Original article

THE BRITISH PAIN SOCIETY

British Journal of Pain
2014, Vol 8(3) 98–106

DOI: 10.1177/2049463713498865
bjp.sagepub.com
SAGE

From traditional cognitive–behavioural therapy to acceptance and commitment therapy for chronic pain: a mixed-methods study of staff experiences of change

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Abstract

Health care organizations, both large and small, frequently undergo processes of change. In fact, if health care organizations are to improve over time, they must change; this includes pain services. The purpose of the present study was to examine a process of change in treatment model within a specialty interdisciplinary pain service in the UK. This change entailed a switch from traditional cognitive–behavioural therapy to a form of cognitive–behavioural therapy called acceptance and commitment therapy. An anonymous online survey, including qualitative and quantitative components, was carried out approximately 15 months after the initial introduction of the new treatment model and methods. Fourteen out of 16 current clinical staff responded to the survey. Three themes emerged in qualitative analyses: positive engagement in change; uncertainty and discomfort; and group cohesion versus discord. Quantitative results from closed questions showed a pattern of uncertainty about the superiority of one model over the other, combined with more positive views on progress reflected, and the experience of personal benefits, from adopting the new model. The psychological flexibility model, the model behind acceptance and commitment therapy, may clarify both processes in patient behaviour and processes of staff experience and skilful treatment delivery. This integration of processes on both sides of treatment delivery may be a strength of acceptance and commitment therapy.

Keywords

Acceptance and commitment therapy, chronic pain, cognitive–behavioural therapy, organizational change, service development

Introduction

Pain services ought to innovate, evolve and change. The whole business of research and treatment development, and the creating and updating of guidelines, should lead services to update their methods and models to remain consistent with the best current practice. It is understood that processes of institutional or workplace change can be complex and challenging, and can require skilful management for their success.[1–5] In fact, times of change in pain management services may produce adverse impacts on treatment outcome.[6] However, we know little about the processes involved when pain services, or other health care services, undergo changes in their methods or models of delivery. Further, we lack understanding of the direct experiences of those

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most central in such processes of service change, in this case pain service providers.

Beginning in the late 1970s and early 1980s, approaches to chronic pain based on cognitive–behavioural therapy (CBT) have become the dominant psychological approach within pain management. Multidisciplinary approaches based on CBT are considered the most clinically effective and cost-effective approaches to chronic pain available today.[7] Even so, all current approaches to chronic pain are limited to some extent, and even those supported by evidence should continue to evolve. In fact, new approaches have emerged within the family of CBT approaches for chronic pain. One of these is acceptance and commitment therapy (ACT). ACT has been fully described in a number of other sources.[8–11] Briefly, it is a form of CBT that is distinguished from traditional CBT in part by its focus on a core treatment process called 'psychological flexibility'. It focuses on promoting psychological flexibility by employing predominantly experiential treatment methods, by using such methods as exposure and metaphor and by creating a compassionate, respectful and psychologically active therapeutic relationship. There is a growing evidence base for ACT in chronic pain management, and applications of ACT in pain management appear to be increasing.[12]

A key staff change in a large multidisciplinary pain management unit in central London in September 2011 provided an opportunity to investigate clinical staff experiences of a changing treatment model and methods, in this case from traditional CBT to ACT. The purpose of this study was to qualitatively and quantitatively examine the results of a brief survey of these experiences. The rationale for this examination is that it might lead to strategies for optimizing similar processes of change within the current service, for other pain services or for other health care services, in the future.

Methods

An anonymous questionnaire was devised and disseminated to all current clinical staff members of the INPUT Pain Management Unit at St Thomas' Hospital, in London, in December 2012. The INPUT service has been in operation since 1989. During most of this time it followed a general, interdisciplinary, cognitive–behavioural approach; however, beginning in September 2011 a change in the primary model from traditional CBT to ACT was initiated. The changes were conducted through a series of brief training workshops, weekly clinical development seminars, redesign of clinical outlines and manuals, a change in the clinical measures used to better reflect processes of psychological flexibility and clinical supervision. This process is ongoing. Fifteen months after the start of this process of change, a survey was conducted to examine the views and experience of clinical staff at that point in the process of service development. In consultation with the Research and Development Department at Guy's and St Thomas' Hospital, this project was regarded as a service evaluation project and registered as a clinical audit.

Table 1. Sample characteristics of clinical team responding to the survey.

Characteristic	Number (%)	Mean (95% confidence interval)
Age (years)		41.6 (35.5–47.7)
Women	10 (71.4)	
Men	4 (28.6)	
White British	10 (71.4)	
White Irish	1 (7.1)	
White Other	3 (21.4)	
Physiotherapist	6 (42.9)	
Psychologist	4 (28.6)	
Occupational therapist	3 (21.4)	
Assistant psychologist	1 (7.1)	
Years of experience		15.6 (9.3–22)
Months at INPUT		62.1 (16.4–107.9)
Full time	8 (57.1)	
Part time	6 (42.9)	

Participants

The aim of the survey was to sample the views of as many current staff as possible but also to allow people not to participate if they did not wish to do so. Staff who were in employment in the pain management centre during the transition were invited to take part in the study. Fourteen out of 16 (87.5%) potential participants responded. Ten were women (71.4%) with a mean age of 41.6 years (95% confidence interval (CI) 35.5–47.7). The majority were white British (n = 10; 71.4%). There were six physiotherapists (42.9%), four psychologists (28.6%), three occupational therapists (21.4%) and one assistant psychologist (7.1%), with the majority working full time (57.1%). The mean years of experience was 15.6 (95% CI 9.3-22.0) and the mean months working at the pain management centre was 62.1 (95% CI 16.4–107.9). A summary of participant characteristics is included in Table 1. Reasons for no response were not collected, given the limited number and the nature of the research.

Procedure

The survey content for this study was devised by the two authors. It was administered using SurveyMonkey (www.surveymonkey.com). The use of an online administration platform allowed all data to be collected anonymously and the respondents to provide rich free-text descriptions of their views.

All potential participants, including all current clinical staff, received an email invitation to take part in the survey. The invitation included a unique online link to the survey. The survey questionnaire contained three open-ended questions and six closed questions (see Appendix) and, again, all responses were anonymous. Demographic details were collected separately on a questionnaire that was not linked to the other set of responses. All quantitative answers and transcripts were entered into a database and demographic details were entered into a second database for summary and analysis.

Analyses

Framework analysis was used as the approach to the qualitative data with respect to the three open-ended questions. This was considered an appropriate approach, as the answers provided were in text format and considered staff attitudes towards a specific event.[13] This approach is referred to as a systematic way of interpreting information through a matrix blending empirical investigation in creative study,[14] and aims primarily to report patterns within the data.[15] Framework analysis lies within the phenomenological approach, which attempts to understand beliefs and attitudes about a topic from a realist perspective.[16] Interpretative phenomenological analysis, another possible option, was not deemed the best approach, given the relatively large sample involved.[13] A realist stance assumes that participants are reporting the truth in their experience, so the language the participants use is considered by the researcher as a direct reflection of participants' meanings. Within the realist framework, an inductive approach is adopted to ensure that interpretations are grounded directly in the data obtained.[17]

An advantage of the use of an online survey platform is that no audiotaping and transcription were needed. For the purpose of analysis, the researcher simply read all the directly submitted transcripts, first gaining a general familiarity with all of the content and then identifying codes for specific categories of content. Codes that appeared similar were grouped to generate sub-themes. Sub-themes where patterns were observed were clustered to create main themes. Tabulation created a concise way to highlight the emergence of sub-themes throughout the transcripts and across cases in a structured manner. Patterns between the themes were then considered. Triangulation was utilized through the work of a second researcher, who independently read the transcripts and identified themes using the same method. Both researchers subsequently discussed their interpretations to derive a consensus, clarify themes, establish reliability and minimize the influence of potential individual biases. Data allocated to the semantic themes were entered into a matrix that was used to systematically review links and generate the weighting or frequency of appearance of themes throughout the dataset. The data were then scrutinized for disconfirming evidence of the themes that were identified to reduce potential confirmation bias. Finally, for validation, summary findings were disseminated to the participants to consider whether or not their viewpoints had been faithfully represented.

The responses to the closed questions were summarized to provide a potentially converging perspective on the qualitative results.

Results

Three main themes emerged from the qualitative results. These were 'Positive engagement with change', 'Staff experiences of uncertainty and discomfort' and 'Impacts on group cohesion and discord'. Within each theme, sub-themes were also identified. A summary is included in Table 2.

Positive engagement with change

In general, staff members reported that the transition generated a renewed interest in the service and an appreciation of learning. Additionally, some staff seemed to engage in ACT on a personal level and acknowledge the benefits of the processes involved in psychological flexibility.

Improved awareness, self-reflection and self-development. Thirteen members of staff described applying ACT to their own behaviour and noted developments in how they approach their clinical work.

> I believe my group facilitation has improved considerably.
>
> (Participant 1)

> It has made me think much more about my values and how close my actions are to them. This hasn't always been comfortable, but it has made me do some small things directly out of an awareness that there are some things that are important to me that I'm not making enough time for at the moment.
>
> (Participant 3)

Positive attitudes towards ACT as an alternative approach. Some staff appeared to favour ACT-based

Table 2. Summary of themes and sub-themes from qualitative analyses.

Theme	Sub-themes
Positive engagement with change	Improved awareness, self-reflection and self-development
	Positive attitudes towards ACT as an alternative approach
	Excitement in learning new ideas and practices
	Renewed interest in engagement and service delivery
Staff experiences of anxiety and discomfort	Uncertainty with implementation and delivery
	Staff feeling deskilled, invalidated and insecure
	Staff questioning effectiveness of approach
	Concerns over loss of methods from past or that 'mixed models' are better
Impacts on group cohesion and discord	Feelings of professional segregation
	Emergence of staff cohesiveness throughout transition

methods over previous methods, and showed an appreciation for the emphasis on values-guided behaviour encouraged through a focus on treatment processes.

> It feels more applicable and beneficial than retrospectively or prospectively examining thoughts about exercise or activity.
>
> (Participant 2)

> While I think CBT can be very helpful, I think the very concept of 'challenging thoughts' suggests that you are judging the thoughts are a bad thing. ACT seems to be less judging, more acknowledging, and more about what to do given that those thoughts are going on for you.
>
> (Participant 5)

Excitement in learning new ideas and practices. As part of the change in model, a new meeting structure was created, including a weekly 'clinical development' meeting. Some staff appeared to appreciate the focus on research and weekly team meetings aiming to broaden skills and examine current practices. Some staff believed the change allowed more creativity.

> Have felt that I have intellectual freedom to critique my clinical practice independent of other's experience/ national guidelines as no guidelines exist; this has been intellectually stimulating.
>
> (Participant 14)

Renewed interest in engagement and service delivery. Many staff members indicated that more consideration has gone into session delivery and they experience this as an enjoyable process.

> More challenging on a professional basis is having to examine how to deliver the service to patients on an ACT basis … I enjoy the freedom to experiment more with sessions.
>
> (Participant 2)

> Sessions are delivered more thoughtfully. Sessions are more tailored to group and individual needs.
>
> (Participant 6)

Staff experiencing anxiety and discomfort

Thirteen staff members described the changes as having made them question the content of sessions they used to deliver and feel that learning new ideas can be daunting. Some staff expressed feelings of uncertainty within themselves, and with ACT as an approach. Some staff appeared self-critical, and indicated that the change had created a sense of vulnerability. Additionally, along with anxiety and uncertainty, there was some team vacillation; some staff seemed to feel that some previous methods were useful and should remain.

Uncertainty with implementation and delivery. Ten members of staff appeared to express that they were finding it challenging to know what content to deliver in sessions. There appeared concerns with lack of consistency and that the implementation had not been explicitly discussed at all stages throughout the transition.

> [Potential problems] created a lack of consistency in the messages/material being delivered by different members of staff across the teams as some staff members are more resistant to change, uncertainty around what group sessions should/shouldn't be delivered.
>
> (Participant 8)

Staff feeling deskilled, invalidated and insecure. Some staff voiced concerns with their competence with the new approach, and seem to be questioning their value as a professional.

> Despite staff having a better understanding, I feel that staff do not feel as competent in delivering the new therapeutic approach.
>
> (Participant 4)

Table 3. Responses from clinical staff to closed questions on their views towards ACT and the change from traditional CBT to ACT.

	Worse (*n* (%))	Don't know (*n* (%))	Better (*n* (%))
Compared with CBT for chronic pain ACT is:	0 (0)	8 (57.1)	6 (42.9)
	No (*n* (%))	Not sure (*n* (%))	Yes (*n* (%))
Would you recommend that other teams make similar changes in their services?	0 (0)	8 (57.1)	6 (42.9)
Do you feel that this change to ACT from CBT is likely to produce better outcomes for patients?	1 (7.1)	12 (85.7)	1 (7.1)
Do you personally feel that the development of ACT for chronic pain represents progress?	0 (0)	5 (35.7)	9 (64.3)
Does delivering ACT improve your satisfaction with your work?	1 (7.1)	5 (35.7)	8 (57.1)
Do you feel delivering ACT has benefited you in your personal life?	1 (7.1)	2 (14.3)	11 (78.6)

Staff questioning the effectiveness of the approach. Some staff seemed either unsure of how patients receive ACT or to think that patients did not receive it as well as previous methods and they question whether it has beneficial outcomes.

> It would have been helpful at first if we were assured that the results of the new approach showed better long term results for patients.
>
> (Participant 9)

Concerns over loss of methods from past or that 'mixed models' are better. There was concern expressed from some staff about the transition having a negative impact on other therapeutic models and that techniques from traditional models could still be beneficial.

> The potential problems are that sometimes it doesn't feel like there is room for using a mixture of models which I think would be a good skill for us all to have and would avoid the pitfalls of becoming rigid in a new model alone.
>
> (Participant 7)

Change creating group cohesion and discord

Some members of staff indicated that the transition had created a sense of support among staff, whereas others felt there was a sense of tension between different professional disciplines.

Feelings of professional segregation. Some staff implied that professional roles were unclear and that some disciplines were provided with more guidance than others.

> It also appears that the staff group may feel that it is a psychology only based service and the physiotherapists and OTs [occupational therapists] have often commented that their role is now unclear.
>
> (Participant 13)

Emergence of staff cohesiveness throughout transition. There was a sense that staff felt that the staff team members are supportive of one another and of how they are working together to make sense of the change.

> These sessions not only help me learn, but they have also been helpful forums for discussion openly how we are all trying to get our heads around the transition.
>
> (Participant 3)

Summary of multiple-choice items

A quantitative summary of the closed multiple-choice questions showed a mixed picture of attitudes (see Table 3). These data highlight that fewer than half (42.9%) of the respondents believe ACT is a generally better approach than traditional CBT in the treatment of chronic pain, over half (57.1%) of staff did not know which is likely to be better and none reported believing it to be worse. The majority of staff members were positive about whether or not ACT represents progress in pain management (64.3%), and about the personal benefits (78.6%) and job satisfaction (57.1%). At the same time, the majority of staff seemed uncertain of whether or not they would recommend ACT to other teams (57.1%) or whether or not it is likely to specifically produce better outcomes than traditional methods (85.7%).

Discussion

The brief survey study presented here provides potential insights into experiences of clinical staff during changes in treatment model and methods in an interdisciplinary chronic pain treatment context. Qualitative analyses showed that three themes may characterize these experiences: positive engagement in learning and change; anxiety and discomfort; and interdisciplinary cohesion and discord. Quantitative results highlight the experience of uncertainty. Essentially, the team was split on the issue of whether or not ACT is better than traditional CBT and whether or not other pain management teams should be encouraged to adopt this approach. There were two questions on which this particular clinical team was clearest. Most viewed the introduction of ACT as progress in the field, and to a large degree they reported that the experience of the model and methods has benefited them personally.

The finding that anxiety is a part of change, and a part of learning ACT, is consistent with an earlier study of trainee psychologists in Finland.[18] In this study, 14 trainees were provided with instruction and supervision in traditional CBT and ACT. Twenty-eight people seeking psychological treatment for a range of problems were randomly assigned to either ACT or CBT and each therapist treated one person with each approach. The people treated with ACT achieved significantly better clinical improvements, including improvements in general mental health and social functioning. At the same time, the trainees initially reported feeling less knowledgeable about ACT and more anxious throughout their delivery of the ACT methods than CBT. Hence, in this earlier study as in the current one, and as is normal in life, learning new approaches involves uncertainty and anxiety. This is natural and yet, according to these earlier results, it does not have to impede performance and a positive impact.

Psychological flexibility, the core treatment process in ACT, is defined as the capacity to persist or to change behaviour in a way that is (a) open to experiences that are encountered, even if these are uncomfortable; (b) connected to what is present in the situation, in the current moment; and (c) guided by goals and values.[8] It is behaviour that is aware, sensitive and engaged. It is not free of uncertainty and anxiety; it embraces uncertainty and anxiety when these are partly successful goal-directed acts. If psychological flexibility is successfully incorporated into treatment delivery, it will be a quality that is present both in the patient and in the treatment provider. The applicability of this model to treatment provider behaviour may be readily apparent. In short, according to this model, treatment provider behaviour that is more open, aware, sensitive, engaged and guided by goals and treatment principles is likely to be more effective. We suggest that behaviour patterns with these same qualities are also more likely to effectively navigate service changes.

For those planning service changes within pain management centres, there may be lessons to consider here. The experience of, essentially, engagement and interest in learning that arose as a theme may not require a strategy, as these represent positive effects of introducing a new model and methods. We assume that these are probably not specific effects of ACT and are more likely to be general effects of adopting an approach to service improvement and new skills training. The other emerging themes of uncertainty, anxiety and potential team discord probably do deserve some strategic consideration.

The explicit strategy employed in supporting the process of change in model and methods here was to provide staff with training experiences that were designed loosely. Before any change was planned, the Unit already had an important advantage: a highly skilled and expert team. It was regarded as reasonable that such a team could, with exposure to a few core principles and opportunities for practice, learn and develop their own methods for direct implementation. Here the approach was to highlight the psychological flexibility model and employ specific experiences of the model that were designed to address examples in individual staff members' behaviour, and then to encourage creative ways to employ the model within the staff members' already extensive experience of clinical methods. This looseness may be the basis for the frequent comments that people felt they had freedom. At the same time, this looseness presents a natural basis for uncertainty and anxiety. The current study cannot determine whether or not this general training strategy is a more effective way to promote service change; however, future studies may address this question.

From a perspective consistent with the psychological flexibility model, a way to provide staff support during a process of service change includes the following: (a) determine specific goals; (b) share these goals with the team, create a consensus or revise the goals; (c) analyse the required staff behaviour change process in terms that include psychological flexibility, present skills, barriers and new skills needed; (d) engage staff collaboratively in demonstrations, practice and rehearsal; (e) emphasize experiential training methods and the building of general capacities, rather than didactic methods, specific instructions and rigid guides; (f) assess the effects of training, usually informally; and (g) generalize and repeat.

A carefully pre-scripted treatment session can help a therapist to deliver a treatment session. This can be a useful training method, particularly when a therapist is

inexperienced. However, experienced therapists often, eventually, want freedom to respond to what happens in sessions based on their own moment-to-moment observations and on their high level of existing skills. We suggest that this requires setting aside the script. As soon as the script is set aside, this can include sitting with moments of not knowing what to do next, and this requires the openness to uncertainty and anxiety, and the connection to the situation at hand that we describe here, also known as psychological flexibility. If this is the direction that training takes, it is then appropriate to, as we call it, 'normalize' the experience of uncertainty and anxiety, to empathize with the thoughts of incompetency and doubts that emerge here. This is not to try to take them away, but to validate them, and eventually reduce the influence they exert in blocking engagement with the delivery of treatment.

On the issue of potential team discord, there may be similar strategies of normalizing, responding with empathy and validating. We value team working and team cohesion. Consistent team delivery also has practical advantages: team members become more interchangeable and can be applied more flexibly during treatment delivery; processes of patient behaviour change can be driven more consistently and more intensively; there is less confusion for patients; and so on. At the same time, a certain degree of competition or discord is a normal part of team work. If people value a range of points of view, sometimes these will not agree. If people care about the goals of the shared activity, they will have feelings when they perceive these as blocked or at risk, and may express these feelings.

In retrospect, the perceptions of interdisciplinary differences and favouritism, and the potential team discord that might arise from these, could have been predicted and there may have been ways to minimize them. In a sense, staff from all disciplines were learning principles of ACT and psychological flexibility but were not finding it as easy to translate these directly into methods that could be delivered in sessions. Psychological methods to create psychological flexibility are well known and available in abundance.[9,10] Methods for nursing, occupational therapy and physiotherapy that can either directly promote psychological flexibility or, at least, clearly operate in an ACT-consistent fashion are less well mapped out and need to be identified or created. This is an interesting opportunity, and at the same time it may leave non-psychologists feeling disadvantaged. Those whose role is to deliver nursing, occupational therapy or physiotherapy treatment content ought to be offered more support and direct training in how to select, modify or refine some of their methods, or design new ones, to fit successfully within the shifting treatment approach.

Professional boundaries can present challenges in interdisciplinary working. Perhaps there is no guaranteed way to manage these perfectly. Once again, it seems to be the case that, where there is potential, there are also potential pitfalls. Creating integrated interdisciplinary teams can be immensely stimulating and therapeutically powerful. However, the roles involved, and other ways to categorize people and ourselves, can also create competition and restrictions. The process of psychological flexibility would seem able to lessen some of these competitive and restricting processes by helping people to sometimes take their roles less seriously, such as when they create problems within teams, and with regard to the goals of the service.

To summarize some of the key lessons learned, skilled and experienced therapists spend years learning the approaches and methods they use. This cannot be changed at the flick of a switch. Experience in this centre and results from the present study suggest the following steps to facilitate change: (a) assure leadership and a substantial investment in ongoing training, such as the weekly clinical development seminar used here; (b) apply the psychological model directly and actively to the behaviour of treatment providers and build up their skills in openness, connectedness and engagement; and (c) actively create more equitable engagement from the separate disciplines involved – this seems likely to decrease potential discord, and, a point not made so far, (d) greater resource devoted to supporting new learning will create swifter integration of change and achievement of competency achieved.[19] A sometimes precious resource and great facilitator is the use of one-to-one supervision within the team as needed, and the process of providing observation of treatment sessions followed by feedback and discussion.

The current study has a number of important limitations. This study was conducted within one particular pain management service, and results here may not generalize to other centres. Although a clear majority of staff responded to the short survey, the data were gathered from just 14 professionals. This small number means we were limited in the analyses we could perform. It also means that further studies will be needed to determine the reliability of the observations gathered here. As this was an observational study conducted at one point in time, it does not provide a basis for inferring any causal relations in the data. Identifying these will require more sophisticated research designs, such as experiments or training trials. Additionally, this study was conducted from within the service. Even though data were gathered anonymously, there could be biases in the results from the fact that those conducting the survey play roles in the service, are known

to the participants in the study and are not disinterested in the results. Finally, we consider the use of an online system of text entry to be an innovative way to collect data. However, it may have the disadvantage of placing a limit on the amount of content we were able to acquire. Obviously, for most people, it is easier to speak than to type.

In summary, it appears that there is interest, uncertainty and anxiety, and potentially discordant interpersonal effects generated when a pain service undergoes a process of treatment development and change. Naturally, clinical staff should be provided with the information and knowledge they need during processes of change in any part of their work environment. Likewise, it is good to avoid team discord by actively promoting integration and agreement when possible. At some point, however, the attempts to inform, clarify and reduce discord may be ineffective, and other modes of promoting service development and skills training may be needed. When uncertainty, anxiety, resistance and discord present barriers and are unmovable, perhaps it is time to embrace these, keep a focus on goals, and promote active engagement with the process of change.

Funding

This service evaluation project was conducted without funding from outside the service. This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

Declaration of conflicting interests

The authors declare that they do not have any conflict of interest.

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Appendix: Summary content of staff survey

Introduction: The service has recently undergone changes in the therapeutic model, including methods, therapeutic processes, and therapeutic stance, from traditional CBT to ACT. Please include as much detail as possible in the questions requiring writing responses.

1. Please can you describe your perceptions of how this has affected the service in general, including both potential problems and benefits?
2. Please can you describe how the developments of the service impact your performance and

experience of your work, again, both in terms of any problems and benefits?

3. We are also interested in how learning and practicing ACT can affect us. Please can you describe any affects that your experience of ACT has had in your personal life?
4. Compared with ACBT for chronic pain ACT is:
   a. Worse
   b. The same
   c. Better
5. Would you recommend that other teams make similar changes in their service
   a. No
   b. Not sure
   c. Yes
6. Do you feel that this change to ACT from CBT is likely to produce better outcomes for patients?
   a. No
   b. Not sure
   c. Yes
7. Do you personally feel that the development of ACT for chronic pain represents progress?
   a. No
   b. Not sure
   c. Yes
8. Does delivering ACT improve your satisfaction with your work?
   a. No
   b. Not sure
   c. Yes
9. Do you feel that delivering ACT has benefited you in your personal life?
   a. No
   b. Not sure
   c. Yes