Developing a Peer Support Protocol for Improving Veterans' Engagement to Computer-Delivered Cognitive Behavioural Therapy

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Background: Computer-delivered cognitive behavioural therapy (cCBT) is an effective alternative to provider-delivered treatment for depression and anxiety, but high attrition poses a significant challenge to its use. Peer support is a feasible approach to improving cCBT engagement, but less is known about its acceptability among Veterans. Aims: To obtain feedback from Veterans (n = 24) with depression and/or anxiety on their preferences for (a) activities of Veterans Administration Peer Support Specialists (VA PSS) in helping Veterans use Moving Forward, a cCBT-based protocol developed by VA, and (b) methods for delivering support to Veterans using this programme. Method: Four focus groups (5-7 Veterans per group) provided feedback to be used in the development of a peer-supported engagement intervention to help Veterans with depression and anxiety use Moving Forward. Content areas included roles that a VA PSS might play in supporting the use of and engagement in Moving Forward, as well as methods of delivering that support. Results: Veteran preferences for PSS activity focused on practical aspects of using Moving Forward, including orientation to the programme, technical support, and monitoring progress. Feedback also suggested that Veterans preferred more personal roles for the PSS, including emotional support, as well as application of Moving Forward to 'real life' problems. Conclusions: The findings extend the literature on online, patient-facing mental health protocols by identifying emotional support and 'real life' skills application as Veteran-preferred components of a peer-support protocol designed to enhance use of and engagement in cCBT for depression and anxiety.

Keywords: computer-based cognitive behavioural therapy, mental health, peer support, treatment engagement.

Introduction

Rates of depression and anxiety are high among US Military Veterans, both of which can have a significant effect on Veterans' health and functioning. A study by Hoge et al. (2004),

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found that 15 and 17% of Veterans deployed to Iraq screened positive for depression and anxiety post-deployment, respectively. Veterans with depression and anxiety have high rates of suicide risk (Pfeiffer et al., 2009), eating, alcohol and nicotine disorders (Curry et al., 2014), pain (Runnals et al., 2013), and unemployment (Cohen et al., 2013), demonstrating the health burden of these conditions.

Unfortunately, provider-delivered treatment for depression and anxiety are underutilized among Veterans. In a large national study (Mott et al., 2014), only 23–26% of Veterans diagnosed with depression or anxiety sought out US Department of Veterans Affairs (VA) provider-delivered mental health services, and those who did often failed to complete the recommended course of treatment. Similarly, in a study of Operation Enduring Freedom/Operation Iraqi Freedom (OEF/OIF) Veterans enrolled in the VA between 2002 and 2008, 9–27% of Veterans with post-traumatic stress disorder (PTSD) and other (e.g. depression) mental health diagnoses were found to have attended the recommended number of treatment sessions suggesting that relatively few Veterans with these conditions obtain appropriate care (Seal et al., 2010).

Several factors may contribute to low rates of using provider-delivered mental health treatments among Veterans with depression and anxiety. Barriers to mental health help seeking include distrust of providers, feeling embarrassed or weak (Hoge et al., 2004), stigma (Mittal et al., 2013), unfavourable prior treatment experience(s) (Fox et al., 2015), being too busy (Garcia et al., 2014), and difficulty seeking help and scheduling an appointment (Pietrzak et al., 2009). Therefore, alternatives to provider-delivered interventions that help overcome potential barriers to help seeking are needed to help Veterans utilize appropriate mental health care.

Computer-delivered cognitive behavioural therapy (cCBT) is an effective alternative to provider-delivered care for treating depression and anxiety (Proudfoot et al., 2004). A large review of 26 randomized controlled trials (RCTs) found that cCBT can reduce symptoms of depression among adults with subthreshold depression (Cohen's *d* range = 0.30 to 0.65), major depressive disorder (Cohen's d = 0.65), and anxiety disorders, including panic disorder and social phobia (Cohen's *d* range = 0.29 to 1.74; Griffiths et al., 2010). A recent meta-analysis concluded that cCBT interventions can result in small but significant reductions in depressive symptoms post-treatment (Cohen's d = 0.28), with treatment effects sustained at 12-month follow-up (Cohen's d = 0.27) for adults with subthreshold levels of depression or major depressive disorder (Cujpers et al., 2011). Similarly, a computer therapy meta-analysis (Andrews et al., 2010) identified 22 RCTs from systematic reviews and meta-analyses and determined that cCBT for depression and anxiety is practical, acceptable and effective, especially for those who do not wish to engage in clinic-based care.

Despite the effectiveness of cCBT, high attrition is a significant challenge to its utilization as an approach to treatment for depression and anxiety, especially when it is used as a standalone intervention with no person-delivered support (Cavanagh, 2010). Among people with mild to moderate depression receiving eight sessions of cCBT, researchers found that 38% of patients did not complete the initial session and only 14% completed all sessions (de Graaf et al., 2009). One large literature review showed that few individuals (median 38%) with depression and anxiety recruited for clinical trials completed an initial session of cCBT, about half of those (median 56%) completed a full course of treatment, and cCBT participants were twice as likely to drop out as those in control conditions (Waller and Gilbody, 2009). These data suggest that there is a need to develop methods for improving utilization and engagement of cCBT among people with anxiety and depression, especially Veterans, who report many challenges to utilizing mental health care.

Peer support is a feasible and promising approach to improving engagement to cCBT among Veterans. Veteran peers are currently being utilized by the VA to improve engagement to mental health services (Chinman et al., 2008). Peer support specialists (PSS) can increase Veterans' attendance to out-patient mental health treatment (Craig et al., 2004; Chinman et al., 2006), improve in-person treatment participation (Chinman et al., 2014), and may be feasible personnel for supporting Veterans in using cCBT (Nelson et al., 2014). Furthermore, the VA has recently hired several hundred PSS in accordance with the VA Mental Health Strategic Plan (Department of Veterans Affairs, 2004) making peers a feasible personnel option for addressing this care challenge.

Research consistently finds that combining brief in-person support with cCBT can result in greater reductions in depression and anxiety symptoms than when cCBT is used alone (Spek et al., 2007; Newman et al., 2011; Andersson et al., 2014). The effectiveness of a cCBT intervention depends in large part on the consistency with which it is used. Adherence to the intervention and utilization of cCBT components have long been recognized as being strongly associated with short-term outcome and predictive of long-term outcome (McHugh et al., 2009). Unfortunately, treatment fidelity has been inadequately addressed in the literature on cCBT for depression and anxiety, although researchers have begun to address it more fully in the last few years. For example, van Ballegooijen and colleagues (2014) examined treatment adherence in a meta-analysis of internet-based *versus* face-to-face CBT for depression, and found that adherence did not differ between the two modalities when guidance and clear goals for completion were provided, underscoring the critical role of peer support.

Peer-delivered support may include orienting the person to the components of cCBT; presenting ways in which cCBT and associated skills may be relevant to their presenting problems; clarifying expectations about potential outcomes; providing technical support; and helping with planning and scheduling interactions with a cCBT protocol (Marks & Cavanagh, 2009; Cavanagh, 2010). A recent meta-analysis found larger treatment effects (Cohen's d =0.61) for studies that added brief person support to cCBT when compared with studies using cCBT alone (Cohen's d = 0.25; Andersson and Cuijpers, 2009). Another meta-analysis found that when combined with brief support from a provider, cCBT for depression and anxiety produced larger symptom reductions (Cohen's d = 1.0) than cCBT alone (Cohen's d = 0.24; Spek et al., 2007), highlighting the benefit of adding brief, person-delivered support to cCBT protocols. However, to date, no peer-support protocols have been developed specifically for supporting Veterans in using online mental health protocols. This study attempts to address this gap in the literature by developing a peer-based engagement intervention to support Veterans with depression and anxiety in using a cCBT-based protocol developed by VA: Moving Forward. To achieve this aim, we conducted four focus groups with Veterans (n = 24)screening positive for depression and/or anxiety to obtain feedback on their preferences for (a) preferred activities of VA PSS in helping Veterans utilize and engage in Moving Forward, and (b) feedback on preferred methods for delivering support to Veterans using this programme.

Methods

Participants

Focus group participants were recruited through the Central Arkansas Veterans Healthcare System (CAVHS) outreach programme for Veterans serving in OIF/OEF, and via flyers placed in the waiting areas and examination rooms of the OIF/OEF primary care clinic. Inclusion criteria included: not currently on active duty; 18 years of age or older; a score of 10 or greater on the Patient Health Questionnaire (PHQ-9; Kroenke et al., 2001) or a score of 10 or greater on the Generalized Anxiety Disorder scale (GAD-7; Spitzer et al., 2006); and English speaking (Moving Forward is only available in English). Eligible Veterans received \$50 in compensation for their participation in the focus group. The study was approved by the CAVHS Institutional Review Board and Research and Development Committee.

Focus groups

Eligible Veterans were invited to participate in a one time, 2-h focus group (Basch, 1987) held at CAVHS. We conducted four separate focus groups with Veterans (n = 24; 5–7 per group), all of whom had a positive screen for depression and/or anxiety. The focus groups consisted of two parts: first, Veterans were given an overview of the Moving Forward programme, including a description of contents and modules, example webpages, videos, a questionnaire, and a basic outline of the content provided in each module. The focus group leader then presented the focus group objectives: to obtain feedback from focus group participants on the potential role(s) of a VA PSS in supporting Veterans in using and engaging in Moving Forward. Veterans were presented with examples of roles that may be served by a VA PSS based on the literature (e.g. Cavanagh, 2010). These included: orienting to the Moving Forward protocol; technical support; helping Veterans understand the applicability of Moving Forward skills to 'real life' problems; and monitoring progress and providing reminders. Opinions and feedback were also elicited from focus group members about the desirability and feasibility of a menu of methods for delivering support to be included in the prototype peer-support protocol (see Table 1).

Moving Forward

Moving Forward (http://www.veterantraining.va.gov/movingforward/index.asp) is a cCBTbased intervention designed by the US Veterans Administration and Department of Defense as part of a larger suite of web interventions designed to support Veterans in adjusting from military to civilian life. The programme was developed over many years, beginning with its inception as a face-to-face intervention to improve quality of life and functioning in Veterans with mild to moderate distress (Tenhula et al., 2014). Moving Forward is grounded in problem-solving therapy, a transdiagnostic, CBT-based intervention that has a strong efficacy evidence base (Nezu et al., 2012) and is classified by the American Psychological Association as an Empirically Supported Treatment for depression. The programme takes approximately 4–8 weeks to complete. Interactive exercises that incorporate animation, games, live video, self-assessment and practice tools are utilized throughout the programme. Programme content includes: CBT-based psychoeducation on the relationship between thoughts, feelings and behaviours, and the learning of skills for identifying unhelpful ways of thinking (Beck, 1979);

Domain	Per cent of domain codes $(n/43)$	Example quotes
Emotional support	31%	'So that's where a peer support could come in. Somebody that has been down that road with a little bit of empathy, you know.'
Orientation to Moving Forward	28%	'So just sitting down with the Veteran, pulling them to a computer, and saying, hey, this is a great programme, explain the benefits of the programme and say, hey this a good programme, I'm into it, I want you to get into it because it helped me and just sitting down with them every time you meet them, just sit them down and say, hey, where are you at with Moving Forward? Click on, log on to the computer and let's see, let's check in with Moving Forward.'
Technical support	19%	'If you could have people who – for people who have trouble with computers or something, if you could have someone who knows the programme just ask you questions and you just answer them and then work through it that way.'
Applicability of Moving Forward to 'real life' problems	12%	'Are you having any issues with jobs right now, mental health, or any issues? And they say, yeah. Well, have you heard about this programme?'
Monitoring progress/ reminders	12%	'I think if they monitor it they can come back on the next visit talk to me about previous weeks or previous month.'

Table 1. Veteran-preferred peer activities for supporting use of Moving Forward

learning behaviour therapy techniques such as relaxation, deep breathing and meditation (Masters and Burish, 1987); and learning and applying problem-solving skills (Nezu et al., 2012) for improved coping with common problems and experiences including depression and anxiety associated with readjustment from military to civilian life.

Data analytic plan

Template analysis (King et al., 2004) was used to deductively develop a template with two domains reflecting study goals – to identify Veterans' preferred activities of the PSS and preferred methods for the PSS to engage in those activities (see Tables 1 and 2). Two experienced qualitative analysts reviewed each of the focus group transcripts separately. The analysts then identified elements of each domain and recorded them in the appropriate domain on the template for each focus group. The analysts then compared the items placed in each domain and resolved any discrepancies via discussion. When the two analysts had separately completed a template for a focus group, the lead analyst compared and contrasted their findings, then summarized them into a final (i.e. combined) template for each focus group. The analysts used the results of the template analysis phase to conduct a matrix analysis (Nadin

Domain	Per cent of domain codes $(n/51)$	Example quotes
Individual meetings	39%	'Yeah, I think that would be helpful with Veterans one-on-one but not in a group setting.'
Group meetings	18%	'I do like groups; actually, I come up here [to the VA] for a group every week.'
Telephone meetings	16%	'[I would like] bare minimum a check-in, hey, I'm calling to check in on you hey, how are you doing today?'
Email contact	14%	'It seems like emails are better than leaving voicemails to me.'
Text	8%	'I think all of those are important because I text if I can't reach people over the phone.'
Other suggestions	6%	'And also like the chat thing, have the little chat thing on there too.'

Table 2. Preferred methods for delivering Moving Forward-related peer support

and Cassell, 2004). The lead analyst constructed matrices describing Veteran suggestions for each domain, which are provided in Tables 1 and 2.

Results

A total of 24 individuals agreed to participate in the focus groups. Mean age of the sample was 48 years (SD = 11.17) and most participants were male (n = 17; 71%). As a group, participants indicated symptoms consistent with moderate to severe depression and/or anxiety. The mean score on the PHQ-9 was 15.04 (SD = 5.06), and the mean for the GAD-7 was 13.58 (SD = 5.60; cut-points of 5, 10 and 15 represent mild, moderate and severe levels of depressive and anxiety symptoms on the PHQ-9 and GAD-7, respectively). Twenty-two out of 24 participants (92%) said they would be willing to use the Moving Forward programme if they were having problems with depression or anxiety, and this number rose to 23 (96%) when asked if they would be more willing if they had someone like a Veteran peer to help use it.

Preferred PSS activities

Table 1 summarizes Veteran preferences for PSS activities to promote use and engagement to the Moving Forward protocol. Veterans reported the desire to have VA PSS serve five primary roles in supporting Veterans in using Moving Forward.

A. Emotional support

Statements consistent with a need for PSS to provide emotional support were common among Veterans in our focus groups, with 31% of all peer activity-related comments fitting this category. When asked about the challenges of learning the Moving Forward programme, a Veteran suggested, 'So that's where a peer support [specialist] could come in. Somebody

that has been down that road with a little bit of empathy, you know?' Veterans also talked about fear and difficulty associated with addressing their mental health problems and seeking treatment, including online resources. For example, one Veteran said it would be helpful, 'To see someone that actually took the courage to go through it [Moving Forward] and see the results of what it did for them, for them to be a facilitator, to be an example and say, "Hey, I don't know everything you are going through, but I can simulate or I can relate to some of the things you are going through."'

B. Orientation to Moving Forward

Twenty-eight per cent of focus group feedback focused on the importance of having a PSS be familiar with the pragmatic aspects of Moving Forward. For example, one Veteran said, 'I think I would need that peer support more than anything. Somebody that has already been through it and knows the programme.' Beyond the need for practical guidance, Veterans also emphasized the role that the PSS could play as having another Veteran motivate them to use Moving Forward. When asked how a PSS might help them to get the most out of the programme, another Veteran said, '...I would be more willing [to use Moving Forward] if I had a Veteran peer to help.' This suggests that Veterans may be more open to using the programme when another Veteran is guiding them through the protocol.

C. Technical support

A significant percentage (19%) of Veteran comments were focused on a need for technical support to promote its use. Veterans emphasized the importance of being able to ask another person about completing the various modules of Moving Forward '... to kind of help you, help navigate through it with help.' Other Veterans anticipated the need to assist 'people who have trouble with computers' more generally, in addition to providing programme-specific guidance.

D. Applicability of Moving Forward to 'real life' problems

Veterans also discussed the importance of more nuanced guidance to help apply the skills learned in Moving Forward to 'real life' problems. Twelve per cent of the responses from our focus groups fit within this domain. One Veteran suggested that, as part of mental health services assessment and triage, Moving Forward could be offered as 'one aspect of [mental health] treatment.' Another Veteran suggested that a PSS might ask Veterans whether, '[they are] having any issue with jobs right now, mental health, or other issues?' and then suggested that a PSS could help with personalizing the Moving Forward programme to help address their specific concerns or problems. Veterans also discussed the challenge of using the Moving Forward programme in the face of difficulties such as having a disability, stress associated with limited income, and the potential effect these challenges have on the Veteran's sense of pride and self-sufficiency, and overall well-being. One Veteran added that 'everybody needs some encouragement' in the face of such challenges and that a PSS could play an important role in helping Veterans use Moving Forward and connecting to other needed services, when appropriate.

E. Monitoring progress

Veterans (12%) described the benefits of a PSS monitoring Veterans' progress while using the Moving Forward programme to help encourage engagement to the protocol. One Veteran said, 'I think if they monitor [use of Moving Forward], they [PSS] can come back on the next visit and say, "Well, look, this is what we are trying to do on this [module]", and talk to me about previous weeks or previous month, or whatever.'

Preferred PSS methods

Table 2 summarizes Veterans' preferences for methods for delivering preferred PSS activities. The highest percentage of comments mentioned individual, in-person meetings with a PSS (38%), and Veterans also showed some support for group, in-person meetings (18%), whereas telephone, email and 'chat' options received relatively less support.

When asked about frequency of meetings, Veterans did not indicate a strong preference, but the most common responses were 'once per week' and 'twice per week'.

Discussion

The present study obtained feedback from Veterans to guide the development of a peer-based engagement intervention to support Veterans with depression and anxiety in using Moving Forward, a cCBT-based protocol developed by VA. Focus group content was designed to solicit Veteran preferences for (a) preferred activities of VA PSS in helping Veterans utilize and engage in the Moving Forward programme, and (b) preferred methods for delivering PSS-based support to Veterans using Moving Forward. Findings from this study show that Veteran preferences for PSS activity fell into five categories of potential roles for a VA PSS. Three of these roles focused on practical aspects of using Moving Forward, including orientation to the programme, technical support, and monitoring progress. However, preferences also suggested more personal roles for the PSS, including emotional support, as well as application of Moving Forward to 'real life' problems.

One of the most commonly reported needs identified by Veterans for promoting engagement to Moving Forward was for a PSS to provide emotional support while using the programme. This finding is consistent with previous research showing that positive peer relationships can increase Veterans' use of provider-delivered mental health treatment (Chinman et al., 2013). For example, one study (Sells et al., 2006) compared patients with severe mental illness who were assigned to regular case management with those assigned a peer provider. The peer-provider group reported feeling more liked, understood and accepted by their providers, which predicted higher levels of self-reported treatment motivation 6 months later, as well as greater community treatment utilization at 12-month follow-up. Furthermore, during the first few months of the study, number of provider contacts increased among the peer-provider group, whereas the non-peer group's contacts decreased over time. Our findings extend this literature by identifying emotional support as Veteran-preferred component of a peer-support protocol designed to enhance use and engagement of online, patient-facing mental health protocols.

Veterans also reported a desire for guidance from a PSS to apply Moving Forward skills to 'real life' situations. This finding is consistent with prior research showing that Veterans

report the need to see how skills learned in the context of mental health treatment can be used to solve 'real world' problems (e.g. improving relationships and managing uncomfortable emotional experiences; Sayer et al., 2010). Veterans in the present study reported that they would prefer that the PSS help them customize the Moving Forward programme to meet their individual needs beyond the general goal of reducing depression or anxiety symptoms. Veterans expressed confidence that a Veteran PSS with knowledge of the individual Veteran and experience with the VA would be able to help them apply skills to a wide array of problems. Potential target problems such as finding a job or a place to live can be varied and complex, and may not be immediately obvious in how they relate to depression and/or anxiety. Research on problem-solving describes the concept of a 'problem' as a life situation, present or anticipated, that (a) requires an adaptive response in order to prevent immediate or long-term negative consequences, and (b) wherein an effective response is not immediately apparent or available to the person experiencing the situation due to the existence of various obstacles or barriers (Nezu et al., 2012). Veterans in this study mentioned several 'real life' problems consistent with this definition, including getting the most out of VA benefits, improving relationships, managing work problems, and obtaining employment. Importantly, Veterans said they believe that a PSS could offer problem-solving help above what they might get from Moving Forward alone because the PSS would have knowledge of both the Veteran and their individual problems, as well as experience with the Moving Forward programme that would allow them to target strategies in a meaningful way for the Veteran. Research suggests that adding a PSS to clinic-based CBT treatment may contribute to improved 'real life' outcomes, such as work stability, education and training by increasing a sense of empowerment in the patient (Repper & Carter, 2011). For example, Craig et al. (2004) found that patients with severe mental illness assigned a PSS reported improved social functioning and fewer problems and needs in areas such as work, physical health and child care. Similarly, among Veterans with severe mental illness, Chinman et al. (2013) found that peer-supported Mental Health Integrated Case Management (MHICM) yielded improvement in life domains encompassing the 'real life' areas mentioned by the Veterans in our focus groups, including quality of life, and social relationships. Our findings are important in that they highlight and further extend the PSS literature by showing the expressed preference of Veterans to have a PSS help them apply skills learned in a cCBT intervention for depression and anxiety to 'real life' situations.

The remaining activities identified by Veterans tended to focus on practical aspects of using the Moving Forward programme, including orientation to the overall programme, technical support, and help with monitoring progress. Veterans emphasized the importance of a PSS with knowledge about the Moving Forward programme to help them understand what the programme can offer in terms of skills, and also familiarity with the Moving Forward structure, interface and functionality (e.g. software compatibility problems) to help them continue through the programme. Whereas access and acceptability are acknowledged prerequisites to the implementation of an effective intervention, it is equally important to make sure the patient has the ability to use and benefit from it (Murray, 2012). Factors including computer literacy and health literacy can impact a patient's capacity for navigating a potentially complex process of reading, understanding and interpreting mental health information and applying it to their particular situations, contributions that the Veterans in our groups reported wanting from a PSS.

Veterans endorsed in-person support as their preference for connecting with a PSS to receive support while using Moving Forward. This preference over less personal (telephone or email) approaches to connecting with a PSS is consistent with research showing that Veterans are often interested in connecting with other Veterans when they need help (Laffaye et al., 2008). Although civilian life often lacks the structure and support provided by the military, working together with other Veterans may help to 'bridge that gap', particularly because many Veterans believe that they understand each other better than civilians do and that shared experience makes it easier to connect (Chinman et al., 2006).

These findings are also consistent with a recent study comparing two versions of cCBT for depression in a primary care setting (Gilbody et al., 2015). The authors report no statistically significant difference between face-to-face and cCBT interventions, indicating that the cCBT interventions were at least as effective as treatment as usual. This study also produced a companion paper (Knowles et al., 2015) in which the authors asked patients about their experiences with cCBT. They reported that the majority of participants had a mixed reaction to the programme, citing a recognition of the potential benefits against a desire for greater support when struggling with the content and delivery of the materials. The study reported in both papers utilized support that was limited to reminder calls and encouragement to participate, which participants deemed insufficient. Participants reported wanting more substantial support and monitoring, which is consistent with feedback from the Veterans in our study. The authors also noted and participants acknowledged that a higher level of support is desired and important but probably beyond the capacity of a general practitioner, which suggests a role for a blended approach in which cCBT is supplemented with support from a person and which the authors recommended be studied in their discussion. Our study represents the early stages of just such an investigation with an emphasis on support from a relatable peer and feedback from Veterans on what exactly they want from peer support to enhance engagement in a cCBT protocol. We argue that this is especially germane to Veterans who are motivated to receive care outside of a typical clinical setting.

This study has some important limitations, including its sample, which was limited to Veterans recruited in a single VA clinic and, thus, from a localized geographic area. Therefore these findings may not generalize to Veterans in other geographical locations, or to Veterans not using VA health care services. Additionally, this study investigated Veterans' preferences for PSS activities and methods for delivering such activities for the purpose of promoting engagement to Moving Forward. However, our data do not indicate whether these preferences translate into improved engagement to Moving Forward or other cCBT-based interventions, which should be the focus of future research. Despite these limitations, the findings from this study help identify Veteran-informed activities, delivered by a PSS, which may help improve engagement to an online cCBT-based intervention. Future studies are needed to determine whether these preferred activities translate into better engagement and outcomes to online cCBT protocols among Veterans with depression and anxiety.

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Ethical statements: The authors assert that all procedures contributing to this work comply with the Helsinki Declaration of 1975, and its most recent revision, and with the ethical

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