of all the good stuff that has happened.

- You should give it to people in prison, they'll stop killing each other

- Now I am not fighting with my bro and I'm not getting into other fights. Using the skills to not always get what you want but to get somewhere in life . I don't feel like hitting him. I leant not to use fighting to get what you want.
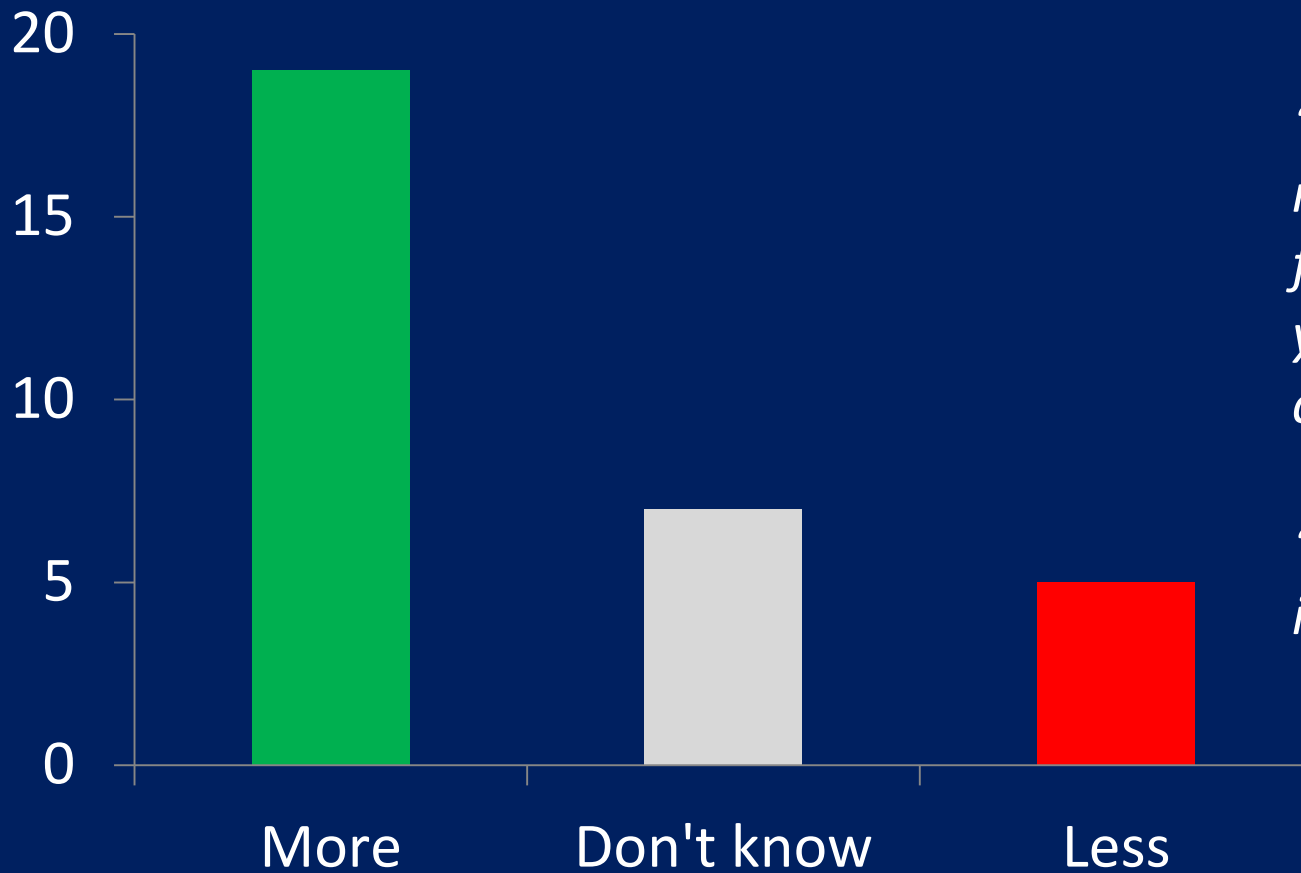
# Provider interviews
## 40 Youth workers; trainees; trainers; managers; tutors



'It's the bazooka!'

'It's transformative'

'Could be a great tool for youth workers'

'What is to be gained by putting them in front of a computer?'

'What about the human contact?'

Fleming & Merry, 2012

# 3. Downsides

- Not everyone wants them

- Can't do some stuff

- Retention often low

  - Pure self help: wide reach but low retention
  - Supported: higher retention, lower reach

- People often don't do full costings

- Possible to do harm

# Helping? Harming?
## Inner Vision



Just like that. A person's identity, memories, personality, gone forever.

# So...

PART of the solution, also need:

People  - love and belonging

Participation -  meaningful things to do & to look forward to

Resources & protection

Options for help when we need it

# 4. If you are keen…

- Try lots out
- Consider utilising/ adapting
    - Ask for implementation data
    - Local consults & decision making
- Budget for safe hosting, updates & comms
- Expect implementation challenges
- Include human support & connect to other options
- Look for collaborations (IRSII Ak 2019; youth focused network terry.fleming@vuw.ac.nz)

# Smart Co-design



*Preferences vary*
*Needs in a crisis can differ from outside the crisis*
Avoid 'one app to rule them all'
Consider: exactly the right users, audience segmentation, fresh eyes, timeliness

1. Digital mental health tools – varied & exploding area

2. PART of the way forward

3. If you are keen to do these…
- Try some
- Collaborate
- Smart Co-design