Title of the manuscript:

The views of lesbian, gay and bisexual youth regarding computerised self-help for depression: An exploratory study

Authors:

Mathijs F.G. Lucassen (correspondence), Werry Centre for Child and Adolescent Mental Health, Department of Psychological Medicine, School of Medicine, Faculty of Medical and Health Sciences, The University of Auckland, Private Bag 92019, Auckland 1142, New Zealand. Telephone: +64 9 373 7599 ext. 82015 email: m.lucassen@auckland.ac.nz

Simon Hatcher, Department of Psychiatry, Faculty of Medicine, University of Ottawa, 1145 Carling Avenue, Ottawa, ON K1Z 7K4, Canada. Telephone c/- +1 613 722 6521 ext. 6811 email c/- s.hatcher@auckland.ac.nz

Karolina Stasiak, Werry Centre for Child and Adolescent Mental Health, Department of Psychological Medicine, School of Medicine, Faculty of Medical and Health Sciences, The University of Auckland, Private Bag 92019, Auckland 1142, New Zealand. Telephone: +64 9 373 7599 ext. 83890 email: k.stasiak@auckland.ac.nz

Theresa Fleming, Werry Centre for Child and Adolescent Mental Health, Department of Psychological Medicine & Department of Paediatrics: Child and Youth Health, School of Medicine, Faculty of Medical and Health Sciences, The University of Auckland, Private Bag 92019, Auckland 1142, New Zealand. Telephone: +64 9 373 7599 ext. 83890 email: t.fleming@auckland.ac.nz

Matthew Shepherd, School of Counselling, Human Services and Social Work, Faculty of Education, The University of Auckland, Private Bag 92019, Auckland 1142, New Zealand. Telephone: +64 9 373 7599 ext. 46368 email: m.shepherd@auckland.ac.nz

Sally N. Merry, Werry Centre for Child and Adolescent Mental Health, Department of Psychological Medicine, School of Medicine, Faculty of Medical and Health Sciences, The University of Auckland, Private Bag 92019, Auckland 1142, New Zealand. Telephone: +64 9 373 7599 ext. 86981 email: s.merry@auckland.ac.nz

Abstract:

Background: Lesbian, gay or bisexual (LGB) youth with depression are often isolated and face the double stigma of mental ill-health and being non-heterosexual. Computerised Cognitive Behavioural Therapy (cCBT) offers a means of providing these youth with evidence-based self-help that is confidential and can be accessed privately. We created a cCBT resource for youth generally and wished to explore what alterations, if any, might be needed to make it acceptable and relevant to LGB youth.

Method: Three focus groups were conducted with LGB young people (56% female, aged 16-27 years) from two LGB youth organisations in New Zealand. We used the general inductive approach to: explore the issues faced by LGB youth; and, their views about prototypes of a cCBT program (SPARX).

Results: Participants reported a number of challenges from living in a homophobic and gender-stereotyped world and they recommended that these be incorporated in a cCBT program addressing depression for LGB youth. Participants were mainly positive about the idea of cCBT and the prototypes of the program; however, they made suggestions to ensure that the program was relevant and appealing to them.

Conclusion: Prototypes of a 'generic' cCBT program did not address all the issues that LGB youth face. It proved feasible to adapt a cCBT program to take this feedback into account, and this led to the creation of Rainbow SPARX. The makers of e-therapy interventions should actively involve and respond to the views of consumers.

Key words:

Lesbian; Gay; Bisexual; Cognitive Behavioural Therapy.

Introduction

Why is addressing depression in adolescents important?

Depression is a serious problem in adolescents (Watanabe, Hunot, Omori, Churchill, & Furukawa, 2007) affecting over a quarter of young people by the time they reach adulthood (Lewinsohn, Rohde, & Seeley, 1998). It is often characterised by protracted episodes, frequent recurrence, impairment in social and academic domains and it is a major cause of disability (Fergusson, Boden, & Horwood, 2007). Depression is also a major risk factor for suicide (Fergusson et al., 2007).

Most depressive disorders in the general adolescent population remain untreated (Mariu, Merry, Robinson, & Watson, 2012), with more than three-quarters of affected adolescents never receiving any form of treatment (Fergusson & Horwood, 2001). Many of today's young people prefer self-help, Internet-based information or support via people they know rather than seeking professional healthcare (Farrand, Perry, Lee, & Parker, 2006). Therefore finding ways to deliver acceptable treatments remains a considerable challenge.

Depression and suicide in lesbian, gay and bisexual youth, is it a problem?

Two nationally representative surveys in New Zealand found that 4% of high school students were attracted to the same sex or both sexes (Le Brun, Robinson, Warren, & Watson, 2004; Rossen, Lucassen, Denny, & Robinson, 2009). Approximately 30% of these youth reported current significant depressive symptoms (in both the 2001 and 2007 cohorts), in comparison with approximately 10% of exclusively opposite-sex attracted youth (Lucassen et al., 2011; Rossen et al., 2009). Same/both-sex attracted students also had consistently higher prevalence estimates for serious thoughts about suicide and suicide attempts (Lucassen et al., 2011). Other

population-based surveys have also confirmed that lesbian, gay and bisexual (LGB) or same/both-sex attracted youth are at an increased risk of depression and suicide (Fergusson, Horwood, & Beautrais, 1999; Hatzenbuehler, McLaughlin, & Nolen-Hoeksema, 2008). Moreover, young people who were not exclusively opposite-sex attracted have reported more difficulties getting help for emotional worries (Lucassen et al., 2011).

Why do LGB youth experience increased rates of depression?

Given society's continuing negative perceptions of homosexuality, it is not surprising that many LGB youth experience homophobia (Hatzenbuehler et al., 2008). Homophobia includes a negative attitude, an affective reaction or ill will towards those that identify as non-heterosexual (Parrott, Adams, & Zeichner, 2002). Homophobia is frequently internalised by LGB youth (Safren, Hollander, Hart, & Heimberg, 2001), so that anti-homosexual messages result in self-loathing. Internalised homophobia is particularly insidious because, to a large degree, it is not conscious and is "continuously reinforced by societal laws, social policies, religious beliefs, and negative media imagery" (Radkowsky & Siegel, 1997, p. 199). As a result, internalised homophobia plays a major role in the development of LGB adolescents (Radkowsky & Siegel, 1997). Incorporating a positive sense of self is obviously compromised when anything other than a heterosexual orientation is stigmatised (Consolacion, Russell, & Sue, 2004). It is therefore plausible to assume that there is a connection between internalised homophobia and negative cognitions, which in turn result in depressive symptoms and mental ill-health.

Is Cognitive Behavioural Therapy the solution?

Cognitive Behavioural Therapy (CBT) is an effective and recommended treatment for adolescent depression (National Institute for Health and Clinical Excellence, 2005). The general principles of CBT are the same for everyone, including LGB youth, however working with unique populations requires some adaptation (Safren et al., 2001). For example, from a cognitive perspective, LGB youth are frequently exposed to negative attitudes about same-sex sexual attraction and this often leads to the development of negative core beliefs about the self which are theoretically linked to the development of psychological dysfunction (Safren et al., 2001).

Many clinicians do not have sufficient knowledge and training to work with LGB populations (Safren et al., 2001). Furthermore, LGB youth may be reluctant to ask for help from clinicians who might be seen as unsupportive of them. Unsurprisingly, there is a shortage of clinicians skilled at working with LGB youth (Safren et al., 2001). The challenge then is finding ways of overcoming the barriers in order to deliver effective help to this unique population. The growing acceptance of e-therapies may provide a solution.

Computerised CBT (cCBT) offers an opportunity to increase access to treatment for LGB youth. It is less dependent on human resourcing, could be made freely available, can be completed in privacy and can be made accessible to isolated individuals using the Internet or smartphones. Until now, the majority of available cCBT interventions have been created and studied in relation to adult populations (Richardson, Stallard, & Velleman, 2010) and we have not found any cCBT programs that address the unique challenges experienced by LGB youth or adults.

What is SPARX?

We created and evaluated an adolescent appropriate cCBT program called SPARX for young people aged 12 to 19 years old with depressive symptoms (a trailer is available at www.sparx.org.nz). SPARX is an e-therapy program where users learn mood management skills (Merry et al., 2011). SPARX uses a fantasy game platform (where a user needs to rid a world of gloom and negativity) to engage users. Each of the seven modules of SPARX has a direct teaching component where skills from the fantasy world are applied to a real life context (Merry et al., 2011). Content from earlier modules are built upon in subsequent levels and all modules use core CBT skills and homework tasks to allow practice and facilitate generalisation (Merry et al., 2011).

During the development of SPARX we worked collaboratively with young people to ensure that the program was acceptable to adolescents (i.e. the proposed consumers). This was done because consumers should be routinely involved in the planning and development of mental health interventions (Anthony & Crawford, 2000; Crawford et al., 2002), however this consumer participation is often lacking (Anthony & Crawford, 2000; Garland, Haine, & Lewczyk Boxmeyer, 2007; Hutton, 2005).

We have previously reported on evaluations of SPARX in two randomised controlled trials (Fleming, Dixon, Frampton, & Merry, 2012; Merry et al., 2012). We have shown that SPARX was an acceptable and efficacious cCBT program for young people who are presumably mostly heterosexual (Fleming et al., 2012; Merry et al., 2012).

In an associated project we carried out a qualitative study with LGB youth to assess whether and how a cCBT program like SPARX could be used (or modified) to meet the needs of LGB

young people with depression. The consultation process with LGB participants ultimately resulted in the creation of a customised version of SPARX for LGB youth, called Rainbow SPARX (or SPARX: The Rainbow Version).

Research aims

The study was designed to:

1. Explore the challenges LGB youth face;
2. Determine whether the identified challenges LGB youth face could and should be addressed in SPARX (and if so, investigate how a cCBT program could be successfully adapted for LGB youth); and,
3. Assist in the pre-testing of the design, characters and scenarios of prototypes of a cCBT program (SPARX).

Method

We have used the consolidated criteria for reporting qualitative research (COREQ; Tong, Sainsbury, & Craig, 2007) to guide reporting so that the reader is able to consider the credibility of methods adopted and the trustworthiness of interpretations.

Ethics

Approval for this study was granted by the University of Auckland Human Participants Ethics Committee.

Recruitment of focus group participants

Recruitment of LGB youth in research is fraught with challenges and ethical dilemmas. For instance, most same/both-sex attracted secondary school students in New Zealand have not come out (Lucassen et al., 2011) and because participants under the age of 16 years old needed parental consent to participate in this research, this could have potentially 'outed' them as a consequence. Therefore, we sought only participants over the age of 16 in this study. Initially young people (aged 16 to 21 years old) from two Auckland-based LGB organisations (one being for those 13 to 28 years old and the other being a social group for University students) were invited to participate in focus groups to inform the development of SPARX. However, there was a great deal of interest from certain LGB young adults from these organisations so the age range was extended to 28 (i.e. the upper age limit of one the LGB youth organisations) to allow their inclusion.

Potential participants heard about the study when ML promoted the research (in person) at the various groups provided by the LGB organisations. Of note, ML was known to several of the participants; because he had previously provided assistance to both organisations (e.g. he was supervising the Education Officer at one LGB organisation at the time of this study).

Timing and duration of focus groups

The focus groups occurred at three critical time points in the development of SPARX when the successive working prototypes of SPARX were available. The groups lasted from one hour and fourteen minutes to one hour and twenty-eight minutes.

Focus group procedures

We designed the focus groups to cover two broad topics:

1. What are the challenges LGB youth face and should these challenges be addressed in a cCBT program?

   Participants were asked to reflect on their own experiences and discuss whether some or all of these challenges should be addressed in a cCBT program.

2. What do LGB participants think of the SPARX concept and prototypes?

   Participants took turns trying out the SPARX prototype, which was projected onto a screen allowing others to observe and comment on:

   - The design, characters and scenarios in SPARX; and
   - How the working prototype could be used to address the needs of LGB youth with depression.

The focus groups were facilitated by ML (a male doctoral candidate, experienced in both youth mental health work and conducting focus groups) with assistance from KS and TF. Each focus group began with: personal introductions (which included ML highlighting that he is gay); confirmation of the research purposes and procedures; and ML mentioning his interest in improving mental health interventions for LGB youth. Questions were open-ended (e.g. *"So what are your first impressions as to how it* [SPARX] *looks?"* and *"What are some of the issues or unique challenges that same-sex attracted youth and youth who are questioning their sexuality face in New Zealand today?"*) and discussion was encouraged. Focus groups were audio-recorded and professionally transcribed. As suggested by Braun and Clarke (2006), the

transcripts were thoroughly checked against the original audio recordings for accuracy and any transcription errors were corrected before data analysis occurred.

Measures

Participants completed a brief custom-made questionnaire at the end of the focus group where they rated and/or commented on the look, style and content of SPARX. Participants were also asked if they had "*suffered from feeling down or* [had been] *low for more than a few days in a row*" and whether or not they would use a resource like SPARX. Demographic information was collected and this is summarised in Table 1.

Data analysis

We used a general inductive approach for data analysis (Thomas, 2006). Like grounded theory and phenomenological approaches this is a method of qualitative content analysis which seeks to build understandings from observations as opposed to testing pre-existing hypotheses. However unlike these other methods, a general inductive approach focuses on eliciting views and perspectives of participants on pre-existing evaluation questions, rather than for generating new theory or building an in-depth description of personal experience (Hsieh & Shannon, 2005; Quinn Patton, 2002). As suggested by Thomas (2006) our aim was to investigate common themes, points of agreement/disagreement and interrelationships between themes from the focus groups as well as from the free-text responses on the questionnaire. Focus group transcripts were read with the research questions in mind; however no a priori models were imposed. ML read and re-read the transcripts several times, and identified lower order units of meaning or themes. These were then clustered with like units; within each area contradictory views and subtopics were searched for and then clusters were reviewed for redundancy and

identification of the essence of each category. One of the authors (TF) reviewed a random sample of three to four pages of uncoded transcripts from each focus group (equivalent to 10% of all the transcripts) and independently coded these excerpts. Excerpts coded by TF were then compared to those coded by ML. This accuracy check identified only minor discrepancies in interpretation and naming of codes and these were resolved through discussion and consensus. We also sought feedback from an independent researcher who provided feedback on the definitions and names for each theme, resulting in changes to the names of two themes. Data were coded using these themes and quotes encapsulating the themes were selected. NVivo8 software was used to manage the data and support analyses. A preliminary summary of themes was also sent to focus group participants for feedback. Most participants did not provide feedback and the two who did made no changes. Quantitative data from the focus group questionnaires were analysed using descriptive functions of SPSS 15.0.

Results

Participants

Four LGB individuals participated in the first focus group and three LGB individuals participated in the second focus group and a different three in the third focus group. Razz (the youngest participant) came with a support person; however the support person did not participate in the focus group (i.e. she was elsewhere in the centre during the group). An additional male participant planned to attend focus group two, but he did not do so (for unknown reasons) despite confirming that he would attend.

Insert Table 1 about here

Issues participants face

We generated four main themes and several associated sub-themes for the issues participants face.

Ways participants can tell that they are 'different'

Participants described how they challenged established gender role expectations. For example Razz (a male participant) described a life-time of gender variant behaviour:

"…I used to play with Barbie dolls and I always had girl mates and I always played netball. I never did boy things." Razz (16 years old)

Several participants appeared to take pride in challenging gender role expectations; however, they were aware that this may result in negative comments. Participants suggested that it was not their sexuality per se (as long as one remains 'in the closest') that resulted in mistreatment or negative comments, but that it was gender non-conformity that brought about harassment:

"…if a guy has just a feminine hint to his voice or something, then everyone is going to be like 'oh my God, he's gay', but he is not. Or if a girl likes playing sports and wears track pants and stuff all the time and she's assumed a lesbian, she'll get crap. But you could have one of the fem, popular girls who are stereo-typically straight; she won't get any trouble for being a lesbian because she is not out kind of thing." Nel (17 years old)

Participants also had to deal with the process of 'coming out'. In all three groups this was seen as risky, especially for younger people, who may then be forced out of home by their immediate family.

Participants talked about facing discrimination, homophobia and mistreatment. A notable example was the use of; *"that's so gay"* to denote when something was 'lame' or stupid or

being called outright derogatory names like *"fag"* or *"bloody homo"*. Several participants gave specific first-hand examples that included being subjected to 'gay jokes' in a workplace and not being able to take a same-sex partner to a school ball. Some described distressing accounts of physical abuse. In particular, Razz's experiences after coming out in provincial New Zealand stood out:

"My house was right next to an alleyway I used to be scared and every time I came home from school or work I would be scared to go down the alleyway because there were a whole bunch of guys waiting for me in the alleyway and my house was right next to the alleyway. And like every time I was screaming out for help and the neighbours didn't even come over, even my blimming mother wouldn't come outside." Razz (16 years old)

Some participants reported that people assumed that they were heterosexual and refused to believe that they were anything other than heterosexual (i.e. accounts of heterosexism), Kate (18 years old) described this scenario:

"He [a male peer] *was like 'will you go out with me?'. No. 'Why not?' I don't like guys. 'Oh, how come you don't like anyone?' I didn't say I didn't like anyone, I don't like guys. 'Oh, what so you are a lesbian then?' And I am like yes. He said, 'no, you're not'"*.

<u>Environments and their impact</u>

Participants reported that some communities were overtly hostile to LGB individuals. Matt and Razz, who had resided in small towns, thought Auckland was considerably better for LGB people than small towns.

Family support varied in terms of how families treated their non-heterosexual offspring or relatives. Some participants described being treated *"…like crap…"* by their parents (e.g. Nel,

17 years old). Others described immediate families that were supportive, but talked of other family members that were less so.

Some of the participants described their parents' struggles to accept them as not heterosexual, making some stereotyped assumptions. For example:

"My Mum pulls out this photo of [famous openly lesbian New Zealand entertainers] *and goes; this is what lesbians look like. You don't look like this! And I was like, but . . . . this is what they look like, how am I supposed to look? You don't know anything about it."* Kate (18 years old)

School environments also varied considerably. Nel, Razz, Denise, Kate and Charlotte discussed school environments that were not supportive of LGB students. For example, Nel (17 years old) mentioned having an unsupportive School Guidance Counsellor when she sought psychological help at her secondary school, with a guidance counsellor that stated numerous times *"…'oh, my god, that* [same-sex attraction] *is so sick'…"*

Ways participants cope

Seven of the participants described the value of friendships and the value of a gay community. For instance, Kirk (24 years old) felt he needed *"a decent group of friends"* before he could even consider coming out to his parents. Having like-minded friends at school seemed to be especially helpful for Kate (18 years old) where she tended to *"hang out with a group where more of us are queer than straight."* However, coming out had the potential to strain or even jeopardise established friendships, with Nel presenting this scenario:

"My best friend is gay and we have sleepovers all the time and I sleep in her bedroom – oh, my God, they are going to think I'm her girlfriend kind of thing." Nel (17 years old)

Both Kirk and Razz suggested that LGB youth seriously consider who they could trust when coming out and that they find *"someone who you can build trust with and confide in"* Kirk (24 years old).

Some participants described coping with life's difficulties by taking an actively hopeful or positive stance. For example, *"Life can be good"* (Kirk, 24 years old), *"No matter what happens to you, you don't have to take the dark path…Not losing hope"* Nel (17 years old).

Depression and sexuality

Two participants mentioned their first-hand experiences of being depressed and they linked this to coming out or the homophobia, discrimination and mistreatment that they faced as an LGB person:

"…I lived there [in provincial New Zealand] *for a year and that's when I went through my depression. And I faced everything like beatings, discrimination, not even being able to get work because of who I was."* Razz (16 years old).

Feedback on prototypes of SPARX

We identified three main themes and several associated sub-themes in relation to what participants thought of the SPARX prototypes. Participants also made several suggestions about how the content of SPARX could be improved or customised for LGB youth.

General comments and feedback

Positive feedback about SPARX could be divided into three broad areas:

1. Positive comments about the 'look and feel' of SPARX;
2. Positive comments about one's ability to be gender non-conformists; and,

3. Positive feedback about the broader concept of cCBT.

Positive feedback about the look and feel of SPARX included general comments, such as *"It looks fantastic"* Denise (26 years old). To more specific feedback; *"I like the RPG* [role-play game] *theme*" Matt (18 years old).

Participants thought that being able to customise an avatar in the later prototypes (i.e. in focus group two and three) allowed for self-expression. This relates to the theme of challenging gender role expectations (discussed earlier). For instance:

"… if someone wants to go and have a guy [as an avatar] *and wants to give him a pony tail it is up to them but they are not going 'this is stink, I can't do that'."* Kate (18 years old)

Finally, participants provided positive feedback about the concept of cCBT and the nature of the project. For example, Kirk (24 years old) thought that having a fantasy role-play program like SPARX (that serves to deliver CBT skills) would be useful as it would allow young people to be "*more receptive to it because it is a game, it is something you would enjoy instead of having someone like just blah, blah, blah at you."*

During focus groups participants asked questions about SPARX and these questions could be grouped into four main categories; technical questions, questions about SPARX's look and feel, general questions and questions about who SPARX was aimed at. Some questions also related to other themes (i.e. there was an interrelationship between themes). For example, Jo (22 years old) asked a question whilst also challenging gender role expectations (discussed earlier):

Jo: *"So basically they* [the computer game development company] *have chosen androgynous or unisex hairstyles?"*

ML: *"Yes, some of them* [the computer game developers] *think the Mohawk is probably more for the guys."*

Jo: *"Have you seen some of the females in* [an Auckland LGB bar] *lately? I was one of them* [i.e. a female with a Mohawk hairstyle]*!"*

SPARX – Improving its appeal to females

Whilst customising their avatar, participants discovered that the female avatar in the prototypes of SPARX could only wear a dress.

"You can't change the clothing? Because it is like male characters wear this, female characters wear that...Not perhaps so important for the male characters. Maybe I am just saying that because I'm a girl, that to say well you are either a guy or you wear a skirt, is not so great." Charlotte (18 years old)

Female participants also identified having only a male Guide character (the virtual therapist in SPARX) was another issue:

"Just from a female's perspective, would it perhaps, it is not that I hate guys, but I would find it easier relating to a female, even if it is only in a game." Jo (22 years old).

Particular issues to do with prototypes of SPARX

Participants highlighted problems and solutions to do with the content and the language used in prototypes of SPARX. Some of the problems were not necessarily specific to LGB youth. For example, participants recommended that the language should be in keeping with the fantasy

setting, that reading should be kept to a minimum and that it should not be too explicitly a 'depression game' (especially in the early modules of the program).

Secondly, participants identified issues to do with game-play, specifically that the mini-games within prototypes of SPARX were too easy.

"…it [the mini-game where the avatar fights Gloomy Negative Automatic Thoughts/Gnats] *was just like click, click, click and they were gone."* Nel (17)

Thirdly, participants identified some technical issues (e.g. the absence of an escape/exit icon) affecting the SPARX prototype; however for each identified issue participants also generated solutions.

Brief questionnaire results

In relation to the look and style of the SPARX prototype participants either "liked it" or "liked it a lot", with a mean rating of 4.3 ("liked it a lot"=5, SD 0.48). All of the participants indicated that they were able to express their opinions in the focus group "half of the time", "a lot" or "totally", with a mean rating of 4.4 ("totally"=5, SD 0.84). Participants commented that the small size of the focus groups was advantageous, for example one participant wrote *"Easy to express opinions in small group, etc"*. Another participant implied that having a group of like-minded LGB youth was useful, stating *"I just feel that I can be me*". Eight participants reported that they had "*suffered from feeling down*". Six of the participants also indicated that they would "*use a resource like this*" if they were feeling down.

The creation of Rainbow SPARX

As a direct result of consulting with LGB youth via the focus groups we decided it was necessary to create a separate version of SPARX for LGB young people. These changes were made upon the conclusion of the current study. Five main areas for modification were identified for Rainbow SPARX, specifically; 1) Ways participants can tell that they are 'different'; 2) Environments and their impact; 3) Ways participants cope; 4) Depression and sexuality; and, 5) Improve the program's appeal to females.

Ways participants can tell that they are 'different'- examples of changes made:

- In module 1 the user is required to customise their avatar, and in the Rainbow Version of SPARX it was ensured that they were not restricted by specific 'feminine' or 'masculine' choices (i.e. the user is free to challenge gender role expectations). In particular, the customization options were the same for both the male and female avatar.
- During a mini-game in module 3 the user's avatar must unblock a series of geysers that are about to explode (which included a "*heterosexism*" and a "*homophobia*" geyser) and the exploding geysers are used by the Guide as a metaphor when he discusses negative emotions having the same potential to explode.
- In module 4, problems of specific relevance to LGB youth are used as examples for the problem solving exercise in that level; for example *"I don't know if I can tell anyone that I'm questioning my sexuality", "I worry my friends will reject me when I tell them I'm not straight"* and *"If I come out to my parents they might kick me out"*.

Environments and their impact – examples of changes made:

- In module 2 the Guide character acknowledges how the actions of others can have a negative impact on LGB youth, for example by stating, "*Mostly people and beings in the Ice Province were nice. But in real life we can come across people who are less than likeable or even outright hostile. It can be especially hard if these people hassle you about your sexuality*". The Guide then offers a potential strategy related to the bullying behaviors of others, for instance "*Wherever possible try to DO stuff with people who value you just as you are. You'll probably enjoy yourself more as a result*". The contact details of LGB support organisations are also provided (in this module and in other modules).
- During module 5 users are encouraged to reflect upon how homophobia might have an impact, for instance when the Guide character states *"Hearing negative comments like 'that's so gay' for when something is lame or stupid implies that there is something wrong with being gay and if we aren't careful we might start to believe it"*.
- In module 6, the Guide uses examples of cognitive distortions relevant to LGB youth, such as *"Your friend walks past a group of students who are laughing. Your friend tells you 'I bet they were laughing at me, probably because I'm bisexual' and she feels really lousy. What would be your advice to her?"* [with the correct response being – *"How do you know they were laughing at you? You're not a mind reader"*].

<u>Ways participants cope – an example of a change made:</u>

- Several hopeful or positive (strengths-based) views about oneself as a LGB individual were included, with statements such as: "*The other message in the game was about having hope. It's good to repeat these simple messages: 'I won't always feel this way',*

'things will get better' or 'it can be hard not being straight, but I know I can handle the challenges that come my way'. These statements are true and thinking them can make you feel a little better almost instantly, even if you don't believe them at first."

Depression and sexuality – an example of a change made:

- In module 1 the Guide encourages the user to think about the link between unsupportive environments and depression, for instance by stating "*Some people think gay, lesbian, bisexual and takataapui* [i.e. Māori same/both-sex attracted individuals] *youth are more likely to get depression. Why is this?"* [with the correct response being – "*Because of the negativity and hassles they get from other people"*] (see Figure 1).

Improve the program's appeal to females – examples of changes made:

- A decision was made that the female avatar in the original version of SPARX should wear a dress. This decision came about in response to the views expressed during consultation with people from the major ethnic groups in New Zealand. Pacific people in particular recommended that it was most appropriate for the female avatar to wear a dress (and not trousers). LGB participants clearly wanted the option of the female avatar being able to wear trousers. Hence this option was made available in Rainbow SPARX (see Figure 1).
- Participants in the focus groups expressed an interest in having a female (and male) Guide character. However, this was not possible given the budget for the development of Rainbow SPARX. In an attempt to address this issue the female

Mentor character was given higher-status (i.e. as an identifiable wise person and 'spokesperson of the Ancestors') giving the Guide and Mentor similar status.

Insert Figure 1 about here

Discussion

This is the first study to explore the views of LGB individuals about the use of cCBT or e-therapy to treat depression. LGB youth who participated in focus groups in this study reported experiencing discrimination, homophobia and mistreatment in the form of victimisation, physical assault and other means (e.g. name calling). Participants could tell they were different because they had either challenged gender role expectations, had 'come out' or had experienced heterosexism. Instead of providing support, several of the participants' families were sources of distress, exerting pressures or stress that other heterosexual siblings or family members were not subjected to. Most participants in our study had suffered from feeling down, and participants made a direct connection between their feelings of depression to the difficulties associated with coming out or the mistreatment that they faced.

LGB participants were positive about the prototypes of SPARX. They gave favourable ratings for the 'look and style of the game' and reinforced the need for such a program. Not surprisingly, focus group participants wanted us to adapt SPARX to better meet the unique requirements of LGB youth and they made a number of suggestions in relation to how this could be done. Consequently, we created a custom-made version of SPARX, called Rainbow SPARX, to cater for the needs of LGB youth with depression or low mood.

Strengths

To the best of the authors' knowledge this is the only investigation that has sought the views of LGB youth about the development of a mental health intervention for LGB young people. Therefore, this study is of particular value, as there is a dearth of consumer involvement in the development of mental health interventions (Anthony & Crawford, 2000) and youth (Hutton, 2005) or LGB consumer consultation in the development of health interventions, policies or guidelines is very rare (McNair & Hegarty, 2010). The format of engagement created a suitable milieu for participants, which was confirmed by their feedback. This is important as a comfortable environment is likely to maximise group interaction (Heary & Hennessy, 2006). We used an established method of qualitative data analysis to investigate common themes, points of agreement/disagreement and interrelationships between themes from the focus groups. E-therapy is fast becoming the new frontier of public mental health interventions. The advantage of e-therapies (like cCBT) are that they can be modified and tailored to the needs of different groups. However, appropriate consultation with consumers is the key to creating relevant and acceptable interventions. Our study highlights our attempts to consult with consumers, and how this process has led us to create (and evaluate) what believe we is the first tailor-made cCBT program for LGB individuals.

Limitations

This is a small study based on a convenience sample of ten participants recruited from local LGB organisations, and this is likely to have resulted in a bias. Volunteers from 'homophile' (i.e. LGB) organisations are believed to be different to LGB participants undergoing therapy

(Bailey, 1999), where those from LGB organisations seem understandably 'well' comparative to those in therapy. Ideally, more LGB youth, from clinical services and non-LGB organisations, would have attended each of the focus groups. In practice this was not possible, as the number of LGB young people accessing clinical services and potentially willing to participate in research is very limited. Recruitment was challenging, and ideally more focus groups would have taken place, but we have a strong sense that no new ideas or concepts were raised upon the conclusion of the third focus group. In the future technologies could have been optimised to ensure more young people participated, such that social media could have been used to promote the study and focus groups could have been conducted online, to ensure maximal convenience for participants and to overcome distance-related barriers. Small group sizes are often an issue when facilitating focus groups with LGB youth (e.g. Lee, 2002) and small group sizes are not uncommon when discussing sensitive topics with 'hard to reach' target groups of young people (Connell, McKevitt, & Low, 2004).

Comparisons to other research

The difficulties described by participants in the current study echo those identified by a large sample of LGB youth in Australia, in which youth described their experiences using autobiographical stories (Hillier & Harrison, 2004). Similarly to other studies (e.g. Hillier & Harrison, 2004; Safren & Rogers, 2001) LGB participants in our study experienced abuse and discrimination when their homosexuality was either suspected or disclosed. However, our results contrast with recent work which has suggested that LGB individuals are now living 'beyond the closest' (Seidman, 2002), where concealing a LGB identity is no longer a major preoccupation for LGB youth (Seidman, 2002; Willis, 2012). Furthermore, although LGB victimization is still acknowledged as a major issue for many LGB young people (Chesir-Teran

& Hughes, 2009; Felix, Furlong, & Austin, 2009; Russell, Ryan, Toomey, Diaz, & Sanchez, 2011), recent research has suggested this victimization decreases over time (Robinson, Espelage, & Rivers, 2013).

Conclusions

LGB youth face unique challenges, and these challenges need to be explicitly addressed in therapeutic approaches designed to help LGB youth overcome psychological distress. E-therapies have much to offer LGB individuals, as they can be completed in private and can be made available to those living outside cities with LGB organisations. We consulted with LGB young people to determine the issues that are important to them and to test working prototypes of a cCBT program. Feedback from participants in this study ultimately led to the development of Rainbow SPARX. cCBT appears a promising approach to delivering therapy to this important sub-population.

Acknowledgements

We would like to thank the participants for their involvement in this study. We would like to acknowledge the two LGB youth organisations who supported this research. For financial assistance ML is grateful for the School of Medicine Foundation Lloyd William Herring Estate PhD scholarship and the University of Auckland Senior Health Research PhD scholarship. We would also like to thank Dr Andrea Green, Associate Professor Mark Henrickson, Thomas Hamilton, Maru Nihoniho and the team at Metia Interactive for their help and expertise developing Rainbow SPARX.

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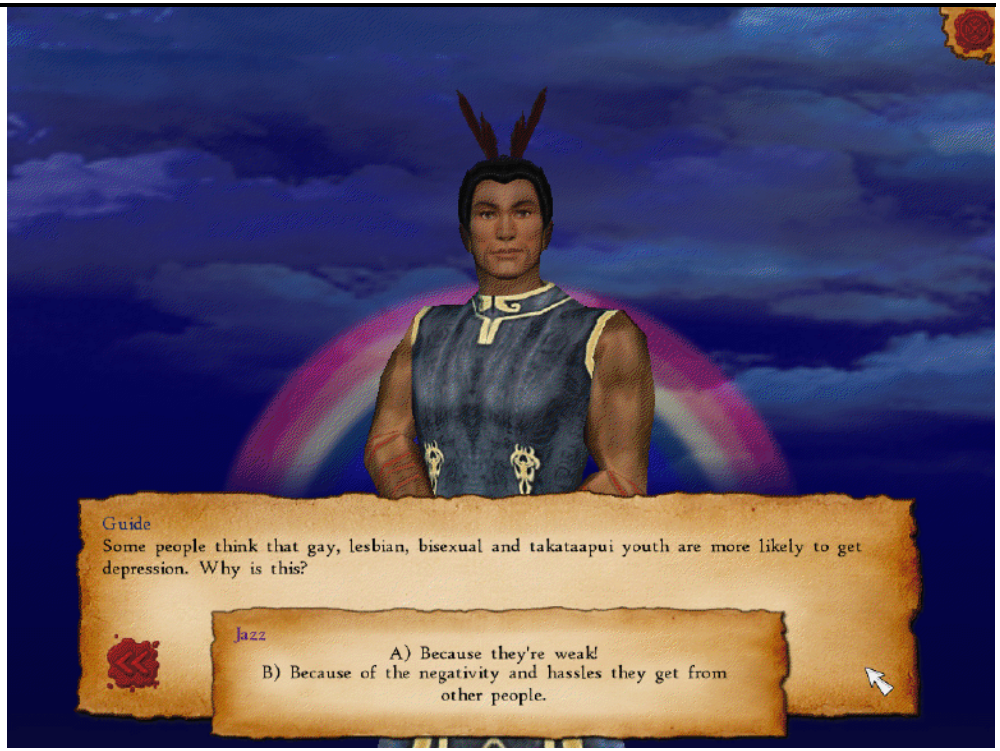
Figures & Tables

Figure 1. Rainbow SPARX images

The female avatar wearing trousers.



The Guide character.

Table 1. Focus group participants' demographic information

Focus group	Pseudonym	Gender/ Gender identity	Age	Sexual identity	Ethnicity
1st	Razz	*"Male"*	16	Gay	*"Māori Euro"*
1st & 2nd	Nel	*"Female"*	17	Lesbian	*"NZ Indian"*
1st	Denise	*"Lesbian"*	26	Lesbian	*"Pakeha"* (i.e. NZ European)
1st	Kirk	*"Male/Gender Queer"*	24	Gay	*"Pacific Islander"*
2nd	Kate	*"Female"*	18	Lesbian	*"NZ"* (i.e. NZ European)
2nd	Charlotte	*"Female"*	18	Bisexual	*"NZ European"*
3rd	Steve	*"Gay Male"*	27	Gay	*"Asian"*
3rd	Matt	*"M"* (i.e. Male)	18	Gay	*"Cauc"* (i.e. NZ European)
3rd	Jo	*"Female"*	22	Lesbian	*"Pakeha"* (i.e. NZ European)

NB - The focus group were conducted within the institutions where the LGB youth organisation were based.