The acceptability, usability and short-term outcomes of Get Real: A web-based program for psychotic-like experiences (PLEs)

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ARTICLE INFO

Article history:
Received 12 January 2015
Received in revised form 27 May 2015
Accepted 27 May 2015
Available online 12 June 2015

Keywords:
Web program
Internet
Intervention
Psychotic-like experiences, psychosis

ABSTRACT

Background: Psychotic-like experiences (PLEs) are subclinical delusional ideas and perceptual disturbances that have been associated with a range of adverse mental health outcomes. This study reports a qualitative and quantitative analysis of the acceptability, usability and short term outcomes of Get Real, a web program for PLEs in young people.

Methods: Participants were twelve respondents to an online survey, who reported at least one PLE in the previous 3 months, and were currently distressed. Ratings of the program were collected after participants trialled it for a month. Individual semi-structured interviews then elicited qualitative feedback, which was analyzed using Consensual Qualitative Research (CQR) methodology. PLEs and distress were reassessed at 3 months post-baseline.

Results: User ratings supported the program’s acceptability, usability and perceived utility. Significant reductions in the number, frequency and severity of PLE-related distress were found at 3 months follow-up. The CQR analysis identified four qualitative domains: initial and current understandings of PLEs, responses to the program, and context of its use. Initial understanding involved emotional reactions, avoidance or minimization, limited coping skills and non-psychotic attributions. After using the program, participants saw PLEs as normal and common, had greater self-awareness and understanding of stress, and reported increased capacity to cope and accept experiences. Positive responses to the program focused on its normalization of PLEs, usefulness of its strategies, self-monitoring of mood, and information putting PLEs into perspective. Some respondents wanted more specific and individualized information, thought the program would be more useful for other audiences, or doubted its effectiveness. The program was mostly used in low-stress situations.

Conclusions: The current study provided initial support for the acceptability, utility and positive short-term outcomes of Get Real. The program now requires efficacy testing in randomized controlled trials.

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1. Introduction

Psychotic-like experiences (PLEs) are subclinical delusional ideas and perceptual disturbances that lie on a phenotypic continuum with psychotic symptoms and disorders. Community surveys indicate that adolescents and adults report 12-month prevalence rates of PLEs of between 6 and 28% (van Os et al., 2009; Kelleher and Cannon, 2011; Nishida et al., 2008a). While most PLEs are infrequent and cause little distress (Scott et al., 2008; Armando et al., 2010; Kendler et al., 1996, 2005), they are risk factors for a range of mental health disorders, including psychosis, depressive, anxiety and substance use disorders as well as suicidal behaviors (Dhossche et al., 2002a,b; Fisher et al., 2013; Saha et al., 2011a,b; van Os et al., 2002; Welham et al., 2009; Nishida et al., 2008b).

Despite this, few studies have explored preventative treatments for PLEs in community samples of young people. A recent search of the literature found only two case series papers using cognitive behavior therapy (CBT) and a quasi-random trial of mindfulness-based cognitive therapy. The majority of preventive treatment research has focused on treatment seeking populations of individuals at ‘ultra-high risk’ (UHR) for psychosis, which are defined by three alternative risk syndromes. Two of these syndromes overlap with PLEs; attenuated positive symptoms defined as symptoms that deviate from normal phenomena but that are not yet frankly psychotic and brief limited intermittent psychotic symptoms (BLIPS) which are of psychotic intensity but they are very infrequent, or have a total duration of <7 days. A recent systematic review and meta-analysis of six CBT trials in UHR samples (not taking antipsychotic medication) found that it reduced the risk of transition to psychosis by more than 50% at 6, 12 and 18–24 months follow-up, compared with treatment as usual or non-specific control treatments (Hutton and Taylor, 2013). Secondary analysis indicated that CBT was also associated with significantly greater reductions in sub-threshold psychotic symptoms at 12 months follow-up. Reductions in both...
psychotic symptom frequency and distress, as well improvements in functioning and quality of life were observed in both the CBT and control treatments. These improvements may not only reflect spontaneous recovery, but also indicate that a range of mental health interventions may be beneficial in the UHR group. Thus, psychological interventions are likely to be helpful for individuals with PLEs, as improved functioning and reductions in distress and symptom frequency may help reduce the risk of developing mental health disorders among individual with PLEs.

Young people who experience PLEs are likely to benefit from psychological treatment (Fowler et al., 2009), but are unlikely to seek mental health treatment. Barriers include stigma or embarrassment, poor mental health literacy, preferences for self-reliance, and inappropriate service models. Web-based interventions can overcome many of these barriers as they are accessible, can provide anonymity, are minimally stigmatizing and can support self-management in this group (Gulliver et al., 2010). They also have high levels of acceptability among young people as a source of information on and support for mental health issues (Oh et al., 2009; Rickwood et al., 2007). Internet programs have demonstrated effectiveness, especially for anxiety and depressive disorders, and multiple trials have demonstrated comparable efficacy compared with face-to-face therapy (Barak et al., 2008).

This study examined users’ responses to the OnTrack Get Real program (www.ontrack.org.au/web/ontrack/programs/get-real), a brief, freely available web-based eHealth program for young people with PLEs. Get Real aims to (i) improve users’ abilities to identify, understand and reduce any distress associated with PLEs; (ii) teach simple coping strategies for coping with PLEs, and (iii) facilitate appropriate help-seeking (when required). The current study used a combination of qualitative and quantitative approaches to assess the acceptability, usability and short-term outcomes of the Get Real program.

2. Methods

2.1. Participants and recruitment

The current sample was recruited from a sample of university students aged 18 to 30 years participating in an online survey of PLEs. One hundred and seventy young adults who reported ≥1 PLE in the past 3 months on the 15-item positive scale of the Community Assessment of Psychotic Experiences (CAPE-P15) (Capra et al., 2013), who experienced some distress associated with PLE/s and had a score ≥17 on the 10-item Kessler Psychological Distress Scale (K10) (Kessler et al., 2003) were invited to participate in the Get Real trial. Both measures have high levels of reliability and validity as screening tools for PLEs and psychological distress (Chan et al., 2014; Konings et al., 2006). Participants who provided informed online consent were then administered the Psychosis Screen of the Composite International Diagnostic Interview (CIDI) (World Health Organisation, 1993) via telephone. Participants were excluded if they had a history of psychotic disorder or antipsychotic medication.

Eligible participants were then provided with access to the OnTrack Get Real program for one month (via an email link). The program was developed by the second and third authors based on the Think You’re Crazy? Think Again self-help book for people at ‘ultra high risk’ for psychosis (including those with PLEs) (Morrison et al., 2008). Web access, a web browser, flash player and pdf reader are required to use the program. The site can work on, but is not optimized for mobile devices. Concepts are illustrated by text, pictures, diagrams, interactive webpages and video clips. Written materials are at Year 7 reading level or less. The program can be completed in two 30–60 minute sessions, but multiple logins are allowed. Module 1 defines PLEs (termed “Weird Stuff”) and provides detailed personal assessment feedback on the frequency of self reported PLEs using age and gender-specific norms. Module 2 provides information on risk factors for PLEs, psychotic symptoms and psychosis, using fact sheets and videos. Information and normative data on different subtypes of PLEs and weird feelings (déjà vu, derealisation, depersonalisation etc.) are also provided. While the program highlights the risks posed by PLEs, it also normalizes them by providing information on their frequency in the general population. Module 3 provides training in number of brief cognitive behavioral techniques for reducing PLEs including mindfulness, problem solving, cognitive restructuring and behavioral activation, using interactive webpages, images and videos. Similar cognitive-behavioral coping skill techniques have a positive effect in community samples of young people at UHR for psychosis (Hutton and Taylor, 2013). Module 4 aims to facilitate appropriate help seeking and address any barriers to doing so.

The website is password-protected and is stored on a secure server. Entered data is retained centrally for subsequent retrieval and review by participants, who are also encouraged to print key pages for reference. All site use by the person is logged, including dates of data entry, modules accessed and completed. All website modules are unlocked and can be accessed by the user at any time. Participants who do not access the program within one week of registration are sent reminder two weekly emails. Users have access to a Help link from every page, which provides the contact details of mental health and crisis care services.

At the end of the month trial, participants were asked to rate the acceptability of the Get Real program on the following questions using a five-point (strongly disagree to strongly agree) Likert scale: (a) Get Real was useful; (b) Get Real was not effective in helping me reduce distress (reverse scored); (c) Get Real was effective in helping me manage an odd or unusual experience/s. They were also asked if the length of the program was too long, a bit long, just right, a bit short; too short.

An individual structured interview was then administered to the participants about their experiences with the Get Real program. Six participants elected to meet face-to-face, while the remaining six preferred a telephone interview. The primary questions in the semi-structured interview were: (a) What do you think when you first noticed some unusual or weird experiences? (b) How did you deal with them? (c) What do you think about these experiences now? (d) How do you make sense of them now? (e) What, if anything, has been useful about the Get Real program? (f) What, if anything would you change in the Get Real program, to make it more effective? (g) Under what circumstances were you using the program? Nonspecific follow-up questions were used to obtain further responses or to amplify comments. Responses were audio-recorded and transcribed by the first author. The researchers used the words ‘weird or unusual’ in place of ‘psychotic-like’ experiences throughout the interview, because those terms were more commonly understood by the age group.

Participants were then asked to complete an online survey containing the CAPE-P15 and K10 at the 3-month follow-up. Ethical approval to conduct the study was provided by the University’s Human Research Ethics Committee (approval number 1100001450). Participants did not receive any reimbursement for participating in the study however they were entered into a draw to win an iPad II.

2.2. Analyses

Paired sample t-tests were conducted to compare the number of PLEs and the frequency and the level of distress associated with them at baseline and 3-month follow-up. A Consensual Qualitative Research (CQR) method (Hill et al., 2005, 1997) was used to analyze the interview responses. This approach relies on words and narratives to describe phenomena. CQR is ideal for use in small samples and allows for intensive analysis. Three to five researchers typically review the responses and make decisions by consensus. The approach is inductive: conclusions are derived from the data, rather than being imposed or tested from an a priori structure or theory.

In the current study, members of the research team (the first and second authors, plus two other raters) recorded their biases and expectations at the outset, to minimize these influences on the analysis. The team read the transcripts and generated broad domains that divided
responses into topic areas. Labels or short phrases were generated to capture the core ideas contained within domains. Categories were then developed to cluster the core ideas within domains and a cross-analysis of the frequency of core ideas per category was undertaken. A stability check was conducted, which involved withholding two cases from the analysis to identify any substantial changes to the existing categories. Results were charted to determine whether specific categories in one domain were related to ones in another domain. Only categories with >6 core ideas were considered, and an a priori minimum of four cases was set. An external auditor audited the data at three points in the analysis.

3. Results

3.1. Participant characteristics

Three hundred and ninety-nine participants completed the online survey. Of these, one hundred and seventy young adults met study inclusion criteria. Seventeen young people were approached and 12 (71%) participants consented to participate in the trial. None were excluded due to a lifetime history of psychosis or antipsychotic medication use. The participants consisted of 9 females and 3 males, with a mean age of 22.6 years (SD = 4.0). Two thirds (n = 8) reported lifetime cannabis use and 25% (N = 3) reported cannabis use in the past month. All participants spoke English as a first language and none identified as Aboriginal or Torres Strait Islander. The mean CAPE-P15 PLE symptom count, frequency and distress total scores, and K10 total score at baseline and 3 months are provided in Table 1.

3.2. Acceptability, usability, perceived utility and outcomes of the Get Real program

At the end of the one-month trial of the Get Real program, 83% reported they found the program useful and 58% reported that the program was helpful in managing an odd experience. Fifty percent reported the program was helpful for reducing PLE-related distress, while the remainder responded neutrally. Half (N = 6) of participants reported that the program length was appropriate, while 42% believed that it could have been longer. Significant reductions in the number of PLEs reported on the CAPE-P15, as well as the frequency and level of distress associated with PLEs were found at the 3-month follow-up (See Table 1). These reductions in PLEs and distress had moderate to large effect sizes. The number of participants who scored 17 or above on the PLEs reported on the CAPE-P15, as well as the frequency and level of distress associated with PLEs were found at the 3-month follow-up (See Table 1). These reductions in PLEs and distress had moderate to large effect sizes. The number of participants who scored 17 or above on the CAPE-P15 PLE symptom count, frequency and distress total scores, and K10 total score at baseline and 3 months are provided in Table 1.

3.3. Qualitative interview themes

The consensual analysis identified four domains relating to the key research questions: (i) initial understanding of weird experiences; (ii) current understanding of weird experiences; (iii) response to the program; and (iv) context of program use. Table 2 details the domains, categories and frequencies. Typical categories, along with patterns among categories, are described below. Typical categories are those in which the core ideas within the category were highly representative of cases (i.e. 6–11 cases).

### Table 2

| Domain | Domain categories | Frequency
|---|---|---
| Initial understanding of weird experiences | Concerned by experiences | Typical |
| | Avoidance, minimization, limited coping skills | Typical |
| | Attribution of PLEs | Typical |
| | Utilization of social support | Variant |
| | Acknowledgement and acceptance of experiences | Variant |
| | Inattentive to PLEs | Variant |
| | Desire for understanding | Variant |
| | Weird experiences are normal and common | Typical |
| Current understanding of weird experiences | Greater self-awareness | Typical |
| | Capacity to cope and self-acceptance | Typical |
| | Attribution of weird experiences to other factors | Variant |
| | My understanding and knowledge of weird experiences have improved | Variant |
| | Understanding unchanged | Variant |
| | Negative emotions associated with weird experiences | Variant |
| | Program normalized PLEs through education | Typical |
| | Information needs to be more specific, scientific, individualized | Typical |
| | Self-monitoring was valuable | Typical |
| | Information was useful and put things into perspective | Typical |
| | Doubt over effectiveness and engagement with program | Typical |
| | Strategies were useful | Typical |
| | Program’s delivery perceived as inappropriate | Variant |
| Response to program | Program relaxed me, made me feel comfortable and less overwhelmed | Variant |
| | Program perceived as being more useful for another audience | Variant |
| | Design of program was confusing | Variant |
| | Program was of good quality, depth and design | Variant |
| | Program was good for self-reflection | Variant |
| | More videos to demonstrate a variety of responses | Variant |
| | Videos were helpful for putting things into perspective | Variant |
| Context of Use | Benefits to online program | Variant |
| | Used program in low-stress situations | Typical |
| | Program was used infrequently for short durations | Typical |
| | Used program when feeling stressed or tired | Variant |
| | Program was more beneficial if used when calm | Variant |
| | Used program for reflection on moods | Variant |
| | Email reminders helpful for remembering to use the program | Variant |
| | Convenience is an important feature of the program | Variant |

*Typical means the core ideas within the category represented 6–11 cases and variant means the core ideas within the category represented 3–5 cases.*
A second category was avoidance, minimization and limited coping skills. Participants who avoided and minimized their experiences either actively avoided dealing with their experiences or minimized the unusual nature of their experiences as ‘minor’.

A third category in this domain involved attributions of experiences. Participants who made attributions reported that anxiety, depression or substance abuse may have explained their experiences.

3.3.2. Current understanding of weird experiences

Participants reflected that their understanding of weird experiences had changed over time and the Get Real program had helped them reframe their weird experiences as normal and common. They were generally relieved to discover that others also experienced similar phenomena and they were not alone.

A second category reflected greater self-awareness and understanding of how stress affects wellbeing among participants. For instance, one participant commented that ‘the experience itself was a way of coping’.

A third category reflected an increased capacity to cope and accept weird experiences. This suggested that participants were more comfortable with their experiences and more aware of how to manage them. For example, one participant explained that: ‘I'd be better able to cope with experiences if they happened again’.

3.3.3. Response to program

Participants overwhelmingly described how the program normalized weird experiences, which they thought was useful.

'I definitely didn’t realise how many people go through it. I think part of the program implied that there’s a lot of people that might go through things like that at different levels but it’s definitely not an uncommon thing to be thinking and feeling the way that I felt’.

A second category related to the program’s strategies being useful. Behavioral methods such as ‘deep breathing’ as well as more cognitive strategies such as ‘visualization’ or ‘action plans’ were all valued.

A third category was self-monitoring of mood, which was viewed favorably. A participant said that they used it as ‘a good reflective tool to ... keep my moods in check’.

A fourth category was that information about weird experiences was useful in putting them into perspective. This information was generally perceived as ‘helpful’ and ‘useful’.

Other categories identified limitations to the program. A fifth category involved a recommendation that information be more specific, scientific and individualized. These participants reported that they wanted more personalized information on how to address their concerns so that: ‘...if you answer these certain questions, then you get your own little video or something like that’.

A sixth category indicated that some participants reported that the program may be more useful for another audience. Typically, these participants suggested that the program would be suitable for younger people, people with more severe symptoms or people who had recently begun experiencing PLEs.

The seventh category comprised experiencing doubt over the effectiveness of the program and whether participants would stay engaged with it. Some reported that their anxiety might impair their motivation to use the program, and concern that the suggested strategies may not work.

3.3.4. Context of program use

Participants reported using the program infrequently: on average, one to three times over the 4 weeks, for 10–20 mins each time. They tended to use the program in low-stress or calm situations, as this allowed them to make better use of it.

'I used it twice and both instances were the beginning of the week so it was a Monday morning and I wouldn't have been particularly stressed at the time because the week would have just been starting'.

3.3.5. Patterns among domains

3.3.5.1. Initial understanding and current understanding of weird experiences

Concern about weird experiences was associated with greater acceptance and capacity to cope, and avoidance of weird experiences was associated with later understanding that weird experiences were normal and common.

3.3.5.2. Initial understanding of weird experiences and response to program

Avoidance of weird experiences was related not only to perceptions that the program normalized these experiences through education, but also with the tendency to doubt the effectiveness of the program and likely level of engagement with it.

3.3.5.3. Current understanding of weird experiences and response to program

Perceiving weird experiences as normal and common was associated with the perception that the program normalized experiences through education, while greater self-awareness was associated with finding the strategies useful.

3.3.5.4. Response to program and context of use

Self-monitoring was considered valuable, and associated with using the program in low-stress situations.

4. Discussion

This study explored the acceptability, usability and short term outcomes of the OnTrack Get Real program in 12 young people who reported at least one PLE in the previous 3 months as well as current anxiety and depressive symptoms. Both qualitative and quantitative feedback suggested that the Get Real program had high levels of acceptability and perceived utility among users. Most participants (83%) thought that the program was useful, and 58% reported that it was useful for managing PLEs as well as reducing associated distress. It was also found to result in significant reductions in the number and frequency of PLEs as well as the level of distress associated with them at the 3-month follow-up. While these reductions in PLEs and distress had moderate to large effect sizes, they could also be related to other factors apart from the website, due to the uncontrolled nature of this study.

Qualitative data indicated that participants initially felt concerned, confused and distressed about their PLEs, and were keen to understand them and find a cause. These are common responses to PLEs reported in previous research (Varghese et al., 2011). We anticipated that negative reactions to PLEs could be reduced by providing relevant information to first normalize PLEs, emphasizing the low risk of psychosis, providing simple strategies for managing PLEs and encouraging appropriate help seeking when required. Participant feedback on the Get Real program partially supports this. Many said that their current understanding of PLEs had changed: They now viewed weird experiences as normal and common, and reported greater self-awareness about their responses to them, together with an improved capacity to cope with and accept their experiences. These perceptions were similar to the change processes elicited by face-to-face CBT and web-based CBT programs (Dudley and Turkington, 2011).

Participants valued the program’s focus on normalizing PLEs, reporting that the information provided helped put their PLEs into perspective. Positive feedback was also provided on the coping strategies contained in the program its encouragement of self-monitoring. Some suggested that the information needed to be more personalized. To address this issue, the revised version of the website automatically populates relevant sections of the program with users self-reported PLEs. Users are also able to track their PLEs over time. The revised
program also provides examples of positive user feedback and additional information on the evidence base for brief CBT strategies used in the program, to increase motivation to use the program and reduce concerns about its effectiveness. The addition of a therapist coach to the delivery of the Get Real program could also facilitate further personalization, and would be likely to increase the impact of the program (Spek et al., 2007). The addition of a moderated peer support forum to the program, could be another strategy to increase its impact (Horgan et al., 2013).

We had anticipated that the program would be used when PLEs were occurring or in crisis situations. However, respondents tended to use the program in low-stress situations, which may have assisted greater learning. Translation of the program to a mobile or tablet app may increase the chance that the program is used as a coping strategy during PLEs and enhance generalization. Consistent with previous research on web program use, Get Real was generally used only for short periods of time. We expected this possibility, and designed the program to be suitable for delivery in a single session (if desired), while also providing users access to material from the site at the time. It remains to be seen whether a brief duration of access to the program limits its impact, and whether additional elements are required to increase program engagement, completion and repeat use. It may be—as in some other programs (Cavanagh et al., 2013)—that a brief intervention is all that is required to have an effect. Quantitative feedback indicated that 50% of the users thought that the program length was appropriate, but 42% believed that it could have been longer.

The small sample size, as well as the time-limited and uncontrolled nature of the Get Real trial, limits the conclusions that can be made from the quantitative data. Nevertheless the sample size was adequate for CQR, and the congruence between the results of the qualitative and quantitative data gives confidence in the acceptability, usability and perceived utility of the program. The participants may not have been representative of young people with PLEs due to self-selection bias. For example, a sample with less education and/or more frequent or distressing PLEs may lack sufficient motivation to engage with the program and may find that it provides insufficient assistance or support. Further testing among a larger and more diverse sample is needed.

5. Conclusions

Our results suggest that Get Real, as an intervention for PLEs, has moderate to high levels of acceptability and usability, and may have a positive impact on PLEs. Further research is required to determine the programs’ efficacy in controlled trials.

Existing face-to-face interventions run the risk of young people waiting until symptoms are recurrent or severe before they seek help. The web-based delivery of key early intervention strategies can dramatically increase treatment access and facilitate earlier help-seeking (when required). Integration of web, mobile or tablet interventions targeting PLEs into mass marketing of early detection and intervention programs for psychosis, is critical for the substantial community impact of these programs.

Acknowledgments

The researchers would like to acknowledge Queensland Health for their funding of the development of Get Real, and its programming by Steven Edge and Jeremy Gibson. The assistance of Professor Robert King, Kristen Tulloch and Nina Pocuca with the analyses of the qualitative responses is also acknowledged. Associate Professor Leanne Hides is supported by an Australian Research Council Future Fellowship.

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