



SPARX Fact sheet

What is SPARX?

- SPARX has been selected as an online e-therapy tool to be rolled out through Initiative 4 of the Prime Minister's Youth Mental Health Project
- SPARX is designed for all young people aged 12-19 who are feeling down, depressed, worried or stressed.
- SPARX is a free E-therapy programme for young people in New Zealand which teaches cognitive behaviour therapy skills to help prevent depression and anxiety
- SPARX is designed as a stand-alone self-help intervention which is delivered online
- The SPARX website includes the SPARX program and:
 - Background information for young people, their families/whanau and professionals who work with adolescents
 - The 'Mood Quiz' – a depression screening tool
 - Information on where to get more help (including support provided by Lifeline and Youthline)
- Evidence shows SPARX is an effective resource for adolescents with symptoms of depression and anxiety
- SPARX does not replace therapy, counselling or medication if they are preferred treatment options
- SPARX can be used alongside other interventions for depression and anxiety.

What is e-therapy?

- E-therapy covers a broad range of psychological and behavioural therapies delivered with the assistance of digital technology
- It is used mostly for the mild to moderate spectrum of mental health problems
- Recommended as part of a 'stepped care' (progressive) approach for the treatment of depression and anxiety in adults
- E-therapies can be used as a pure self-help, with support from a professional or alongside face-to-face therapy/counselling

Who is SPARX for?

- SPARX is for young people:
 - aged 12-19
 - experiencing mild to moderate depression (feeling down, stressed, low mood)
- SPARX is not designed for young people who:
 - Experience severe depression
 - At high risk of self-harm or suicide

How does SPARX work?

- SPARX was designed to help address a gap in treatment options for young people - up to 75% of young people who have symptoms of depression do not get professional help.
- It is a free self-help online programme that can be accessed 24/7 It uses proven cognitive behavioural therapy (CBT) techniques to deal with symptoms of depression
- It uses a youth-friendly format
- SPARX includes core cognitive behavioural therapy strategies for depression
 - Depression and anxiety often occur together
 - Research shows SPARX works for both



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What skills does SPARX cover?

- SPARX uses evidence-based cognitive behavioural therapy (CBT) skills that focus on:
 - Scheduling activities
 - Problem solving
 - Learning to recognise automatic thoughts
 - Stopping negative/unhelpful thoughts
 - Changing unhelpful thoughts into helpful ones
 - Relaxation and self-calming techniques
 - Interpersonal and communication skills
- Cognitive behavioural therapy (CBT) is a treatment based on the premise that thoughts and behaviours influence feelings
- These skills target symptoms of depression but can also help dealing with anxiety

Scientific evaluation of SPARX

SPARX was tested in a large randomised controlled trial by the University of Auckland between 2009 and 2010. Results from the study were published in the [British Medical Journal in 2012](#). In addition, three doctoral projects evaluated SPARX with specific groups of young people.

The randomised controlled trial of SPARX was conducted with 187 young people to determine if it was effective in treating the symptoms of depression.

SPARX was compared with standard care provided to young people with mild to moderate depression. The standard care in the trial consisted predominantly of face-to-face therapy comprising on average at least four counselling sessions, with each session lasting on average between 30 and 60 minutes.

Young people were interviewed and asked to complete questionnaires to measure depression, anxiety and their quality of life. Information was collected before and after SPARX or standard care and again three months later.

The study found that:

- SPARX was as effective as standard care for youths 12 to 19 years old seeking help for depression;
- SPARX reduced depression, anxiety, feelings of hopelessness and improved quality of life;
- These changes lasted for at least three months;
- SPARX worked better for those with more depression (but still within the mild to moderate range);
- SPARX worked equally well across different ethnic groups in New Zealand;
- SPARX worked equally well for girls and boys, and older and younger youths;
- SPARX worked equally well across the age group of 12 to 19 years;
- SPARX appeared to work better when users completed at least half of the modules (i.e. at least four levels)
- Most young people completed at least half of SPARX and this compared very well with other similar programs; and
- Most participants found SPARX useful, believed it would appeal to other teenagers and would recommend it to their friends.

Background to SPARX

SPARX was created by a team of researchers and clinicians from the University of Auckland.



The research team was led by Associate Professor Sally Merry, a Child and Adolescent Psychiatrist, Head of Department of Psychological Medicine and Director of The Werry Centre for Child and Adolescent Mental Health.

The team also included Drs Karolina Stasiak, Theresa (Terry) Fleming and Mathijs Lucassen from the Department of Psychological Medicine at the University of Auckland and Dr Matt Shepherd of the School of Counselling, Human Services and Social Work at the University of Auckland.

Dr Stasiak coordinated the main study of SPARX, while Drs Fleming, Shepherd and Lucassen also carried out doctoral studies of SPARX.

What groups have been involved in SPARX development?

- SPARX was developed in partnership with Maori researchers, clinicians and software developers
- Research on SPARX acceptability and effectiveness for Maori has been published in a doctoral thesis by Dr Matt Shepherd
- Pacific and Asian advisors had input throughout the development and testing; and our trials included substantial numbers of all major ethnic groups in New Zealand

Timeline

2014 – SPARX selected by the New Zealand Ministry of Health as an online e-therapy tool as part of the Prime Minister's Youth Mental Health Project.

2013 – SPARX won an international digital award from Netexplo, a 'global observatory on digital society', hosted by UNESCO [<http://en.www.netexplo.org/laureat/sparx>]

2012 – Results from large randomised controlled trial led by the University of Auckland on the effectiveness of SPARX in treating the symptoms of depression published in the British Medical Journal [<http://www.bmj.com/content/344/bmj.e2598>]

2011 – SPARX wins a World Summit Award in the category of e-Health and Environment. The World Summit Awards honour excellence in multimedia and e-Content creation. The World Summit Awards are under the auspices of United Nations. [<http://www.wsis-award.org/winner/sparx-76920110609>]

2009 - 2010 – A randomised controlled trial of SPARX conducted by the University of Auckland with 187 young people to determine if it was effective in treating the symptoms of depression.



SPARX - a briefing paper

- SPARX is a self-help computer-based E-therapy programme, developed for young people who may be experiencing mild-moderate depression or anxiety. The programme is designed as a game and uses Cognitive Behavioural Therapy (CBT) to teach users five behaviours known to be especially important in protecting against depression – problem solving, being active, positive cognition, social skills, and relaxation.
- SPARX talks to adolescents in a language and genre they understand, and which can be undertaken in the individual's own time and place. Trials have shown the programme is at least as effective for NZ youth 12 – 19 years old seeking help for depression as are 'standard' treatments (face-to-face counselling, medication) but also, importantly, that SPARX worked equally well across ethnic groups, genders and targeted age groups.
- The benefits of SPARX, at this time, are primarily social. However the University of Auckland's commercialisation company Auckland UniServices is exploring global commercialisation opportunities. This highlights the research pathways to innovative products with worldwide commercial applications.

Background – Why create SPARX?

- Depression is a particularly disabling disorder and seriously costly to society all over the world. It is the major underlying risk for attempted and completed suicide, is a relapsing disorder and it is common in young people with an estimated one-in-five 18-year-olds having suffered an episode of clinical depression.
- Three quarters of teenage sufferers will not see a mental health professional and so will not receive treatment. Generally treatment comprises psychological assistance (with evidence specifically for cognitive behavioural therapy and interpersonal therapy) and antidepressant medications, usually SSRIs (selective serotonin reuptake inhibitors). The use of antidepressant medications for adolescents is contentious with concerns as to their efficacy and potential increase in the risk of suicide.
- The growing need for a simple and effective therapy that can be delivered easily and cheaply to large groups of young people has resulted in SPARX.

SPARX the game:

- SPARX is set in a fantasy world, an increasingly familiar genre for youth, where the user chooses an avatar whose mission is to save the world from gloom and negativity. Through a series of quests, the user develops skills that help her/him accomplish the game's goal. (e.g. dealing with negative thoughts, problem-solving, activity scheduling, relaxation, etc.). The same skills can also be used to help the young person better manage their mood and stresses in real life.
- SPARX is designed as a stand-alone self-help intervention which can be delivered and supported online with a website that provides background information for young people, their families/whanau and professionals who work with adolescents, the 'Mood Quiz' – a depression screening tool plus information on where to get more help (including support provided by Lifeline and Youthline).



- The therapy was largely developed by a team of researchers and clinicians at the University of Auckland in conjunction with game developers Metia Interactive. The project was funded by the Ministry of Health (<\$2m).
- SPARX was developed in partnership with Maori researchers, clinicians and software developers; Pacific and Asian advisors had input throughout the development and testing; trials included substantial numbers of all major ethnic groups in New Zealand.

Evaluating SPARX

- SPARX was tested in a large randomised controlled trial by the University of Auckland between 2009 and 2010. SPARX was compared with standard care provided to young people with mild to moderate depression and found to be as effective as at least four counselling sessions, with each session lasting on average 30 - 60 minutes. Remission rates were higher for the group treated via SPARX.
- Results from the study were published in the 19 April 2012 edition of the influential British Medical Journal. Further, three doctoral projects evaluated SPARX with specific groups of young people.
- In 2013 SPARX received international recognition for its innovation and effectiveness at the Unesco Awards for eContent and Creativity.

Supporting SPARX

- Youthline and Lifeline can provide clinical back up support to SPARX users who request it. There is a dedicated line (0508 4 SPARX) that is staffed by professional counsellors 12 hours a day 7 days a week. On screen messaging can also remind users that the emergency 111 number can be used.
- SPARX is strongly backed by theory and increasingly by evidence of its efficacy.

Rolling out SPARX to our community

- SPARX has been selected as an online e-therapy tool to be rolled out through Initiative 4 of the Prime Minister's Youth Mental Health Project.
- Access to SPARX is through a dedicated website (www.sparx.org.nz), which also includes:
 - Background information for young people, their families/whanau and professionals who work with adolescents
 - The 'Mood Quiz' – a depression screening tool
 - Information on where to get help (including Lifeline and Youthline)
- SPARX will be promoted within the health sector and schools. In addition, information about the SPARX game/programme will be provided to concerned parents, families and whanau.

Commercial opportunities

- The SPARX programme has entered into a partnership with US-based e-therapy company Linked Wellness which plans to further refine the operating platforms SPARX uses, making the therapy available to users on smartphones, tablets and other such channels. The agreement provides the SPARX programme a royalty free, perpetual right to use any and all improvements and developments to the programme(s) within NZ and Australia.