Training Cognitive Behavioural Therapy Practitioners in New Zealand:
From University to Clinical Practice

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The present study evaluated the transfer of skills taught in a Cognitive Behavioural Therapy training programme to work practice. Seventy-three past trainees from varying mental health professions completed self-report questionnaires exploring key aspects of transfer. The results showed that, overall, there was a moderate degree of perceived transfer and a high degree of confidence in using CBT techniques. Statistically significant differences in transfer scores were found between groups with different current therapeutic approaches, age groups of clients, and therapy formats. Significant positive correlations were found between the transfer outcome and two variables: perceived confidence in using the CBT skills, and the perceived impact of the CBT training on skills and knowledge. The most helpful factors and influential barriers in the transfer of CBT training were identified. Results were consistent with findings from previous CBT studies and Goldstein and Ford's (2002) theory of the transfer process. Limitations and strategies to enhance the transfer of training are highlighted.

The 'transfer of training' issue is a well-documented and researched phenomenon (Heaven, Clegg & Maguire, 2006). Even if trainees acquire high quality skills during training, there is no guarantee that they will apply those skills correctly, or at all, in the work setting (Jahr, 1998). In the clinical context, transfer of training is of paramount concern as many efficacious and/or promising psychosocial treatments do not necessarily transfer from the clinical research environment (Corrigan & McCracken, 1997; Milne, Dudley, Repper & Milne, 2001). For instance, in one study, the implementation of four different behaviour programmes was evaluated, and none were adopted successfully (Stolz, 1981). Another study found that only 10% of training expenditure could be expected to be transferred to the workplace (Georgenson, 1982).

The majority of research investigating training in cognitive behavior therapy (CBT; Beck, Rush, Shaw & Emery, 1979) has focused on evaluating the competence of trainees (Freihelt & Overholser, 1997; Kingdon, Tyrer, Seivewright, Ferguson & Murphy, 1996; Shaw et al., 1999). The results of previous studies evaluating the transfer of a variety of CBT training programs show an improvement in knowledge acquisition and competence, and that the majority of trainees successfully transfer skills from training (Ashworth, Williams & Blackburn, 1999; Freiheit & Overholser, 1997; Hull & Swan, 2003; Milne, Keegan et al., 2000; Myles & Milne, 2004). It is argued that there is a need to extend the analysis of CBT training to include *transfer* as a follow-up assessment of competency (Milne, Baker, Blackburn, James & Reichelt, 1999). This need stems from

research demonstrating that measures of knowledge in treatment techniques are not a sufficient and reliable indicator of clinicians' behaviour change in the clinical setting (Reid & Whitman, 1983; Whitman, Scibak & Reid, 1983).

Taking this into account, a sample of 90 mental health professionals who attended a 12 week CBT training course were found to have a significant increase in use of nearly all CBT techniques between three months pre-training and the three months post training (Myles & Milne 2004). In another study, a sample of 40 clinical psychology graduates used significantly more CBT techniques at the end of a nine-month CBT training practicum than at the beginning (Freiheit & Overholser 1997). The trainees in Milne, Keegan et al. (2000) also reported significant improvements in their use of learned skills in CBT and other psychosocial interventions for severe mental illness across time, persons, settings, and behaviour. A limitation of several of these studies is the use of an oversimplified pre-post design to evaluate changes in use of CBT skills.

In contrast, some studies showed less successful results of transfer. For example, Kavanagh et al. (1993) assessed the implementation of CBT family interventions for schizophrenia, and found that only 18% had applied their learned skills with more than three different clients, demonstrating poor transfer of skills. Furthermore, a written quiz indicated that 70% of these trainees

did not even display a minimal recall of the cognitive therapy material covered in training to competently apply it in practice. Another study showed that although consultant psychiatrists are getting increasing amounts of formal training in CBT, many are unable to incorporate the techniques into everyday practice due to medically-related time constraints around such issues as diagnostic assessment and drug treatment (Le Fevre & Goldbeck, 2001).

Factors in the Transfer Process: Barriers and Strategies

In the general training literature, a number of common factors which directly or indirectly affect 'transfer outcomes' have been identified (Baldwin & Ford, 1988; Gielen, 1996; Kozlowski & Salas, 1997). As shown in Figure one, Goldstein and Ford's (2002) model identifies the following four broad categories of factors hypothesized to influence the transfer of training; namely therapist/trainee factors, the design characteristics of the training program, the learning process, and the work environment.

"Therapist factors" have an indirect impact on transfer outcomes through their impact on learning outcomes (Goldstein & Ford, 2002). A review of 30 practitioner reports identified that individual trainee characteristics account for 21% of all barriers to transfer (Foxon 1993). These include motivation and readiness to learn (Goldstein & Ford, 2002; Taylor, 2000), self-confidence, and self-efficacy (Bennett-Levy & Beedie, 2006; Haccoun & Saks, 1998; Taylor, 2000), work experience (Gielen, 1996), past knowledge of the training content (Fogarty, Perkins & Barrell, 1991),

theoretical orientation or professional discipline (Freiheit & Overholser, 1997), and trainee perceptions of the consequences of using new skills (Heaven et al., 2006).

Secondly, it has been suggested that 22% of barriers relating to transfer of training are programme design characteristics (Foxon, 1993), which have an indirect effect on learning outcomes (Goldstein & Ford, 2002). These design factors include (a) relevance of training content to the job content (Scroth, 2000), (b) acknowledging classic learning principles (McGehee & Thayer, 1961), (c) conducting a 'training needs analysis' (Corrigan & McCracken, 1995), (d) goal-setting (Fadden, 1997), (e) relapse prevention (Marx, 1982), and (e) self-management of performance (Burke & Baldwin, 1999). Active teaching methods (Rogers et al., 1986) and the employment of a variety of relevant training stimuli are also found to strengthen trainee understanding and retention of material for more successful transfer (Goldstein & Ford, 2002).

Thirdly, learning processes such as changes in cognitive, skill, and affective components are expected to have direct effects on transfer outcomes (Goldstein & Ford, 2002). Although the acquisition of CBT skills has been researched, no study has evaluated whether this is related to the application of those CBT skills in practice. Finally the significance of work characteristics as an influence in the transfer of training is a recurring theme from the past 30 years of research into training in the mental health field (Milne, Woodward & Hanner, 2003), with organisational factors accounting for 42% of barriers to transfer (Foxon, 1993). Identified barriers included time constraints (Fadden, 1997; Hull & Swan, 2003; Le Fevre & Goldbeck, 2001), lack

of resources and staff, bureaucratic demands for documentation, restrictive rules, and difficulty integrating the caseload with other responsibilities from work (Corrigan & McCracken, 1997). Positive transfer is facilitated by a supportive 'organisational climate' (Burke & Baldwin, 1999) with support from colleagues (Corrigan & McCracken, 1997), managers (Gamble, Midence & Leff, 1994), and supervisors (Heaven, et al., 2006), contact with other course members and other CBT supporters (Milne, Keegan, et al., 2000), and opportunities to use the acquired skills (Goldstein & Ford, 2002) relating to the presence of appropriate clients for the type of therapy, and ease of engaging clients in that therapy (Fadden, 1997).

Empirical Support for Model

There is only a modest amount of literature on strategies to maintain the use of learned skills in comparison with the abundance of literature on the acquisition of skills. Research has shown that early experiences (positive or negative) when attempting to transfer new skills determines whether the trainee maintains or abandons new skills (Heaven et al., 2006). This occurs irrespective of motivation to change. Therefore, strategies "aimed at ameliorating negative influences can assist in securing the transfer process" (Heaven et al., 2006, p. 314). Specific strategies for maintaining skills may include relapse prevention (Milne, et al., 2002; Tziner, Haccoun, & Kadish , 1991), 'refresher training' and continuing education for 'professional development' (Goldstein & Ford, 2002; Taylor, 2000; Hesketh & Ivancic, 1999). Although feedback and reward systems have been shown to be effective for maintaining performance, their effects tend to decrease when the procedures were removed (Jahr, 1998). Therefore, incorporating these procedures into the daily work environment is recommended. With ongoing supervision and further training, the trainees from Ashworth et al.'s (1999) study reported that, not only were their CBT skills maintained, but they had actually improved since the formal CBT course. In addition, Myles and Milne (2004) found that trainees' skills were maintained from post-training to 3-month follow up.
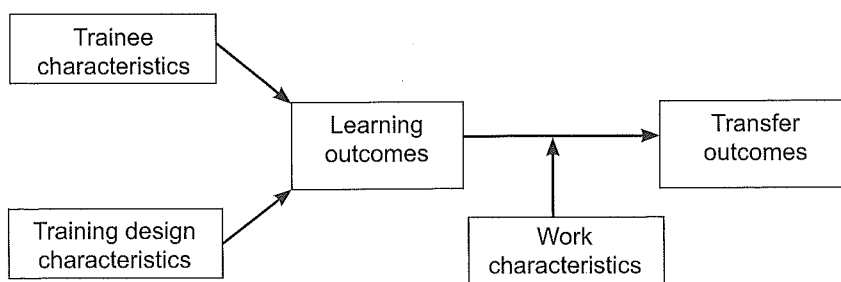
Figure 1.
The transfer process (adapted from Goldstein & Ford, 2002, p. 87)

The present study extends the current CBT training research, by evaluating whether involvement in specific activities of continuing education leads to a higher transfer outcome than non-involvement.

There are only a few CBT training studies which have formally evaluated the barriers to transfer of CBT skills and only one CBT study has evaluated helpful factors. The need to investigate this further has been highlighted (Ashworth et al., 1999; Milne et al. 1999), and the present study also evaluates whether these factors fit generally into the model of transfer outlined by Goldstein & Ford (2002).

The present study

Despite the popularity of CBT in New Zealand (Kazantzis & Deane, 1998) and findings showing that CBT is the treatment of choice for most anxiety disorders and mild to moderate depression (National Health Committee, 1996, 1998), no studies have evaluated the effectiveness of the transfer of skills taught within CBT postgraduate training in New Zealand. It is anticipated that identifying the strengths and weaknesses of the Massey University Postgraduate Diploma in Cognitive-Behaviour Therapy (PGDipCBT) would improve the efficacy of the course and aid the design of CBT training programmes in Australasia.

The present study evaluated the transfer of training following the completion of all, or part of the Massey University PGDipCBT. The Diploma training is founded on the Vail-(scholar/professional) model which has a predominantly professional focus (Norcross, Castle, Sayette & Mayne, 2004). Selection for the PGDipCBT is based on past qualifications, years of mental health experience, referee endorsement, and curriculum vitae. A full course consists of academic and practical components, which are completed over a minimum period of two years. The academic component consists of the four theoretical courses taught in a block mode format. The supervised clinical practicum systematically fosters the development of CBT skills and competence with selected clients. It is a requirement of the program that all trainees are employed in the mental

health sector which means that some trainees take longer than the two year period to complete the diploma. At the time the study was conducted thirty-eight percent of the sample had completed all components of the program. The present study does not evaluate the differences between the amount of training completed against the criterion variable, transfer of training.

In the study, trainees' subjective *perceptions* of the extent of transfer, and level of confidence in using specific CBT techniques in practice were examined, as well as changes in therapeutic approaches. Differences in transfer outcome were compared across subgroups categorised according to current theoretical orientations, employment settings, professional groups, and main client age groups. The relationship between the perceived transfer outcome and the extent of CBT experience prior to the PGDipCBT training was assessed. In addition, the perceived quality and importance of specific elements of the courses and practicum for improving trainee CBT knowledge and skills was evaluated. The three factors most helpful for the transfer of training and the barriers limiting transfer of training were identified. Further, this study assessed participant involvement in activities for continued professional development in CBT, the usefulness of these activities for the later use of CBT techniques, and the differences in transfer outcomes for those involved in these activities.

Method

Participants

From a total of 110 mental health professionals from 5 consecutive years (2000-2004) enrolled in the PGDipCBT, 73 volunteered to participate. This is a response rate of 66%. The sample included 56 women (77%) and 17 men (23%). Participants' ages ranged from 27 to 65 years ($M = 45$ years, $SD = 9.7$). There were 10 different professional groups represented; 11 Clinical Psychologists, 11 Counsellors, 9 Psychiatric Nurses, 8 Social Workers, 5 Other Registered Psychologists, 5 Psychiatrists, 4 Psychotherapists, 3 Community Mental Health Workers, 3 Occupational Therapists, and 2 General Practitioners. Current therapeutic

approaches included cognitive-behavioural ($n = 48$), client-centered ($n = 4$), and eclectic ($n = 12$). Work settings where participants were employed included District Health Board ($n = 37$), Private practice – self-employed ($n = 9$), University/polytechnic ($n = 5$), Non-governmental organization ($n = 4$), Department of Corrections ($n = 3$), School/Ministry of Education ($n = 3$), and Private practice - employed ($n = 2$). Years of professional experience ranged from 0 to 25 years ($M = 8$, $SD = 6.3$). Ninety percent ($n = 56$) of participants reported treating individuals, 6% ($n = 4$) families, 4% ($n = 3$) couples/groups. Age groups treated included: 8% ($n = 6$) children, 11% ($n = 8$) adolescents, 74% ($n = 45$) adults, and 6% ($n = 4$) older adults.

Measure

In the absence of any well-established systematic measures of transfer of CBT training, Stenhouse, Haarhoff and Kazantzis adapted and combined the following questionnaires: the Measure of Generalisation (Myles, Smith & Shires, 2000), Barriers to Change Questionnaire (Corrigan, Kwartarini & Pramanan, 1992), the Survey of Past Cognitive Therapy Trainees (Williams, Ashworth & Blackburn 1999), and the Cognitive Behavioural Therapy Knowledge Quiz (Myles, Latham & Ricketts, 2002). Permission to use these measures was obtained from the authors. In addition items relevant specifically to the Diploma were included. There was a mixture of qualitative and quantitative items presented in multi-choice format or 5-point Likert scale format. The resulting questionnaire, named the Survey of Past Trainees in the Postgraduate Diploma of Cognitive Behavioural Therapy, consisted of eight sections, namely general information about the Diploma, feedback about the experience of the Diploma, changes in practice following the Diploma, barriers to generalisation, professional development, personal and professional characteristics, final comments, and a CBT knowledge quiz. The questionnaire was expected to take approximately 30 minutes to complete. The present study used selected parts of that questionnaire, which addressed the following areas;

Table 1.
Extent to which CBT techniques are used in current practice (in descending order of use)

CBT techniques	Mdn	Range: *1 (never)* to 5 (almost always)	M	SD
Socratic questioning and guided discovery	4	1-5	4.17	1.07
Relapse Prevention strategies	4	1-5	4.01	1.22
5-part model	4	1-5	3.99	1.13
Set an agenda for therapy sessions	4	1-5	3.87	1.36
Client feedback on therapy sessions	4	1-5	3.81	1.28
Behavioural experiments	4	1-5	3.77	1.10
Cognitive-behavioural formulation/ conceptualisation	4	2-5	3.68	1.09
Identify underlying/core beliefs using cognitive strategies	4	1-5	3.64	1.24
Visual Analogue Scale	4	1-5	3.60	1.30
Thought record	4	1-5	3.46	1.21
Activity schedule	3	1-5	3.36	1.19
Graded hierarchy/graded task assignments	3	1-5	3.13	1.12
Validated measures (e.g. BDI, STAI, HS, DAS)	3	1-5	3.13	1.48
Cognitive continuum	3	1-5	2.85	1.16
Responsibility pie	3	1-5	2.52	1.28
Core belief worksheet	2	1-5	2.38	1.29

a) *Personal and professional characteristics.*

b) *Feedback about the Diploma - courses completed, quality of the specific elements of the courses and practicum, importance of those elements for improving knowledge and skills, impact of overall training on overall effectiveness, and general and specific CBT skills.*

c) *Transfer – perceived extent to*

which various CBT techniques were used in current practice, and perceived confidence in using specific CBT techniques.

d) *Barriers and helpful factors in transfer – the extent to which barriers limited transfer, the three most helpful factors for transfer, and helpful CBT activities since training.*

e) *Professional development post PGDipCBT – attendance at CBT*

workshops/conferences; supervision received and given to others; and further reading in CBT.

Results

Transfer to Practice

Descriptive statistics were used to evaluate the transfer of CBT training to practice. There was a wide distribution of scores across the whole 5-point scale (e.g., some participants reported that they '*never*' used some of the

Table 2.
Perceived confidence in using CBT techniques (in descending order)

CBT techniques	Mdn	Range: 1 (not at all confident) to 5 (completely confident)	M	SD
5-part model	5	1-5	4.42	0.83
Visual Analogue Scale	5	1-5	4.24	1.00
Activity schedule	4	1-5	4.13	0.95
Thought record	4	1-5	4.07	1.01
Set an agenda for therapy sessions	4	1-5	4.01	0.98
Client feedback on therapy sessions	4	1-5	3.99	1.12
Reviewing clients' homework	4	1-5	3.80	0.98
Graded hierarchy/graded task assignments	4	1-5	3.71	1.00
Socratic questioning and guided discovery	4	1-5	3.71	0.99
Relapse prevention strategies	4	1-5	3.71	1.16
Identify underlying/core beliefs using cognitive strategies	4	2-5	3.70	0.94
Assigning clients' homework	4	1-5	3.67	0.98
Validated measures (e.g. BDI, STAI, HS, DAS)	4	1-5	3.59	1.25
Behavioural experiments	4	1-5	3.59	0.98
Designing/choosing clients' homework	4	1-5	3.55	0.93
Cognitive-behavioural formulation/ Conceptualisation	4	1-5	3.51	0.92
Responsibility pie	4	1-5	3.30	1.40
Core belief worksheet	3	1-5	3.14	1.20
Cognitive continuum	3	1-5	3.13	1.21

techniques, while others reported 'almost always' using them (see Table 1). On average, participants reported that they used the majority of CBT techniques either 'sometimes' (with 50% of clients) or 'often' (with 75% of clients). The most frequently used technique was reported to be 'Socratic questioning' and 'guided discovery' ($M = 4.17, SD = 1.07$), followed by 'relapse prevention' strategies ($M = 4.01, SD = 1.22$), which participants, on average, used 'often'. 'Core belief worksheets' were reported as the least frequently used CBT technique. That is, they were used on average, only 'rarely' (with around 25% of clients). Participants also reported using 'responsibility pies' and 'cognitive continua' only 'rarely'.

Confidence with CBT Techniques

Participants reported a high level of confidence across the various CBT techniques (see Table 2). On average, participants reported to be most confident about using the '5-part model' and least confident about using the 'cognitive continuum'. Again, there was a large range of responses. However, on average across the range of techniques, there were only 5% ($n = 1$) of participants who rated themselves as 'not at all confident', while there were 28% ($n = 5$) who rated themselves as 'completely confident'.

Change in Theoretical Orientation

There was a substantial (60%) growth in the number of participants who reported their predominant therapeutic approach to be CBT following participation in the training programme. Specifically, practitioners identifying CBT as their primary orientation rose from 13% ($n = 16$) to 73% ($n = 53$). Of those participants whose predominant therapeutic approach changed, 62% ($n = 45$) reported this change to be a direct result of the training programme.

Therapist Factors

One-way between groups analysis of variance (ANOVA) with Tukey HSD post-hoc tests were conducted to evaluate the differences in the dependent variable 'mean transfer of training score' within the following independent variables: therapeutic approach, training background, work setting, age of client group and therapy format (see 'Method' for groups).

Five groups divided by their current therapeutic approach were compared[1]. A significantly lower mean score of transfer [$F (2, 61) = 3.4, p <.05$] was found for those participants who reported their current therapeutic approach to be client-centered ($M = 38.75, SD = 14.36$) compared with CBT approach ($M = 57.25, SD = 13.52$). The

eta squared effect size was small (0.10). Interestingly, those who identified an 'eclectic' approach did not significantly differ in use of CBT techniques from those who used CBT. There were also no significant differences in scores of transfer of CBT techniques as a function of professional training[2] or employment setting.

The mean scores of transfer differed significantly across groups that treated different age groups of clients [$F(3, 59) = 8.7, p < .05$]. In particular, the mean score was significantly lower for those participants who treated children ($M = 36.17, SD = 11.44$) compared with those who treated adolescence ($M = 53.38, SD = 6.32$). The mean score was also significantly lower for those who treated children compared to adults ($M = 59.67, SD = 1.84$). Those who treated adults had a significantly higher mean score of transfer than those who treated older adults ($M = 42.25, SD = 8.82$). The eta squared effect size was medium (0.30). Significant differences in transfer scores were found between different therapy formats [$F (2, 59)=3.4, p .05$]. That is, there was a significantly higher score of transfer of training for those who treated individuals ($M = 56.82, SD = 13.69$) than those who treated families ($M = 38.5, SD = 13.28$). The

Table 3.
Top three most helpful factors for the transfer of training into practice

| Factors | Ranking | | |
| | Most helpful | Second most helpful | Third most helpful |
	No.	No.	No.
Receiving CBT supervision	14 (21)	4 (7)	3 (9)
Structure/models/tools of CBT	8 (13)	5 (9)	2 (6)
CBT part of job role	7 (11)	2 (4)	3 (9)
Practical nature of the course	7 (11)	1 (2)	1 (3)
Workplace culture supports	5 (8)	2 (4)	2 (6)
Work with others practicing CBT	3 (5)	1 (2)	2 (6)
Confidence in own ability	3 (5)	1 (2)	1 (3)
Personal motivation	3 (5)	3 (6)	2 (6)
Ongoing CBT education	3 (5)	3 (6)	0 (0)
Supportive management	2 (3)	2 (4)	2 (6)
Supportive colleagues	2 (3)	7 (13)	3 (9)
Clients like CBT	2 (3)	5 (9)	3 (9)
CBT effective with clients	2 (3)	4 (7)	4 (11)
Practicum supervision	2 (3)	0 (0)	1 (3)
Discussions with colleagues	1 (2)	3 (6)	1 (3)
Clients understand CBT	1 (2)	3 (6)	2 (6)
PGDipCBT materials	1 (2)	7 (13)	1 (3)
Participation in groups using CBT	0 (0)	1 (2)	0 (0)
Discussion with PGDipCBT members	0 (0)	1 (2)	2 (6)

Note: *Numbers represent number of participants. Percentages are presented in parentheses*

Table 4.
Barriers in the transfer of training to practice (in descending order)

Factors	Mdn	Range: 1 (not a barrier) to 5 (insurmountable barrier)	M	SD
Lack of colleagues who also practice CBT	2	1-5	2.31	1.19
Insufficient resources to help clients	2	1-5	2.17	1.04
The way that client care is organised is too restrictive (e.g. bureaucracy – forms and procedures)	2	1-5	2.10	1.16
Inadequate supervision	2	1-5	2.07	1.24
Too many clients	1.5	1-5	2.04	1.18
Using CBT does not fit with job description	1.5	1-5	1.96	1.13
Clients do not favour CBT	1	1-4	1.66	0.90
Clients do not understand CBT	1	1-5	1.66	0.96
CBT is believed to be inappropriate for my clients	1	1-5	1.65	1.08
Other staff are unsupportive of CBT use	1	1-5	1.47	0.97
My CBT knowledge and skills have declined Since the PGDipCBT	1	1-4	1.46	0.75
Clients' whanau/family or friends interfere with the delivery of CBT	1	1-4	1.41	0.75
Past attempts to use CBT have been unsuccessful / dissatisfactory	1	1-4	1.34	0.65
Other clients in contact with my clients interfere with the delivery of CBT	1	1-4	1.27	0.68
Clients' whanau/family or friends do not favour CBT	1	1-4	1.23	0.57
The approach is unethical	1	1-4	1.08	0.44

eta squared effect size was small (0.10). However, there were no significant differences found in scores of transfer between those treating individuals and those treating couples/groups.

Correlates of Transfer of Training

A number of variables were correlated with the transfer of training scores, using Pearson's r correlation coefficient. Two strong significant positive correlations were found. The first strong correlation was between transfer of training and participants' perceived confidence in using CBT techniques [$r = .69$, $n = 61$, $p < .05$]. That is, high levels of perceived confidence were associated with higher levels of perceived transfer of training. The second strong significant correlation was between transfer of training and the perceived impact of the training programme on overall clinical effectiveness and CBT-specific knowledge and skills [$r = .67$, $n = 62$, $p < .05$]. However, there were no significant relationships between transfer of training scores and the factors of previous CBT experience, years practicing in mental health, quality of courses or practicum, and importance of courses and practicum.

Factors Influencing Transfer of Training

Participants ranked the top three helpful factors for transferring training into practice (see Table 3). There was a wide range of responses for each. The most commonly reported '*most helpful factor*' was receiving CBT supervision ($n = 14$; 21%), the '*second most helpful*' was supportive colleagues ($n = 7$; 13%) and course materials ($n = 7$; 13%), and the '*third most helpful*' was that CBT was effective with clients ($n = 4$; 11%).

Barriers to Transfer of Training

Participants rated the extent to which barriers limited their ability to introduce what they learned in the Diploma training into their practice (see Table 4). Many barriers were only rated as being 'slight' or 'moderate' barriers, rather than 'large' or 'insurmountable'. On average, the factor rated as the most influential barrier was '*lack of colleagues who also practice CBT*' ($M = 2.31$, $SD = 1.19$), and the least influential barrier was '*that the approach was unethical*' ($M = 1.08$, $SD = 0.44$).

Continuing Professional Development Activities

An independent-samples t-test evaluated whether the transfer outcome differed between those who were and were not involved in various activities for their continued professional development. The majority of participants ($n = 55$; 82%) reported that they had been receiving supervision since training. Of these participants, 57% ($n = 19$) reported that receiving supervision was '*extremely helpful*' for their use of CBT. In addition, over a third of participants ($n = 25$) reported offering supervision to others, and 56% of these participants found it '*very helpful*' for their use of CBT. However, no statistically significant differences in mean transfer of training scores were found for the five groups that differed in frequency of supervision from '*not currently receiving supervision*' ($n = 12$), attending it '*weekly or more*' ($n = 10$), '*fortnightly*' ($n = 24$), '*monthly*' ($n = 17$), and '*less than monthly*' ($n = 4$). There were also no statistically significant differences in transfer scores found between different types of supervision models used; CBT ($n = 20$), non-CBT ($n = 20$), or mixed ($n =$

14). A significantly higher mean score of transfer was found between those who offer supervision to others (n = 25; M = 60.41, SD = 9.11) compared with those who do not (n = 42; M = 51.68, SD = 15.89) [t (57) = 2.68, p <.01]. The magnitude of differences in the means was small (eta squared = .11).

Just over half (54%; n = 37) of the participants reported that they had attended CBT workshops or conferences specific to CBT since the PGDipCBT. The majority of these participants (n = 15; 45%) found that attending workshops or conferences was '*extremely useful*' for the application of CBT. Five groups were divided according to the amount of days in which participants had attended CBT workshops/ conferences following the training: no days (n = 32), 1 day (n = 5), 2 days (n = 9), 3-5 days (n = 13), 6 or more days (n = 10). Those who did not attend any CBT workshops had significantly lower mean transfer of training scores (M = 49.11, SD = 15.48) than those who attended 3-5 days of workshops (M = 64.27, SD = 7.54) [F (4, 55) = 2.9, p < .05]. The effect size was small (0.17).

The majority of participants (n = 62; 90%) reported that they had read further on CBT since training; 83% via books and 72% via journal articles. Thirty-nine percent (n = 22) who read further on CBT, reported it to be '*extremely helpful*' for their use of CBT in practice, and those who did further reading in CBT after training (n = 62; M = 57, SD = 13.43) had significantly higher transfer scores than those who did not (n = 7; M = 38.67, SD = 11.86) [t (58) = 3.20, p =.002]. The effect size was small (eta squared = 0.15). Although only 17% (n = 11) of participants conducted research on CBT, 64% (n = 7) of these participants reported it to be '*very helpful*' or '*extremely helpful*' for using CBT. Finally, 45% (n = 13) of participants reported that 'having contact with staff from the PGDipCBT' was '*extremely helpful*' for their use of CBT since the training. Almost all participants (96%; n = 69) reported that they were interested in gaining further knowledge about CBT models and techniques.

Discussion

The results suggest that overall there was a moderate degree of transfer of CBT training. Due to the complexity of assessing transfer many, even simple, transfer studies reveal little or any transfer (Haskell, 2001) and therefore it is encouraging to find this level of transfer. A possible reason that this level is not higher is the absence of systematic programming of transfer. As highlighted in the limitations, this level is likely to be related to the fact that, while 87% learned the core CBT skills, only 38% of participants had completed all theoretical and practical components of the training at the time they participated in the study.

The wide variation in use of techniques is consistent with Padesky and Greenberger's (1995) observation that there is an increasing diversity in modes of delivery of CBT. Moreover, the 'generic' techniques, such as Socratic questioning and agenda setting, were used more since they are applicable to a wider variety of cases. In contrast, the more 'specific' techniques, such as core belief worksheets and responsibility pies, generally used with more complex cases (Padesky & Greenberger, 1995), were used less often.

There was a reasonably high level of confidence in delivering the CBT techniques following the training, consistent with results in a randomised controlled trial of CBT with medical doctors conducted by King et al. (2002). Again, there was variation in confidence levels between specific techniques which may be due to the relative ease of applying these techniques. It may also be due to the varying extent of practice they had with each. Baum and Gray (1992) found that, among other factors, practice results in better cognitive-behavioural skill, less anxiety and more self-confidence in trainees.

There was a substantial growth in number of participants who claimed that CBT was their predominant therapeutic approach from pre to post-training. This change in therapeutic approach is likely to be related to a high degree of transfer of CBT skills in practice.

There were significant differences in transfer between those treating different age groups and in different therapy formats. For example, CBT was reported to be used more with adults than children. This is consistent with Stallard's (2002) assertion that when working with children, "at times, the 'cognitive' component is minimal, or is limited to one specific technique, such as coping self-talk, with the predominant emphasis of most programmes being behavioural" (p.12). In addition, those treating individuals reported higher use of CBT than those treating families. Again this would reflect that CBT is most often used with individuals.

Two factors, namely; perceived confidence in applying the techniques, and perceived impact on knowledge and skills were related to the transfer of training into practice. This supports past evidence (Bennett-Levy & Beedie, 2006; Taylor, 2000) and theoretical models showing a direct link between learning outcome and transfer outcome in the transfer process (Goldstein & Ford, 2002). Prior work experience was not related to transfer, contrasting with the general training research reviewed by Gielen (1996), but supporting research by Burlingame, Fuhriman, Paul and Ogles (1989) that showed that both experienced and inexperienced therapists benefited from skills training in time-limited therapy, such as CBT.

Extending previous CBT research on levels of satisfaction with the quality of the course, we found that perceived quality and importance of the courses and practicum was not directly related to the transfer outcome. These results may be consistent with Goldstein and Ford's (2002) model that training design characteristics and transfer outcomes are mediated by learning outcomes and moderated by work characteristics.

The most commonly identified '*helpful factors*' for use of CBT included "*receiving supervision*", "*supportive colleagues*", "*CBT is effective with clients*", "*structure/models/tool of CBT*", "*PGDipCBT materials*", "*practical nature of the course*", and "*CBT is part of the job role*". These are similar to those identified in the CBT study by Milne, Keegan, et al., (2000). The largest perceived barriers were "*lack of colleagues who also practice CBT*", "*insufficient resources to help clients*", "*the way that client care is organised is too restrictive (e.g., bureaucracy—forms*

and procedures)", and *"inadequate supervision"*. These were similar to other studies of institutional constraints (Corrigan & McCracken, 1997; Milne, Gorenski, et al., 2000; Myles & Milne, 2004). The variation in scores between barriers and between participants is likely due to the wide variation in job roles and employment settings.

Most participants reported that they had continued their professional development with involvement in various activities. Percentages of participants involved in each activity appear to be similar to those after a similar course in the UK, evaluated by Ashworth et al. (1999). Overall, the activities found to be extremely helpful for use of CBT included attending workshops or conferences, receiving supervision, further reading in CBT, and having contact with staff from the training program. Offering supervision to others and doing further reading in CBT also both lead to significantly higher transfer scores. These results further emphasise the role of professional development for transfer maintenance.

Implications for Training and Organisations

The results of the present study can be viewed as corrective feedback to the trainees, trainers, training designers and organisations, highlighting the need to implement interventions for enhancing the transfer outcome. A difficulty when 'programming' transfer, as highlighted by Jahr (1998), is the lack of component analyses in the literature to guide the identification of specific, effective and superfluous components of training. Nevertheless, some recommended strategies, as discussed earlier, are goal-setting and feedback that act as motivational components; self-management to monitor one's transfer; and relapse prevention to prepare trainees for setbacks. Levels of confidence in transfer were high with this particular sample and confidence was shown to relate to transfer. Therefore, it may be valuable to further build self-efficacy by using strategies to reduce the perceived threat of failure, develop better learning strategies, and plan how to utilise the learned skills, as recommended by Haccoun and Saks (1998).

The main problem when attempting to programme transfer is that training designers and trainers have little or no control over the work environment. Contributing to this difficulty is the variety of organisations from which trainees come. Therefore, an assessment of the organisational climate is recommended, for example, by focusing on the antecedents and consequences that the trainee encounters in the work environment (Burke & Baldwin, 1999). A number of supplementary strategies such as providing information booklets or extra training to managers on topics such as positive reinforcement contingent, administrative and supervisory support, and the development of user-friendly interventions (Baldwin & Ford, 1988; Milne et al., 2001) could be recommended to supervisors, employers or organisations to improve transfer (Rouillier & Goldstein, 1993). In addition, as it is shown that involvement in certain activities of professional development are related to higher transfer, it may be beneficial for organisations to encourage staff and provide the resources to maintain or improve the level of use of training in the hope of developing better quality services (Salas & Cannon-Bowers, 2001).

Limitations

To maximize the number of participants the present sample was made up of different student cohorts across five years of training. The transfer of training may have been influenced by the evolution of the training. Aspects of the PGDipCBT training programme have been revised and altered during this time reflecting the expansion and development of the program over its first five years. To add to this problem, students completed the questionnaire at different times following training, and some had more time and experience with practicing CBT. In future, similar cohorts should be compared. Furthermore, although the present study evaluated transfer across all past students as a group, no analyses were conducted to compare the differences in transfer outcome between those completing different courses within the degree. As previously mentioned, at this stage in the development of the Diploma many of the trainees participating in the study were still in the process of completing the training. Nonetheless, relative to similar literature, results of transfer were positive. Perhaps the differences across specific courses could be evaluated in future studies to determine the role of theoretical and practical aspects of training.

A second limitation is the subjective nature of the data collected. There is no independent information from peers, supervisors, managers or others regarding transfer. Future studies would benefit from more objective measures of transfer. For example, audio or video tapes of clinical practice could be evaluated using independently rated scales such as the Cognitive Therapy scale (Young & Beck, 1980). Feedback from clients could also be utilized. Comparisons between self-report and the objective measures could be undertaken. In addition, although the response rate was good, the information may have been slightly distorted if those who did not complete the questionnaires were those who held less positive attitudes toward the training, or were experiencing low levels of confidence or transfer.

The present study contributes to the field of 'transfer of training' as it provides an indication of the degree of transfer following this New Zealand CBT training, and what factors are related to this level of transfer. The transfer of CBT training may be enhanced if trainers 'programme' transfer with goal setting, feedback, self-management and relapse prevention, and if organisations provide a supportive climate with positive reinforcement, administrative and supervisory support, user-friendly interventions, and opportunities for professional development. Improving the usefulness of training programmes is consistent with the New Zealand Ministry of Health's (1994) aim to improve the quality of mental health services. Given the efficacy of CBT and its development as the leading psychotherapy treatment worldwide, it is important to invest further research into training programme development and evaluation.

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Notes

1 Categories 'don't know', 'no orientation', 'psycho-education' and 'DBT' had only one participant and were excluded from the analyses.

2 The single 'registered general nurse', 'teacher', 'non-registered psychologist' and the participant who was 'unable to work' were excluded from the analyses.

Information about the Massey University Post Graduate Diploma in Cognitive Behaviour Therapy can be accessed on http://psychology. massey.ac.nz.

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