

A qualitative study of sexual minority young peoples' experiences of computerised therapy for depression

Abstract

Objective: To describe the experiences of lesbian, gay, bisexual or sexual minority youth who used a form of computerised therapy (Rainbow SPARX) for depression.

Method: 25 adolescents (20 with significant depressive symptoms) who had trialled Rainbow SPARX took part in semi-structured interviews. The general inductive approach was used to analyse interview data.

Results: Feedback consisted of five main themes: 'appealing aspects'; 'applying it to real life'; 'things to improve'; 'aspects that did not appeal'; and, 'other themes'. Young people also suggested that there should be more sexuality-specific ('rainbow') content in the program. Seventeen participants thought computerised therapy helped them feel better or less depressed.

Conclusions: Consumer perspectives are increasingly being sought and this user input is especially useful for improving services. Our study provides important in-depth feedback on Rainbow SPARX, from the perspective of sexual minority youth, and it highlights that computerised therapies can be successfully modified for groups traditionally under-served by mainstream mental health interventions.

Key words: lesbian, gay, bisexual, depression, psychotherapy, adolescent

Introduction

Lesbian, gay, bisexual or sexual minority youth, are young people who are sexually attracted to the same sex, both sexes, or are questioning their sexuality. These youth are more likely to

experience significant depressive symptoms in comparison to their exclusively opposite-sex attracted peers.¹ Furthermore, although sexual minority youth demonstrate a willingness to discuss their mental health issues,² these young people are more likely to experience difficulty accessing professional help.² Cognitive behavioural therapy (CBT) is an effective and recommended treatment for adolescent depression,³ and its principles are the same for all consumers, including sexual minority youth. Nonetheless, using CBT with unique populations, such as sexual minority individuals, necessitates some adaptations.⁴ Besides a general shortage of CBT therapists, there are few clinicians trained to address the specific needs of sexual minority people.⁴ Computerized cognitive behavioural therapy (cCBT) offers an opportunity to address this, because programs can be specially tailored to suit the needs of a specific group, for example in the case of sexual minority people, by having content that addresses heterosexism (the assumption that everyone is heterosexual or ought to be heterosexual), homophobia, and other relevant challenges (such as coming out).

We developed and evaluated a seven-module cCBT self-help program for adolescents with depression, delivered in a game-like format, called SPARX (Smart, Positive, Active, Realistic, X-factor thoughts) www.sparx.org.nz.⁵ In a parallel study we conducted focus groups with sexual minority youth which led us to create a customised version of SPARX (Rainbow SPARX) to meet the unique needs of this group.⁶ The details of the adaptations and the results of an open trial of Rainbow SPARX have been reported previously.^{6,7} In summary, almost all the participants (n = 19, 90.5%) completed at least four out of the seven modules and their depressive symptoms decreased significantly post-intervention (p<0.0001, pre- to post-effect size $d=1.01$), with this reduction being maintained at 3-month follow-up.⁷

Insert Figure 1 about here

To date, the primary focus of cCBT research for depression and anxiety has been on investigating changes in symptom levels and/or overall functioning.^{8,9} Few studies have collected detailed information about consumer satisfaction. For instance, of the ten studies cited in the review of cCBT to prevent or treat anxiety or depression in children and adolescents, only four studies included any information about participants' satisfaction with treatment.⁹ Carrying out a qualitative evaluation of a cCBT program is therefore useful in determining what worked well or what could be improved, and it provides consumers with 'a say' in the planning and further refinement of cCBT interventions.¹⁰

In this qualitative study we sought to determine participants' views on:

- What they liked and did not like about the intervention (Rainbow SPARX);
- How Rainbow SPARX might benefit others;
- What they thought of the sexuality (or Rainbow) specific content of the program;
- What they thought about completing the weekly challenges (i.e. homework tasks) associated with the program; and,
- Whether or not Rainbow SPARX helped them feel better or less depressed.

Methods

We have used the consolidated criteria for reporting qualitative research (COREQ).¹¹

Ethics

Approval for this study was granted by the Multi Region Ethics Committee (Ref: MEC/09/01/002). Written parental and participant consent was obtained from those aged 13 to 15 years old and young people were able to consent for themselves if they were 16 or older.

Sample and data collection

Participants in the trial of Rainbow SPARX were recruited from four high schools and a youth-led organization for sexual minority youth. The study was also advertised by the sexual minority media. All were sexual minority youth ~~aged 13 to 19 years old~~ from Auckland, New Zealand.

Interviews

Interviews were conducted immediately after the post-intervention assessment point with MFGL. The interviews were conducted in a private room in one of three locations selected by the participant (i.e. at the University of Auckland, the youth-led organization, or at the participant's school). The interviews lasted from 8 to 36 minutes (mean=18 minutes, SD=7 minutes). A semi-structured interview format (available from the corresponding author) was used. The initial question for each section was broad and open, but was then followed by more specific questions. For example:

- *“What did you think of Rainbow SPARX?”* followed by: *“What did you like [didn't you like] about Rainbow SPARX?”*

A series of more precise questions were asked next:

- *What did you like [didn't you like] about the design or look of Rainbow SPARX?*
- *What did you like [didn't you like] about the mini-games or puzzles in Rainbow SPARX?*
- *What did you like [didn't you like] about the characters and the messages they gave?*
- *Was there anything else you liked [didn't you like] about Rainbow SPARX?*

The interviewer, MFGL, was a doctoral candidate at the time, experienced in clinical youth mental health work. All the participants had previously met MFGL during the face-to-face

pre- and post-intervention assessments. The participants were aware that MFGL was a gay male and a co-developer of Rainbow SPARX. All the interviews were audio-recorded and professionally transcribed. No field notes were taken.

Data analysis

We used the general inductive approach (GIA) for data analysis.¹² Like grounded theory and phenomenological approaches, GIA is a method of qualitative content analysis which seeks to build understandings from observations as opposed to testing pre-existing hypotheses.

However, unlike some qualitative methods, GIA focuses on obtaining views and perspectives of participants based on pre-existing evaluation questions (or topics), rather than for building an in-depth description of personal experience or for generating new theory.¹³ Our aim was to investigate common themes and points of agreement/disagreement between interviews.

The transcripts were read with the research objectives in mind, but no a priori models were imposed. MFGL read and re-read the transcripts several times, and identified lower order units of meaning which were then clustered with similar 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. TMF reviewed a random sample of the data (10% of each interview) and independently coded these excerpts.

Excerpts coded by TMF were then compared to those coded by MFGL. This accuracy check identified only minor discrepancies in interpretation and these were resolved through discussion. Data were coded using the themes identified and quotes capturing the themes are provided in Table 2. NVivo8 software was used to manage the data and support analyses. A preliminary summary of results was sent to participants for their feedback. Only one participant responded, but they recommended no changes be made.

Results

Everyone invited to take part completed an interview (n=25). Participants were adolescents between the ages of 13 and 19 years old (mean=16.36). Twelve participants identified as male and 13 participants identified as female, with two participants' gender identity and sex assigned at birth differing (i.e. they were transgender). The majority of participants were New Zealand European (n=15), with the remainder being Māori (n=3), Asian (n=2), Pacific (n=1), or an 'other' ethnicity (n=4). Twenty participants were assessed as having significant depressive symptomatology (i.e., Child Depression Rating Scale–Revised raw score ≥ 30) prior to using Rainbow SPARX. All the participants were sexual minority youth (i.e. they were lesbian, gay, or bisexual youth, or young people sexually attracted to the same sex, both sexes, or they were questioning their sexuality). Two participants reported being opposite sex attracted, but selected sexuality labels consistent with being a sexual minority young person, i.e. “gay or lesbian” and “mostly heterosexual” respectively. To ensure that participants could not be identified they were given pseudonyms. All the participants completed the seven modules of Rainbow SPARX except Steven, Goldie and Sasha.

Table 1 summarises the feedback according to five main themes: appealing aspects (with five associated subthemes); applying it to real life (with two subthemes); things to improve (with two subthemes); aspects that did not appeal; and, other themes (with three subthemes).

Insert Table 1 about here

Discussion

Participants largely endorsed the use of cCBT for treating depression and thought that Rainbow SPARX was an acceptable intervention, suggesting that it is possible to modify an existing computerised therapy for a sub-population like sexual minority youth. Confirming

the results of the quantitative evaluation of the program,⁷ most young people reported that Rainbow SPARX helped them feel better. The positive findings associated with the program's acceptability may be attributed to its 'rainbow' content, as it was perceived favourably and thought to be valuable. However, some participants suggested that there should be more sexuality-specific material. User satisfaction with the program may have also been influenced by the format of Rainbow SPARX, as it was presented in an engaging youth-friendly game-based format.¹⁴

Strengths and limitations

This study is unique and adds to what is known about making computerised (and face-to-face) interventions acceptable and relevant to sexual minority individuals. Previous research in this field has been limited to brief quantitative surveys⁹ and our study adds a more detailed account from all those who had used Rainbow SPARX and completed a post-intervention assessment. An additional strength of this study is that an established method of qualitative data analysis was utilised.

Participants knew that MFGL was a developer of Rainbow SPARX, and as such they may have felt inhibited to express any criticisms of the program. To attempt to remedy this, every participant was specifically asked to comment on what they did not like about Rainbow SPARX. Some of the interviews were very brief, partly because some participants had less to say, or because there was a pressure to finish (as three participants needed to get back to school at a certain time). All the participants in this study were sufficiently confident about their sexuality to take part in this project and this may limit generalizability (i.e. participants questioning their sexuality were likely under-represented). The analyses were conducted by developers of Rainbow SPARX and as such this is a limitation of the study.

Comparisons to other research

Our findings resonate with earlier research evaluating adolescent satisfaction with cCBT.⁹

Rainbow SPARX was perceived favourably with most participants liking the look and feel of it. As with two previous studies in the field,^{15, 16} a sizeable proportion of participants identified technical glitches or things requiring improvement, albeit fairly minor (e.g. to reduce the amount of ‘clicking’ required in the program). Previously, the makers of ‘Master Your Mood Online’ in the Netherlands reported having difficulty ‘pitching’ their program to the right developmental level, with some users finding the program too difficult.¹⁶

Conversely, in our study some of the older participants thought that our intervention ‘babied’ them; however, overall the program was deemed suitable for the target age group. Rainbow SPARX is the first cCBT program for a mood disorder to address challenges specific to lesbian, gay, bisexual or sexual minority individuals.¹⁷ As previously highlighted by our team,⁶ and in a recent analysis of the applicability of e-therapies for lesbians and gay men,¹⁷ participants in the current study endorsed the need for sexuality-specific or ‘rainbow’ content in computerised interventions. We concur with Rozbroj and colleagues that e-therapies need to address the specific needs of lesbian, gay, bisexual or sexual minority people, so that these unique sub-populations can benefit from the rise of e-therapies.¹⁷ We hope this rise will become a positive step towards reducing the disparities in mental health between heterosexual and non-heterosexual populations.¹⁷ In the future we hope to modify Rainbow SPARX, incorporating the changes suggested by our study participants, and subsequently conduct a randomised controlled trial of the program.

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Figure 1. An image from Rainbow SPARX



Table 1. Feedback about Rainbow SPARX

Major theme	Associated subthemes	Descriptions and examples from data
Appealing aspects	Liked – ‘look & feel’	Most of the participants commented positively about the ‘look and feel’ of Rainbow SPARX, e.g. <i>“I liked, like, how it looked really shiny on my computer, and it looked like a completely different world”</i> – Bob (male, 13 years old, bisexual).
	Liked – certain characters	Six of the characters from Rainbow SPARX were perceived to be positive and likeable, specifically Hope, the Guide, the Mentor, Cass, Te Hokioi and the Yeti, with Hope being the most frequently mentioned: <i>“I liked Hope actually, I really liked Hope. I thought it was a cool idea...I liked the fact that it [the program] realised that hope was something tangible. Even though in real life it might not be, it was cool to give it as a tangible thing and to talk about it as something that was real”</i> – Andy (male, 19 years old, gay)
	Liked - format	Numerous participants stated that they liked having a self-help program in a game-like format, they liked the accompanying notebook, and they liked the overall flow/format, <i>“I like the concept that a computer game could work towards solving those problems [depression] so it was a good way of getting you interested”</i> – John (male, 17 years old, male)
	Liked - content	Most of the participants thought that Rainbow SPARX consisted of useful messages or content and they talked about this more generally (e.g. <i>“I liked the tips given”</i> – Natasha [female, 19 years old, bisexual]), or they provided detailed examples of the content they liked or valued.
	Liked – ‘rainbow’ content	Nine participants liked the ‘rainbow’ content in the program and they perceived it to be valuable: <i>“...I liked how it talked about problems that were relevant to people going with different sexualities and stuff”</i> – Maree (female, 15 years old, bisexual).
Applying it to real life	Completing challenges and applying skills	The vast majority of young people reported having completed at least some of the challenges (CBT homework tasks) set at the end of each level of Rainbow SPARX, e.g. <i>“...I think the ‘spot it’ one most appealed to me because if you can spot what it is [recognise negative cognitions], it is a lot easier, kind of, to be happy because you know what is bothering you”</i> – Jack (male, 14 years old, bisexual). However, seven participants thought that the challenges were not relevant to them.
	Did it help participant feel better?	Seventeen participants stated that Rainbow SPARX helped them feel better (or less depressed). Four participants thought that it did not help them feel better, but they attributed this to the fact that they were not depressed to begin with. Two participants thought the program was <i>“kind of”</i> helpful, with a further two stating it was not helpful, e.g. <i>“I wouldn’t say it made me feel better, worse on some occasions”</i> – Stefan (male, 17 years old, gay).
Things to improve	General improvements	Eighteen participants described various technical issues that needed to be addressed in Rainbow SPARX (e.g. numerous older participants thought that the mini-games or puzzles should be more challenging). Participants also said there should have been less talking or dialogue and more game play.
	Improve ‘rainbow’ content	Nine participants thought that there was insufficient ‘rainbow’ content: <i>“...it could be a little bit more focused on gay, or all types of queer youth...Not turn it into a queer game, I don’t know but maybe just a little bit more”</i> – Andy (male, 19 years old, gay). A few participants recommended that the terminology pertaining to sexuality be improved.

Aspects that did not appeal	-	Three of the older participants (16 years or older) thought the program was patronising or that it “ <i>babied</i> ” them. However, two participants acknowledged that there could be some value in keeping the program that way, e.g. “ <i>I thought some things were a little easy...Like overall it wasn’t difficult to figure out what you needed to do. Those little puzzles were quite easy to do. I guess it would be hard to make them more difficult though because you would have to be careful that everyone could actually get it</i> ” – Andy (male, 19 years old, gay).
Other themes	Usefulness for sexual minority youth	Ten participants said that they thought Rainbow SPARX could help other sexual minority young people feel better or less depressed, “ <i>It could give them techniques and stuff on how to be more open. Because like lesbians are pressured in different ways and stuff like that...because the gay community apparently is pressured more</i> ” – Lara (female, 17 years old, lesbian). Three participants thought Rainbow SPARX would be useful for all young people.
	Usefulness for whom?	Eighteen participants expressed an opinion on the ideal age range for use of Rainbow SPARX, with the majority suggesting that the program was best suited to those aged between 13 and 17 years old. Some older participants cautioned against pre-teens using the program, “ <i>...if it is specifically aimed at people who are questioning their sexuality or whatever, then it is only going to apply to people who are. So if someone is ten and stuff and they have no concept of sexuality...it is not going to apply for them</i> ” – Goldie (female, 16 years old, “Other”).
	Suggestions for roll out	Three participants made suggestions about the rollout of the program, with school guidance counsellors being identified as being important in a rollout, “ <i>You could do it [Rainbow SPARX] through a guidance counsellor at school possibly which I think would be easier because you get a lot of confidentiality with that. So if you are doing it at school I think through a counsellor would be a very good idea</i> ” – Sapphire (female, 16 years old, Bisexual).
