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Commentary on A Novel Group Therapeutic Format in Cognitive Behavioral Treatment for Clients with Social Phobia in a Training Setting: A Case Study of One Treatment Group with Nine Clients

Handling Multiple Levels of Data and Multiple Research Questions in an Embedded Case Study: Methodological Challenges

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ABSTRACT

Hougaard et al. (2008) report an embedded case study in which nine socially phobic clients were treated as part of a therapy program, which incorporated individual and group therapy and which was largely delivered by trainee clinicians. An important focus of the report is on the effectiveness of their treatment model. This commentary draws attention to the size and complexity of the available data, and it suggests ways in which the use of a more explicitly interpretative methodology can draw out additional dimensions of the data and allow a more systematic contribution to be made to the development of clinical theory.

Key words: cognitive-behavior therapy; effectiveness research; hermeneutic methods; interpretative methodology; positivist methodology; social phobia; psychotherapy training

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Hougaard et al.'s (2008) valuable account of the design and implementation of a treatment program for social phobia in a training setting is likely to be of particular interest to psychologists in similar training contexts who may be able to draw on the experiences described here in maximizing training opportunities for their students. It is also of broader interest to clinicians interested in the treatment of social phobia. Through tracking clients' progress with self-report and therapist observation measures they were able to provide good evidence for the clinical effectiveness of their intervention. The study also provides evidence that the treatment was effective when delivered in a training setting with novice therapists. In addition, in the design of their treatment, they were able to combine the advantages of working with an individual therapist with those of working in a group. This is a naturalistic study in a real life setting with the kinds of limitations and constraints found in everyday practice: clients go on holiday, take examinations, have job interviews, fail to complete assessment instruments. In treatment efficacy research it is important to have strict criteria for participant inclusion in order to safeguard the validity of conclusions drawn from the data. By contrast, this kind of study examines effectiveness and transportability, that is the extent to which treatments that have been shown to work in randomized controlled trials can be shown to work in everyday settings.

In contrast to the majority of case studies published in *Pragmatic Case Studies in Psychotherapy*, this is not a single-level, but an embedded case study (Yin, 2003): that is, a study of the implementation of a group treatment program within which are embedded the treatment experiences of the nine individual clients themselves. By combining individual pragmatic case studies (Fishman, 2005) with multilevel, group-therapy qualitative and quantitative data, Hougaard et al.'s project is unique and is charting out new ground. Specifically, the whole program included arrangements for client recruitment and assessment, case formulation, treatment planning and implementation of the four intervention phases, and ongoing supervision. The research aspect involved collection of various kinds of data, and data analysis, which included quantitative analyses and the students' writing of case studies. Embedded within all this were the experiences of the clients as well as of the students and the trainers/supervisors. There are several potential foci for analysis here. One is the case series of clients going through the program. Within the treatment there are the individual sessions as well as the group meetings with all that that implies in terms of group processes. Another potential focus is the cohort of students participating as part of their training. Yet another is the complex process between student and supervisor as they planned the details of treatment for each client session by session. Even though there was little formal quantitative data from the students there is a great deal of qualitative data, including their responses to participation, their effectiveness as therapists, the supervisors' experience of supervising them, and even the nature and quality of their case study writing.

Of course, it would be impossible to tackle all these aspects in a single article and the authors have rightly selected a limited set of objectives for their present contribution. Nevertheless, the very complexity of such a set of data provides the opportunity to explore complicated methodological questions that are not necessarily raised when writing individual case studies. Since Hougaard et al. (2008) do a fine job in laying out the quantitative aspects of their analysis, in this commentary I will discuss interpretive opportunities in their data that these authors did not fully develop.

REPORTING RESEARCH FINDINGS:
THE IMPORTANCE OF RESEARCH QUESTIONS

When it come to identifying the questions to be investigated by a research project, there is a marked difference between traditional positivist research that uses parametric or non-parametric statistical methods, and hermeneutic enquiry that largely relies on qualitative methods. The former approach places an emphasis on taking a research question and translating it into one or more rigorous hypotheses about the behavior of quantified scores, such as correlations between them or differences between means (Durrheim, 1999). By contrast, hermeneutic enquiry typically begins with broader questions and answers them by interrogating qualitative data from, for example, interviews, therapy transcripts, or participant observation (Kvale, 1996; Smith & Osborn, 2003; Terre Blanche and Kelly, 1999). There is a complementarity between the two approaches in that hermeneutic enquiry can serve to build complex and differentiated bodies of theory. Hypothesis testing using statistical methods can provide very rigorous tests of specific propositions, but can only test theories that have already been developed by other means. However, hypothesis testing is not limited to studies using

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statistical methods. It can also be achieved by qualitative methods of research (Edwards, Dattilio, and Bromley, 2004).

In contrast to a positivist methodology, where the main focus is usually on the rigorous testing of hypotheses advanced at the outset of the study, a hermeneutic methodology allows for and even encourages the emergence of questions as the data are gathered and examined more closely. This means that data are expected to be used to examine and answer not only questions stated at the outset by the researchers, but also new ones. The larger and more diversified the body of data that is gathered, the more questions it may be able to answer. Qualitative data can be very rich and complex, and until the researchers engage with it they do not know what kind of interrogation it might be able to sustain (Terre Blanche and Kelly, 1999).

Pragmatists will always try to get the best of both worlds, and the pragmatic case study (Fishman, 2005) has features of both the positivist and hermeneutic approaches. The case narrative is a tool for hermeneutic enquiry that can provide evidence bearing on a range of questions relevant to clinical theory, and, in particular can serve as a means of building or refining grounded theory relevant to the assessment and treatment of particular clinical problems. In this way it can contribute to the development of "empirically grounded clinical interventions" (Salkovskis, 2002) and the testing and refinement of case law — to use Bromley's (1986) metaphor from jurisprudence. The collection of quantified self-report data which can be displayed in graphical form also lends itself to hermeneutic enquiry because, in conjunction with the case narrative, it can provide evidence for the impact of specific interventions (or of extra-therapy events) as well of the treatment as a whole. However, it may also provide a basis for more formal statistical analysis such as the calculation of effect sizes or comparisons with normative data from other studies. Hougaard et al.'s (2008) study includes a case series large enough to provide a basis for group means from which effect sizes can be calculated, allowing direct comparison with group means from other studies.

Writing a report is the final stage of the research process and in the positivist paradigm, it can be conceived of as a formal process of reporting the rationale, methods and procedures of the study, followed by the results and a discussion. Years ago I was told about a researcher, who when conducting a research project, used to write the whole paper except for the results, discussion and conclusions, before the data had even been collected. Within the hermeneutic paradigm, reporting is much less straightforward. Researchers need to reflect in some depth on the material they have collected and ask what they have discovered that is value and worth reporting on. Only on this basis can they plan the way in which they will report their findings. There is thus a recursive process in which an evaluation of what useful conclusions can be drawn determines the structure and content of the whole report.

In practice the distinction between quantitative and qualitative methods with respect to report writing is less dichotomous than this, since this kind of recursive and interpretive process is also important in reporting many studies in which hypotheses are formally examined by means of statistical analysis of quantitative data—I recall one of my early supervisors giving me a lesson in the art of "data snooping." But a more positivist approach does not always own up to this. In any event, the distinction is helpful in evaluating Hougaard et al.'s (2008) case study.

Specifically, in my view the structure of their report does a fine job in terms of traditional positivist norms of reporting, but does not mine a good deal of the richness in their data that derives from a hermeneutic approach to identifying and investigating research questions. In my comments I will thus focus on this latter approach.

OPPORTUNITIES FOR RESEARCH QUESTIONS AND THEMATIC INTERROGATION OF THE DATA

Hougaard et al. (2008) describe the aim of their study as "to pilot test the new treatment format for social phobia clients" (p. 3). Given the richness and complexity of the body of data, this is quite striking in its conservatism. However, in the next section, when they discuss the design, they expand on this by indicating that they are conducting "a practical evaluation of this particular treatment program" (p. 4) and this includes not only an examination of (i) the effectiveness of the treatment, but also of (ii) its practical acceptability to clients, and (iii) the "causes of differences in treatment response of individual clients." These questions are indeed the focus of much of the report, but some other questions are mentioned. One is methodological: (iv) an examination of the "correspondence between outcome on quantitative self-report scales and on clinical judgments based on qualitative information." Later additional questions are raised with respect to (v) how effectively treatment can be delivered by novice therapists when carefully supervised (pp. 11 and 27), and (vi) the educational value of the program (p. 5). However, there is limited attention in the Hougaard et al. case study on the last three, and a number of other questions that the data might have answered are not examined. In this commentary I will focus on those questions that are less developed in Hougaard et al.'s report.

1. Effectiveness of the Treatment

With respect to their main aim of pilot testing the treatment, Hougaard et al. (2008) provide useful quantitative analyses that demonstrate the effectiveness of the intervention. Effect sizes are large in terms of conventional reporting, and compare well with that of .85 reported by Stangier, Heidenreich, Peitz, Lauterbach and Clark (2003) for a group version of the Clark and Wells treatment. However, they are relatively low compared to those reported in recent randomized controlled trials of the Clark and Wells (1995) treatment. Thus Clark, Ehlers, McManus, et al (2003) reported an effect size of 2.16, while Clark, Ehlers, Hackmann et al. (2006) reported an even higher effect size of 2.63. Furthermore, in this latter study, even for a comparison treatment of Exposure and Applied Relaxation the effect size was 1.46. Effect sizes in Hougaard et al's study are lower than this, despite the fact that pre- to follow-up effect sizes were based on data that excluded two participants who made little or no progress. Thus while it is fair to conclude that the intervention was an effective treatment, effect size measures would suggest that effectiveness fell short of the current state of the art. To be fair to Hougaard et al. here, it should be remembered that their therapists were beginning students under supervision and not experienced therapists.

Also, a possible confounding factor is that the value of Cohen's d is affected by the intensity of initial symptoms. If these are rather low, then this will limit the effect size that can achieved even with successful treatment. It would therefore have been helpful to have

information about the typical scores of socially phobic clients, particularly on the Social Phobia Scale (SPS) and the Social Interaction Anxiety Scale (SIAS) measures, which were specifically included to tap symptoms of social phobia.

Another explanation could be that the Clark and Wells (1995) treatment is best delivered in an individual format. This is because of the centrality in the Clark and Wells treatment of the development of a detailed individualized formulation and the systematic and focused targeting of aspects of this in the choice of interventions. This is more difficult to manage in a group treatment. As already noted above, the effect size for Stangier et al.'s (2003) group format for this treatment was much lower than in studies using the individual treatment. However, Hougaard et al. used a combination of group and individual treatment and it might have been expected that this would have overcome the problems associated with treatment delivery in an exclusively group format. The use of individual sessions at the beginning should allow for the development of an individualized formulation but perhaps the group phase had the disadvantage that it was less easy to target specific factors on a client by client basis, as seems to have been the case with the Stangier et al. study. Individual treatment after the group interventions might offer a means to work in a more focused way on aspects indicated by the individual formulation, but not all clients elected to receive this. This of course is an aspect which effect size statistics can shed no light on, but case narratives could be used to investigate this more closely, as will be discussed in the next section.

2. Processes of Client Change

While the aim of "pilot-testing" the treatment clearly puts the focus on effectiveness, it also opens up questions about the nature of the processes of client change and the extent to which such processes, as observed in the case studies, are in accordance with the theory on which the treatment was based. Such questions cannot be answered by the kinds of quantification and statistical analysis used to determine effect size. Yet they are central questions for the development and refinement of the program.

How processes of change are examined depends to some extent on the theoretical framework within which they are considered. Both Clark and Wells (1995) and Heimberg and his group (e.g. Rapee and Heimberg, 1997) have complex psychological models of the factors maintaining social phobia. These have implications for treatment since they suggest the kinds of change processes that therapists should seek to set in motion. Systematic case studies provide the opportunity to examine the processes set in motion by the therapeutic interventions and to assess how these fit with the theory. Hougaard et al.'s design could have allowed them to examine the psychological dimensions of these models in much greater detail than they did. What is important here is to analyze the theoretical bases of the two treatments and to explore contextually and definitionally key theoretical terms with implications for the understanding of change processes. =

First, there is the concept of "exposure." This term is used rather loosely in cognitive behavior therapy to refer to interventions that expose clients to avoided experiences or situations, but in classic behavioral theory, the rationale for exposure is in terms of habituation of anxiety

and other conditioned emotional responses (as stated by Hougaard et al. on p. 17). The same applies to the concept of flooding, used by Hougaard et al. on page 11 (see Ramsay, 1977). The cognitive model on which the Clark and Wells treatment is based has a different rationale, namely that change is fundamentally cognitive and happens when the client discovers that specific anxiety-inducing beliefs are exaggerated or wrong. For this reason, one of the central interventions for Clark and Wells is the behavioral experiment in which clients enter avoided situations in order to *test* whether specific beliefs are accurate. The reference to "massed exposure" versus "spaced exposure"(Hougaard et al., p. 28) also points to a simple conditioning model, although, of course, if a difference can be shown experimentally between the effects of the two, cognitive theorists might want to offer an explanation that was not merely about the weakening of associations.

The problem with conditioning theory is that it cannot explain why anxiety sometimes fails to habituate in the face of exposure. The cognitive model explains this on the basis that critical beliefs failed to change. One can contrast two clients responding to an exposure exercise. The first has the thought, "I don't know how I survived that, the situation is as terrible as I always thought it was;" the second, like Mary (Hougaard et al., p. 19) has the thought, "I can cope and perform effectively, even though I get anxious." The cognitive model would predict that the second client would improve, but not the first. Thus when John discovers that "anxiety declines after a while if you stay in the situation" (Hougaard et al., p. 17), this may not be simply explicable in terms of habituation. From the perspective of the cognitive model, it might be expected that he was also learning that some social situations were not as threatening as he had been led to expect because of learning history with an alcoholic mother and the probable interference that had caused in his establishing normal peer relationships.

This distinction is not just semantic. The implications for treatment are different. An exposure-based rationale would predict that the more exposure there was the more treatment progress there would be. A cognitive rationale would predict that change would depend on change in critical cognitive processes maintaining the disorder. As a result cognitive therapists are likely to put more focus on detailed case formulation (unfolding as the case proceeds) and the development of quite specific behavioral experiments designed to target key cognitions (see Edwards & Kannan, 2006 for an example in the treatment of social phobia, and Bennett-Levy, Butler, Fennell, Hackmann, Mueller & Westbrook, 2004 for extensive examples across a range of psychological problems).

Hougaard et al. mention the terms "mere catharsis" (p. 22) and "emotional ventilation" (p. 25), but they don't discuss their theoretical implications. These terms raise important questions about the role of emotional activation in the therapy process and how that might or might not contribute to therapeutic change. Within the cognitive model, activation of emotions provides the opportunity to identify distorted or dysfunctional beliefs and attitudes that are not normally readily available to awareness. Once made explicit these "hot cognitions" can be systematically examined and targeted using behavioral experiments, logical analysis or even imagery rescripting (Edwards, 2007b; Wild, Hackmann and Clark, 2007). The way in which the terms "ventilation" and "catharsis" are used by Hougaard et al. might be taken to imply that the therapist was unable to use the emotional activation to identify important cognitions that could

be used as a basis for further interventions.

The strength of the systematic case study is that it allows for process information to be included in the narrative in such a way that the underlying clinical theory can be tested. Although, because of space limitations, Hougaard et al. could not include full case studies in this article, there would be room for such examination of process in the original case studies, and it would be productive to summarize some of the findings here.

Another area where more information and reflection on process is valuable is the contrast between the individual and group phases of the intervention. Despite the obvious advantages of a group format for clients whose difficulties revolve around self-consciousness in social interaction, researchers have often failed to find greater effectiveness of group over individual delivery of treatment for social phobia. As already noted, from the point of view of the Clark and Wells model, which is very formulation driven, individual treatment has the advantage that the therapist can pay more attention to the details of the individualized formulation for each client. Hougaard et al.'s clinical model, with its combination of individual and group treatment, seems to offer the best of both worlds. The initial individual sessions provide the basis for developing an individualized formulation, and the group sessions offer a context in which participants can feel supported by finding they are not alone in their problems, by gaining support from group members, by learning from the processes of interacting within the group, and by learning vicariously from watching others tackling their problems. In addition the group provides resources for setting up realistic role-play practice (Edwards & Kannan, 2006). In line with these considerations, it would be valuable to explore the different functions of the individual and group sessions within Hougaard et al.'s qualitative data to assess the extent to which there was a useful complementarity between the individual and group aspects of treatment.

3. Implications of Individual Differences in Response to the Program

One explicit aim of Hougaard et al. was to examine the "causes of differences in treatment response of individual clients." The availability of nine systematic case studies (even though here only synopses are given) provides a wealth of data that could bear on this. The authors provide several useful pointers to factors relevant to this question, but a systematic hermeneutic approach to reading these cases could provide a more comprehensive theoretical treatment.

Several important factors are identified. The role of client motivation (p. 29) might be linked to Prochaska's classic theory of readiness for change (Prochaska and Norcross, 2001). This might provide a useful basis for cross-case comparisons. Leila's marital discord (p. 30) was identified as significantly interfering with treatment, and this points to the significance for treatment effectiveness of support within the client's domestic and social context, a factor examined by Tarrier and Humphries (2003) with respect to the problems it poses in the treatment of PTSD. Other factors identified as interfering with treatment effectiveness are Cecilia's rigid internal standards, and Mona's chronic resentfulness and dichotomous thinking (p. 29). Finally, the data from the SCID-II Personality Questionnaire (SCID-II-Q) were used as a basis for

suggesting that more attention needs to be given to characterological factors.

The authors point to the value of the post-group-therapy individual sessions for following up these kinds of factors. This is an area where an examination within cases could yield more detailed suggestions about the nature of these kinds of factors, how they can be identified, and how they can be addressed. Five participants who showed marked improvement had SCID-Q scores above 20, and four of these had 6 or more follow up individual sessions (Niels had 17). Perhaps the data from these individual sessions could have been used to explore questions about the kinds of characterological factors that are important for successful outcome, the extent to which they are flagged by a measure such as the SCID-II-Q, how they might manifest and be detected during the process of therapy, and how they are best targeted in the last phase of therapy. Although there are passing references to Young, Klosko and Weishaar's (2003) schema therapy and McCullough, Kuhn, Andrews, Kaplan, Wolf, and Hurley's (2003) psychodynamic approach, there is no systematic treatment of this aspect. Furthermore, despite the characterological features, a majority of clients benefited from what was still relatively brief treatment compared to what might be expected when significant characterological problems are present.

While it is useful to draw attention to these kinds of factors, systematic use of case studies provide the kind of data that allows for more detailed examination of case formulation. While Hougaard et al. acknowledge the value of an examination of " 'thick description' of client functioning before and after therapy as a qualitative assessment of outcomes"(p. 32), they did not have the space to make use of a thick description of episodes in the therapy process itself. Such descriptions could serve as the basis for using case-based reasoning to develop (a) more specific principles with respect to the kinds of factors for which therapists should be alert at assessment or as the case proceeds, and (b) options for response in terms of modifying the approach to treatment when such factors are identified.

The identification of individual differences and classifying them in terms of their implications for the selection of treatment interventions is an important aspect of the development of applied clinical theory. In the development of "treatment algorithms" (p. 4), Hougaard et al. argue for the importance of rule-based reasoning. I disagree here, contending that rule-based reasoning derived from treatment trials *cannot* achieve generalizations except in a very cumbersome and impractical way. In an earlier article in this journal, I illustrated this by drawing on an argument by Miller and Miller (2005, p. 71) who

> cite a study in which researchers calculated that, if RCTs were the only source of scientific evidence available to accurately guide clinical decisions about the different options available for treating Alzheimer's disease, "127 RCTs would have to be done on 63,500 patients over a 286 year period." (Edwards, 2007a, p.12).

The claim that "cases do not represent general knowledge" (Hougaard et al., p. 4) is therefore misleading because, as the authors later point out, "every case is a possible source of knowledge" (p. 33), and case studies are "better suited to [an examination of] the complex idiographic patterns of client prognostic variables" (p. 10). Of course there are limitations to the conclusions that can be drawn from any one case. But one case, or as in the Hougaard et al. study, a case

series can be interpreted by means of case-based reasoning in the context of *all other cases* of a similar kind that have been reported or used to derive principles of treatment. This is the source of the majority of treatment algorithms on which treatment planning is based in CBT. From this perspective, on the basis of their case series, Hougaard et al.'s treatment program has the potential to contribute in an important way to clinical theory on the treatment of social phobia.

4. Competences Needed for Treatment Delivery

Roth and Pilling (2008) have suggested that for the delivery of any treatment there are basic competences that can be identified which therapists need to have mastered. One of the aims of the Hougaard et al. program was to contribute to the clinical training of students. Hougaard et al (2008, p. 31) observe that there is evidence that trainees can effectively work with anxiety disorders using CBT, and they found support for this in their own study. Trainees presumably start with some basic competences (which perhaps made them eligible for admission into the training course in the first place) and learn others as they go along – either from other training experiences, from the treatment manual for a particular approach, from supervision, or from learning in the therapy situation itself. The Clark and Wells model in particular calls for a range of specialized competences in the development of the initial model at assessment and the selection of interventions based on the idiosyncratic elements of each individual client's model. A close examination of how well novice therapists were able to do this could be instructive. This serves as a basis for another set of questions which could be used to interrogate the data. These would focus on what the basic competences are for delivery of this treatment; which ones are acquired during the program itself; how these are acquired; and, finally, whether there are some competences that are more difficult than others to acquire, and how this differentiation might guide the trainers in giving specialized attention to helping students develop such skills.

5. Ongoing Improvement of the Program

Hougaard et al. indicate that one aim is to conduct "a practical evaluation of this particular treatment program" (p. 4). This suggests that a methodological approach based on program evaluation might have added to the value of their study. This angle would be particularly valuable for a journal like *Pragmatic Case Studies in Psychotherapy* where it is a priority to showcase the strengths of case-based reasoning as well its complementarity to rule-based reasoning. Like pragmatic case study methodology, program evaluation draws on both (Potter, 1999).

One aim of the researchers was to evaluate the program and to continue with it in future years, either in the same form or with alterations and/or refinements. Changes would be based on feedback received from the students, from the clients, and from an examination of the process within each session and across the whole range of sessions for each individual client. Program evaluation can therefore be considered a kind of action research since the intervention (and the accompanying theory on which it is based) evolves and changes in response to feedback provided by the data gathered in each cycle. Given that there have already been four such cycles in the use of this program (p. 28), I would be interested to ask Hougaard and colleagues, "What did you learn from this whole experience and how did you use that learning to modify what you

did the following year?" I would expect they could supply a wealth of information in response to this question which did not get into this article =because of space limitations. =

One aspect of program evaluation would be the treatment model itself. Examination of the first four themes listed above – treatment effectiveness, therapy process, client individual differences, and therapist competences – could provide the basis for the systematic evaluation of the treatment model with respect to its four-phase structure (individual, intensive group, weekly group, and individual therapy) and the specific focus of each session within each phase. The aims of each phase are specified: the initial individual sessions allow for a thorough assessment and the building of a relationship with the primary therapist; the intensive group week provides a comprehensive educational and experiential encounter with the treatment model, emphasizing intensive "massed" client exposure to social stimuli and student exposure to clinical material; the weekly group sessions allow for consolidation and practice in everyday contexts of what was learned in the intensive group week; and the final individual sessions allow for a focus on characterological factors not addressed in the group setting. It would be valuable to examine on a case-by-case basis how far these aims were achieved within each phase. This would serve as a basis for determining whether the treatment program should remain in its existing form or be altered in any way.

A program evaluation approach could also have offered a more systematic approach to investigating the value of the program for training. The extent to which the training program was of educational value to the students was a question that was particularly salient for the authors. Students completed a short course evaluation questionnaire (p. 5) and wrote personal reflections on the process as they went along (p. 5). In addition there were "informal discussions among the students and supervisor" (p. 31), which someone must have recorded or made notes about. All these provide opportunities for giving more focus to questions about educational value. In addition, the case narratives may not have been written to focus on the therapists' experiences. However, it would be possible to draw out this aspect in the narrative if this was part of the research design. A therapy process includes not only the experience and process of the client, but also that of the therapist. Another role-player and stake-holder is the supervisor, since it is often at supervision sessions that critical decisions about intervention are made and a case narrative can be written to reflect all of this, if this is relevant to the research aims (Karpelowsky and Edwards, 2005). Because supervisors are also likely to have information relevant to the learning experiences of students, interviewing them or asking them to write some reflections about this could have provided additional data.

Of course, with so much data already it may not have been practically possible to gather more qualitative data. Nevertheless, the existing data, perhaps with a little extra data collection, could provide the basis for a much more comprehensive examination of the program's educational value and this could have been made more explicit both in terms of the methodology and in the conclusions drawn.

I'm sure that as their experience has accumulated over the four years, Hougaard and colleagues have used feedback from students to make at least some changes in their program that have enhanced its value as a training process for students. A program evaluation perspective

would allow for these to be systematically described, something that would be of value to other training centers considering the use of similar training methods.

CONCLUSIONS

The above discussion of additional facets of Hougaard et al.'s program that they did not cover in their case study is not intended to diminish the value of the clinical and research contribution made by their article (Hougaard et al., 2008). On the contrary, as already indicated, it will be read with interest particularly by those involved in training. Furthermore, I fully recognize that to develop all the lines of argument suggested above would call for a series of articles, not just one. The purpose of this commentary was to discuss how—going beyond a classical quantitative hypothesis-testing knowledge paradigm and adopting a grounded, interpretive, recursive knowledge building knowledge paradigm—there is additional gold to be mined in studies like that of Hougaard et al. that is frequently ignored. I hope my above comments will encourage others reporting on complex embedded case studies to draw more explicitly on the methodological principles of hermeneutic enquiry and to exploit the contribution they can make to the systematic treatment of qualitative data.

REFERENCES

Bennett-Levy, J., Butler, G., Fennell, M., Hackmann, A., Mueller, M., & Westbrook, D. (2004). *The Oxford guide to behavioural experiments in cognitive therapy*. Oxford: Oxford University Press.

Bromley, D. B. (1986). *The case study method in psychology and related disciplines*. Chichester: John Wiley.

Clark, D. M., Ehlers, A., Hackmann, A., McManus, F., Fennell, M., Grey, N. et al. (2006). Cognitive therapy versus exposure and applied relaxation in social phobia: A randomized controlled trial. *Journal of Consulting and Clinical Psychology, 74,* 568-578.

Clark, D. M., Ehlers, A., McManus, F., Hackmann, A., Fennell, M., Campbell, H. et al. (2003). Cognitive therapy versus fluoxetine in generalized social phobia: A randomized placebo-controlled trial. *Journal of Consulting and Clinical Psychology, 71,* 1058-1067.

Clark, D. M. & Wells, A. (1995). A cognitive model of social phobia. In R. G. Heimberg, M. R. Liebowitz, D. A. Hope, & F. R. Schneier (Eds.), *Social Phobia: Diagnosis, assessment and treatment* (pp. 69-93). New York: Guilford.

Durrheim, K. (1999). Quantitative analysis. In M. Terre Blanche & K. Durrheim (Eds.), *Research in practice: Applied methods for the social sciences* (pp. 96-122). Cape Town: University of Cape Town Press.

Edwards, D. J. A., Dattilio, F., & Bromley, D. B. (2004). Developing evidence-based practice: The role of case-based research. *Professional Psychology: Research and Practice, 35,* 589-597.

Edwards, D. J. A. (2007a). Collaborative versus adversarial stances in scientific discourse: Implications for the role of systematic case studies in the development of evidence-based practice in psychotherapy. *Pragmatic Case Studies in Psychotherapy,* Vol. *3*(1)*,* Article 2, 6-34. Available: http://hdl.rutgers.edu/1782.1/pcsp_journal.

Edwards, D. J. A. (2007b). Restructuring implicational meaning through memory based imagery:

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*Some historical notes. *Journal of Behavior Therapy and Experimental Psychiatry, 38,* 306-316.

Edwards, D. J. A. & Kannan, S. (2006). Identifying and targeting idiosyncratic cognitive processes in group therapy for social phobia: The case of Vumile. *Pragmatic Case Studies in Psychotherapy,* Vol. *2*(1), Article 1, 1-30. Available: http://hdl.rutgers.edu/1782.1/pcsp_journal.

Fishman, D. B. (2005). Editor's Introduction to PCSP - From Single case to database: A new method for enhancing psychotherapy practice. *Pragmatic Case Studies in Psychotherapy* [Online]*,* Vol. *1*(1), Article 2, 1-50. Available: http://hdl.rutgers.edu/1782.1/pcsp_journal.

Hougaard, E., Madsen, S. S., Hansen, L. M., Jensen, M., Katborg, G. S., Morsaa, L. et al. (2008). A novel group therapeutic format in cognitive behavioral treatment for clients with social phobia in a training setting: A case study of one treatment group with nine clients. *Pragmatic Case Studies in Psychotherapy* [Online],Vol. *4*(4), Article 1, 1-52. Available: http://hdl.rutgers.edu/1782.1/pcsp_journal.

Karpelowsky, B. J. & Edwards, D. J. A. (2005). Trauma, imagery and the therapeutic relationship: Langu's story. *Journal of Psychology in Africa, 15,* 185-195.

Kvale, S. (1996). *InterViews: An introduction to qualitative research interviewing*. Thousand Oaks CA: Sage.

McCullough, L., Kuhn, N., Andrews, S., Kaplan, A., Wolf, J., & Hurley, C. L. (2003). *Treating affect phobia: A manual for short term dynamic psychotherapy*. New York: Guilford.

Miller, D. W. & Miller, C. G. (2005). On evidence, medical and legal. *Journal of American Physicians and Surgeons, 10,* 70-75.

Potter, C. (1999). Programme evaluation. In M. Terre Blanche & K. Durrheim (Eds.), *Research in practice: Applied methods for the social sciences* (pp. 209-238). Cape Town: University of Cape Town Press.

Prochaska, J. O. & Norcross, J. C. (2001). Stages of change. *Psychotherapy, 38,* 443-448.

Ramsay, R. W. (1977). Behavioural approaches to bereavement. *Behaviour, Research and Therapy, 15,* 131-135.

Rapee, R. M. & Heimberg, R. G. (1997). A cognitive-behavioral model of anxiety in social phobia. *Behaviour Research and Therapy, 35,* 741-756.

Roth, A. D. & Pilling, S. (2008). Using an evidence-based methodology to identify the competences required to deliver effective cognitive and behavioural therapy for depression and anxiety disorders. *Cognitive and Behavioural Psychotherapy, 36,* 129-147.

Salkovskis, P. M. (2002). Empirically grounded clinical interventions: Cognitive-behavioral therapy progresses through a multi-dimensional approach to clinical science. *Behavioural and Cognitive Psychotherapy, 30,* 1-10.

Smith, J. A. & Osborn, M. (2003). Interpretative phenomenological analysis. In J. A. Smith (Ed.), *Qualitative psychology: A practical guide to research methods* (pp. 51-80). London: Sage.

Stangier, U., Heidenreich, T., Peitz, M., Lauterbach, W., & Clark, D. M. (2003). Cognitive therapy for social phobia: Individual versus group treatment. *Behaviour Research and Therapy, 41,* 991-1007.

Tarrier, N. & Humphreys, A. (2003). PTSD and the social support of the interpersonal environment: The development of social cognitive behavior therapy. *Journal of Cognitive*

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Psychotherapy, 17, 187-198.

Terre Blanche, M. & Kelly, K. (1999). Interpretive methods. In M. Terre Blanche & K. Durrheim (Eds.), *Research in practice: Applied methods for the social sciences* (pp. 123-172). Cape Town: University of Cape Town Press.

Wild, J., Hackmann, A., & Clark, D. A. (2007). When the present visits the past: Updating traumatic memories in social phobia. *Journal of Behavior Therapy and Experimental Psychiatry, 38,* 386-401.

Yin, R. K. (2003). *Case study research: Design and methods*. (3rd ed.) Thousand Oaks CA: Sage.

Young, J. E., Klosko, J., & Weishaar, M. E. (2003). *Schema therapy: A practitioner's guide*. New York: Guilford.