

The Adaptability of Cognitive-Behavioral Therapy Techniques for Depression in China: A Delphi Study^a

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Abstract

Objective: To explore the adaptability of Cognitive-Behavioral Therapy (CBT) techniques for depression in China among Chinese CBT experts.

Method: A 34-item rating list on CBT techniques was developed based on literature review. Thirty-one CBT experts in the Delphi study rated by two rounds each technique through four dimensions of maneuverability, frequency of use, contribution to outcomes, and acceptability by the patients.

Results: The establishment of therapeutic alliance, assessment, psycho-education, and identifying automatic thoughts ranked high on the list, while the pie chart method, social skill training, continuous calibration, problem solving, and cost-benefit analysis were among the least favorite ones. The Kendall's concordance coefficients on the four dimensions ranged from 0.259 to 0.315 ($p<0.05$), but the coefficient of variation of social skill training, problem solving, activity monitoring/scheduling, suicidal behavior delay, and behavioral experiments on at least one or two dimensions were greater than 0.25.

Conclusions: The findings suggest that most CBT techniques are being acknowledged by Chinese CBT experts as adaptable to apply to depression except a few cognitive or certain behavioral ones. Further, the less adaptable behavioral techniques also reveal incongruous opinions among raters especially when considering their acceptability to patients.

Keywords: China; Cognitive-Behavioral Therapy; Depression; Delphi study; Techniques

Introduction

Beck's Cognitive-Behavioral Therapy (CBT) for depression has been a subject of great scientific interest since its first reported clinical trial [1,2]. The positive effect has been extensively proven by various studies over the past several decades [3-7]. Standard CBT holds the view that thoughts, feelings and behaviors are interrelated with each other. In order to ameliorate patients' negative moods and improve their interpersonal relationship and social functioning, the goals of most CBT approaches for depression have focused on instructing patients about a cognitive approach to understanding the etiology and maintenance of mood disorders, applying specific

skills to identify and modify dysfunctional automatic thoughts, as well as understanding maladaptive assumptions and beliefs judged as reflecting enduring cognitive structures or schemas [8]. Furthermore, aside from these cognitive techniques, CBT also includes certain behavioral strategies, such as 'behavioral experiments', to address worries and maladaptive behaviors [9].

Since the first introduction of CBT in China in 1989 [10], an increasing number of Chinese clinicians have adopted the approach in their clinical work. Statistics have shown that the number of published research papers on CBT grow exponentially since 1996 [11]. Besides, the efficacy of CBT for depression among Chinese patients has been proven by many recent studies [12,13]. While those studies are of great importance, several aspects regarding their methodology warrant further examination and questioning.

First, though all studies reported CBT as a treatment, some did not describe in detail any CBT protocols or specific intervention techniques they used [14,15], which leads to questions such as whether real CBT was implemented and the validity of the conclusions. Second, although a number of researchers did provide a CBT manual to their therapists to guide treatments, the contents of these manuals varied from one study to another. Some applied the foreign CBT manuals directly to Chinese patients [16], while others designed the manuals themselves, based on the theories and techniques widely acknowledged in CBT publications [17-20]. And among those who described how they performed in their treatment, they described them in a general manner, such as identifying automatic thoughts; little is known about the techniques they chose specifically in identifying automatic thoughts, such as doing a thought record. Third, most studies addressed the overall relationship between CBT and the outcomes and little attention was given to the applicability or adaptability of each technique itself. For example, it remains unclear how often a certain technique was actually used in treatments, or to what degree the patients were able to accept it.

In view of the lack of standardization in the application of CBT techniques in China, a Delphi method is chosen to gather opinions from Chinese CBT experts on how adaptable they view the techniques being used in their clinical work and to reach a consensus on the adaptability of CBT strategies among them. The long-term goal of this study is to help the development of localized practice guidelines for depression in China and therefore improve the standardization of CBT techniques applied both in research and patient care.

Methods

The Delphi Method

The “Delphi method” [21] is a systematic, interactive method that relies on a panel of independent experts answering questionnaires in two or more rounds, with feedback from each round provided to help achieve consensus. The process is stopped when a pre-defined stopping criterion is reached, such as certain number of rounds.

Participants

Participants who took part in the Delphi study were 31 Chinese experts in the field of psychiatry or clinical psychology; among those were CBT therapists or psychiatrists with senior professional titles, members of the committee of the CBT academic conference, and CBT supervisors. Most of them worked in hospitals, while a few in universities or colleges. Since the experts were from different provinces in China, each of them was invited to take part in the study via e-mail. All participants in this study signed a Letter of Consent for this study.

Procedure

Literature Search for CBT Techniques: A systematic literature review on CBT techniques was conducted. The databases included Pubmed, ScienceDirect, Embase, and CNKI (China National Knowledge Infrastructure, a database widely used in China). The search terms were cognitive behavior therapy/cognitive therapy/behavior therapy, and depression, and we collected the cognitive behavior techniques in the published papers to form the preliminary list.

Questionnaire Development: Ten Chinese CBT experts were then asked to verify the accuracy of each name of the techniques, whether the techniques included were appropriate, and whether any techniques should be included in the preliminary list. After the revision, the list of techniques included 34 items, which could be divided into three categories: basic techniques (13 items), cognitive techniques (12 items), and behavioral techniques (9 items). Each item was designed to be rated through four aspects on Likert rating scales:

1. maneuverability on the patients (from 1, very unadaptable to 5, very adaptable);
2. frequency of use (from 1, never used to 4, used quite frequently);
3. contribution to outcomes (from 1, no contribution at all to 4, contribute largely);
4. acceptability to patients (from 1, not accept at all to 4, accept entirely), and by these four aspects we define adaptability.

Besides, the operational definition of each technique was also strictly discussed and presented at the bottom of the list, too. Moreover, the experts weighed the significance of each dimension.

The study also included the Inventory of Degree of Familiarity (IDF) [22] to understand the experts’ overall degree of familiarity of the listed techniques and the Inventory of Basis of Judgment (IBJ) [22] to comprehend what influence their ratings. The IDF contains 5 levels ranging from very unfamiliar (0.2) to very familiar (1.0). The judgment can be based on “practical experiences”, “theoretical analysis”, “opinions of other counterparts”, and “intuitions”. Degree of the influence to the final judgment can be divided into three levels, “big, medium, and small” [22]. The degree of the experts’ authority can then be counted by both the IDF and IBJ scores.

Two Delphi Rounds: In Round 1, we sent to each expert the CBT techniques rating list by mail. They were instructed to rate these techniques; meanwhile, they should consider if there were any techniques that were important and should be included on the list. The rating lists were then collected for analysis. In Round 2, the results of Round 1 ratings were provided to the experts as score references. The feedback included means and Standard Deviations

(S.D.) of each technique on the afore mentioned four dimensions. The experts were told that they could revise any of their previous ratings after seeing the feedback. In addition, they were instructed to weigh the importance of each of the four rating dimensions in treatment. They should mark each dimension between 0 and 1, and the added score of the four dimensions should be 1.

Analysis of Results

We use the Statistical Package for the Social Sciences (SPSS, version 18.0) to analyze data. For each item, the mean and S.D. were calculated. Besides, the Coefficient Of Variation (C.V.) and the Kendall's concordance coefficient (ω) were calculated to reveal the degree of consensus the experts had reached. A score less than 0.25 can be an indicator of good concordance being reached. The Kendall's concordance coefficient was calculated by using a nonparametric test of related samples. The scores should be between 0 and 1, with a higher score indicating a higher degree of concordance. A score above 0.5 represents a good concordance among experts [22]. Moreover, the overall rank of each item in Round 2 was also calculated.

Results

Participants Characteristics

Dimensions Techniques	Maneuverability			Frequency of use			Contribution to outcomes			Patients' acceptability		
	\bar{R}	M	C.V.	\bar{R}	M	C.V.	\bar{R}	M	C.V.	\bar{R}	M	C.V.
Basic Techniques												
Establishing therapeutic alliance	23.00	4.61	0.12	25.23	3.97	0.05	25.08	3.8	0.10	24.44	3.53	0.16
assessment	22.27	4.58	0.12	24.89	3.94	0.06	22.61	3.63	0.17	22.39	3.39	0.16
Making a treatment plan	18.94	4.29	0.16	22.92	3.77	0.11	18.21	3.33	0.16	21.85	3.32	0.14
Setting the agenda	18.98	4.28	0.18	17.37	3.40	0.18	16.73	3.21	0.19	18.34	3.07	0.19
Psycho-education	23.50	4.65	0.13	23.89	3.84	0.10	22.10	3.57	0.18	22.76	3.42	0.18
Normalization	15.55	4.06	0.21	18.29	3.45	0.18	16.55	3.2	0.25*	17.79	3.06	0.28*
Relapse prevention	17.90	4.23	0.19	19.69	3.52	0.21	18.27	3.33	0.21	19.60	3.19	0.26*
Reviewing the treatment	19.74	4.32	0.20	19.05	3.48	0.21	21.77	3.57	0.18	14.85	2.87	0.23
Homework assignment	15.03	3.94	0.28*	15.08	3.19	0.26*	17.85	3.27	0.23	14.85	2.83	0.26*

Of the 31 experts participated in the round one Delphi study, 28 (90.3%) completed and returned the questionnaires. Therefore, the round two Delphi study was conducted among these 28 experts, and the response rate was 100%. Of the 28 experts, 15 (53.6%) were male and 13 (46.4%) were female. Their mean age was 48.5 ± 8.67 years old. Nineteen were psychiatrists and 9 were CBT therapists. Eighteen held professorship and the other 10 held associate professorship. On average, they had practiced CBT for 15.77 ± 7.76 years at time of study.

The mean IDF and IBJ scores of the 28 experts were 0.87 and 0.90 respectively. The degree of the experts' authority was calculated as the mean of IDF and IBJ, which was 0.89 in this study, which suggests the experts being chosen are of high authority in the field of CBT.

Round 1

The mean rank (\bar{R}), mean (M) and C.V. of each item were shown in (Table 1). The Kendall's concordance coefficient for maneuverability, frequency of use, contribution to outcomes, and patients' acceptability were 0.126 ($\chi^2=129.33$, $P<0.01$), 0.205 ($\chi^2=210.15$, $P<0.01$), 0.146 ($\chi^2=149.46$, $P<0.01$), and 0.152 ($\chi^2=155.51$, $P<0.01$) respectively.

Case formulation	16.29	4.07	0.22	18.44	3.41	0.20	16.76	3.18	0.24	19.34	3.10	0.23
Curative effect Maintenance	19.95	4.39	0.16	19.06	3.48	0.19	17.47	3.27	0.23	20.24	3.23	0.17
Asking feedback	20.00	4.35	0.17	19.98	3.58	0.16	18.85	3.37	0.17	19.45	3.16	0.17
Motivational interviewing	16.32	4.10	0.20	16.71	3.32	0.21	16.10	3.13	0.25*	16.47	2.94	0.23
Cognitive Techniques												
Logical reasoning examination	15.50	4.00	0.21	17.27	3.30	0.25*	17.02	3.20	0.24	15.76	2.93	0.25*
cost-benefit analysis	12.65**	3.77	0.23	13.26	2.97	0.32*	11.97**	2.87	0.31*	14.58	2.80	0.33*
Automatic thought records	20.60	4.42	0.15	19.21	3.52	0.21	19.19	3.42	0.18	16.24	2.97	0.20
Examining the evidence	18.85	4.23	0.21	19.69	3.50	0.23	19.29	3.37	0.24	18.03	3.03	0.20
The pie chart method	15.08	4.00	0.24	12.55**	3.00	0.29*	15.16	3.10	0.26*	16.32	2.97	0.22
Identifying automatic thoughts	21.87	4.52	0.16	22.16	3.74	0.14	22.21	3.61	0.14	19.97	3.23	0.15
Identifying intermediate beliefs	17.00	4.13	0.26*	16.81	3.35	0.22	18.00	3.29	0.24	17.74	3.06	0.22
Identifying core beliefs	19.61	4.35	0.19	19.69	3.55	0.19	19.65	3.45	0.19	18.35	3.13	0.20
Continuous calibration	12.44**	3.8	0.25*	11.05**	2.80	0.36*	11.68**	2.83	0.32*	15.24	2.87	0.27*
Role-playing	15.69	4.03	0.21	13.21	3.03	0.28*	17.06	3.23	0.26*	13.82	2.81	0.25*
Socratic questioning	16.13	4.10	0.21	17.77	3.42	0.18	18.03	3.30	0.21	17.11	3.00	0.24
Challenging the suicidal beliefs	12.26**	3.77	0.24	11.79**	2.94	0.25*	12.71**	2.87	0.28*	12.13**	2.68	0.22
Behavioral Techniques												
Activity monitoring/scheduling	18.69	4.26	0.19	17.95	3.42	0.20	16.81	3.26	0.18	17.98	3.10	0.19
Social skills training	18.42	4.23	0.16	17.66	3.40	0.18	18.26	3.30	0.16	17.08	3.00	0.19
Problem solving	16.37	4.10	0.18	14.89	3.10	0.29*	14.82	3.07	0.25*	14.23	2.86	0.24

Behavioral experiments	18.00	4.23	0.17	19.52	3.50	0.19	20.34	3.47	0.20	19.74	3.17	0.20
Signing the safety agreement	18.79	4.27	0.17	17.65	3.37	0.20	19.29	3.40	0.18	15.89	2.97	0.21
Suicidal behavior delay	14.32	3.9	0.22	11.85**	2.80	0.37*	11.56**	2.76	0.32*	10.69**	2.59	0.19
Emotional recognition	14.02	3.97	0.20	11.47**	2.90	0.28*	11.79**	2.86	0.30*	12.24**	2.72	0.19
Relaxation training	14.15	3.87	0.26*	14.97	3.10	0.31*	15.31	3.03	0.30*	19.55	3.13	0.27*
Assertiveness training	17.08	4.13	0.21	13.98	3.07	0.26*	16.50	3.20	0.21	19.92	3.20	0.22

Note: * coefficient of variation (C.V.) ≥ 0.25

Table 1: The mean rank (RR), mean (M) and Coefficient of Variation (C.V.) of each technique in Round 1.

Round 2

The mean (M) and C.V. of each item were shown in (Table 2). The Kendall's concordance coefficient for maneuverability, frequency of use, contribution to outcomes, and patients' acceptability were 0.264 ($\chi^2=244.38$, $P<0.01$), 0.288 ($\chi^2=266.15$, $P<0.01$), 0.315 ($\chi^2=290.93$, $P<0.01$), and 0.259 ($\chi^2=239.46$, $P<0.01$), respectively. The weighing coefficients of each of the four dimensions were 0.26, 0.19, 0.27, and 0.28. The overall rank see (Table 2) of each technique is based on the weighted summation of its mean rank in each dimension.

Dimensions Techniques	Overall rank (order)	maneuverability		Frequency of use		Contribution to outcomes		Patients' acceptability	
		M	C.V.	M	C.V.	M	C.V.	M	C.V.
Basic Techniques									
Establishing therapeutic alliance	26.11 (1)	4.86	0.09	3.93	0.1	4	0	3.93	0.07
Assessment	25.30 (2)	4.89	0.09	3.93	0.1	4	0	3.68	0.14
Psycho-education	24.44 (3)	4.93	0.08	3.86	0.15	3.82	0.12	3.64	0.15
Making a treatment plan	21.29 (6)	4.64	0.11	3.89	0.11	3.54	0.18	3.43	0.17
Asking feedback	20.93 (7)	4.82	0.1	3.79	0.13	3.46	0.15	3.36	0.17
Reviewing the treatment	20.16 (10)	4.61	0.15	3.79	0.13	3.57	0.14	3.25	0.16
Normalization	19.95 (11)	4.61	0.15	3.71	0.14	3.39	0.17	3.42	0.15
Homework assignment	19.38 (12)	4.54	0.17	3.64	0.2	3.57	0.18	3.18	0.19
Curative effect Maintenance	19.03 (13)	4.54	0.16	3.68	0.15	3.43	0.17	3.29	0.16
Relapse prevention	18.89 (14)	4.29	0.15	3.68	0.15	3.5	0.15	3.42	0.15
Case formulation	17.62 (15)	4.25	0.17	3.57	0.16	3.43	0.15	3.29	0.16
Setting the agenda	16.30 (18)	4.43	0.13	3.39	0.17	3.21	0.13	3.18	0.15
Motivational interviewing	15.80 (22)	4.18	0.13	3.39	0.17	3.32	0.16	3.18	0.17

Cognitive Techniques									
Identifying automatic thoughts	22.90 (4)	4.82	0.1	3.86	0.14	3.79	0.14	3.39	0.17
Examining the evidence	21.79 (5)	4.71	0.1	3.79	0.11	3.75	0.16	3.36	0.15
Identifying core beliefs	20.56 (8)	4.64	0.12	3.64	0.17	3.64	0.17	3.32	0.16
Automatic thought records	20.46 (9)	4.64	0.13	3.75	0.16	3.57	0.16	3.29	0.18
Identifying intermediate beliefs	17.28 (16)	4.5	0.14	3.54	0.16	3.29	0.21	3.11	0.2
Socratic questioning	16.68 (17)	4.25	0.19	3.5	0.2	3.32	0.18	3.14	0.17
Role-playing	15.83 (21)	4.29	0.11	3.29	0.16	3.32	0.16	3.21	0.18
Logical reasoning examination	15.37 (25)	4.25	0.14	3.46	0.17	3.25	0.18	3.04	0.14
Challenging the suicidal beliefs	12.87 (29)	4.14	0.15	3.11	0.22	3.11	0.18	2.86	0.18
cost-benefit analysis	12.69 (30)	3.89	0.15	3.11	0.18	3.07	0.2	3.04	0.17
Continuous calibration	11.94 (32)	3.96	0.15	3.04	0.19	2.93	0.18	3.04	0.17
The pie chart method	10.09 (34)	3.86	0.12	2.93	0.16	2.89	0.14	2.79	0.2
Behavioral Techniques									
Emotional recognition	16.19 (19)	4.43	0.11	3.28	0.18	3.36	0.15	3.15	0.11
Behavioral experiments	16.12 (20)	4.18	0.13	3.46	0.17	3.39	0.22	3.04	0.25*
Relaxation training	15.80 (23)	4.18	0.21	3.18	0.21	3.39	0.15	3.15	0.23
Assertiveness training	15.58 (24)	4.18	0.15	3.32	0.14	3.29	0.21	3.15	0.21
Signing the safety agreement	15.12 (26)	4.21	0.19	3.32	0.23	3.04	0.25*	3.11	0.21
Activity monitoring/scheduling	14.75 (27)	4.54	0.12	3.68	0.13	2.79	0.23	2.78	0.25*
Suicidal behavior delay	13.68 (28)	4.11	0.15	2.89	0.22	3.18	0.23	3.07	0.25*
Problem solving	12.61 (31)	4.29	0.12	3.54	0.16	2.68	0.31	2.48	0.34*
Social skills training	11.58 (33)	4.21	0.18	3.29	0.16	2.64	0.26*	2.59	0.29*

Note: * coefficient of variation (C.V.) ≥ 0.25

Table 2: The overall rank, mean (M) and coefficient of variation (C.V.) of each technique in Round 2.

Discussions

To our knowledge, this was the very first study in mainland China that explores the adaptability of CBT techniques for depression. We addressed this issue by the Delphi method. Experts in this study evaluated each of the basic, cognitive, and behavioral techniques through four dimensions (maneuverability, frequency of use, contribution to outcomes, and the patients' acceptability) in two separate rounds. And we assessed the degree of adaptability by view of the techniques' overall ranks in the second round.

In Round 1, the mean scores in the first dimension showed that all of techniques were considered to have a relatively high degree of maneuverability, suggesting that the techniques being listed in this study are applicable on the part of the therapists. As for the other three dimensions, opinions of the experts varied greatly. The values of C.V. showed that 16 techniques failed to reach a good consensus in the first round. In Round 2, however, this number decreased to six. Meanwhile, the Kendall's concordance coefficient in the second round was higher than that in round one. Both the C.V. and the Kendall's concordance coefficient in round two showed that, for a wide

range of techniques consisted of basic, cognitive, and behavioral ones, a high degree of consensus was obtained within the panel of Chinese CBT experts.

By looking into the data of Round 2, we found that the experts reached a comparatively higher level of consensus on each of the basic techniques than techniques in the other two categories. Establishing the therapeutic alliance, assessment, and psycho-education ranked high on the list, suggesting that they are of first degree adaptability in CBT treatment. Generally speaking, they are the ones that have been considered as the most common factors in almost all types of psychotherapies [23]. In this sense, their adaptability in CBT should be without doubt. Other basic techniques that fell into the top ten included making a treatment plan, asking feedback and reviewing the treatment. The rankings clearly indicate the fundamental nature of these basic techniques. In contrast with those that can often be seen in psychotherapies other than CBT, homework assignment is commonly recognized as a component almost exclusively used in CBT [9]. In this study, experts generally acknowledged homework assignment as agreeable to apply to Chinese patients. This result is in line with the finding that homework is of particular importance in the CBT treatments of depression [24].

The adaptability of cognitive techniques reached a high degree of consensus as well, with identifying automatic thoughts ranking first within this category. The concept of automatic thought, reflecting the basic cognitive theory of CBT, has been most frequently seen in studies both in China and worldwide [25-28]. However, techniques that have often been introduced both by CBT publications and trainings, such as challenging the suicidal beliefs, cost-benefit analysis, continuous calibration, and the pie chart method, ranked low in this study. The findings contradict with the common notion that these techniques are as well typical in CBT and are the preferred ones to use in treatment. The statistics in this study also show that the patients seem not very much willing to accept these easy-to-use techniques. Further research is needed to explore whether these seemingly applicable techniques are virtually unadaptable in practice. Given the results in this study, possible explanations might be that since a proportion of depressive patients have difficulty in concentrating or thinking effectively, they probably have trouble in following cognitive instructions that require too much effort. Or it could be that some people might have already used alternative ways to modify their dysfunctional thoughts or beliefs, thus rendering these methods unneeded anymore. Or it could just because these techniques seem too didactic to the patients.

As for those behavioral techniques, including activity monitoring/scheduling, suicidal behavior delay, problem solving, and social skills training, they all had poor consensus in the dimension of patients' acceptability. Moreover, they ranked the

lowest on the entire technique list. Given that one of depressive patients' major symptoms is fatigue or lack of energy, it could be that they are reluctant to conduct these relatively complicated behavioral activities. Meanwhile, it is worth noting that relaxation training and assertive training obtain good consensus among experts, even in the dimension of patients' acceptability. Perhaps it is because these two activities require less preparation before trying.

Furthermore, cultural factors should also be taken into consideration when look at our findings. First, techniques that ranked among the bottom ten on the list are mainly those that aim at modifying the patients' present maladaptive cognitions or behaviors. Although CBT therapists are believed to use them in a euphemistic and collaborative way, the nature of those techniques is still challenging in Chinese culture. Since ordinary Chinese values often emphasize mild and indirect attitudes, addressing directly to the patients' problematic cognitions or behaviors might do harm to a certain extent to the therapeutic relationships. Second, this Delphi study showed an apparent preference for cognitive techniques over the behavior ones. To the contrary, there has been accumulating evidence suggesting that changes in CBT treatments may primarily be the result of certain behavioral strategies rather than cognitive ones. Such strategies are often designed to activate patients in behaving adaptively in their environment [28-31]. To address this disparity, a possible important factor is whether the patients' certain characteristics are matched to the interventions. In Chinese culture, we set store by persuading through reasoning; therefore, the Chinese generally tend not to try out a thing unless they have been fully convinced of the benefits of doing it.

In this study, we listed the CBT techniques as comprehensive as possible and conducted a rather comprehensive evaluation. However, a few limitations need to be acknowledged. First, some of the techniques listed in the study were not precise or specific enough. For example, techniques such as establishing therapeutic alliance, making a treatment plan, reviewing the treatment, case formulation, can be viewed more as a general component of psychotherapy rather than a specific technique. Second, we did not distinguish the degree of severity of depression in this study. It is possible that the ranking of these techniques differs if the experts were asked to rate them according to the severity of depression. Furthermore, therapy often has various phases, with each serving distinct functions. The adaptability of each technique cannot be the same across different therapeutic phases. Finally, although all efforts had been made to include all the CBT techniques for depression from published articles and books, some techniques may still not be included in this study.

In the future, a close examination of the matching among techniques, severity of depression, and treatment phases may yield more important information, and from which we could be able to learn more about why and under what circumstances some

techniques are more adaptable than others. Moreover, further investigation needs to be done as for whether there are localized CBT techniques in China and how they have been specifically applied. Last but not least, it is worth noting that no psychotherapy is simply technique driven. Future research should focus more on how to implement these techniques as a whole rather than on the discrete use of each of them. And for the same reason, apart from instructing the various techniques and their adaptability, CBT trainings in China should emphasize more often on the skillful delivery of these techniques.

In conclusion, this was the first Delphi study in China that examined the adaptability of CBT techniques for depression. The Chinese CBT experts reached a high degree of consensus on adaptability of both the basic and the cognitive techniques, but not on all behavioral ones. The adaptability of certain behavioral techniques for depression under distinct circumstances warrants further investigation.

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References

1. Beck AT (1979) Cognitive therapy of depression. New York, NY: The Guilford Press.
2. Rush AJ, Beck AT, Kovacs M, Hollon S (1977) Comparative efficacy of cognitive therapy and pharmacotherapy in the treatment of depressed outpatients. *Cognitive therapy and Research* 1: 17-37.
3. Butler AC, Chapman JE, Forman EM, Beck AT (2006) The empirical status of cognitive-behavioral therapy: a review of meta-analyses. *Clinical psychology review* 26: 17-31.
4. Dobson KS (1989) A meta-analysis of the efficacy of cognitive therapy for depression. *Journal of consulting and clinical psychology* 57: 414-419.
5. Enright SJ (1997) Cognitive behaviour therapy-clinical applications. *BMJ: British Medical Journal* 314: 1811-1816.
6. Rachman S, Wilson GT (2008) Expansion in the provision of psychological treatment in the United Kingdom Commentary. *Behaviour research and therapy* 46: 293-295.
7. Tolin DF (2010) Is cognitive-behavioral therapy more effective than other therapies? A meta-analytic review. *Clinical psychology review* 30: 710-720.
8. Beck AT (2005) The current state of cognitive therapy: a 40-year retrospective. *Archives of General Psychiatry* 62: 953-959.
9. Blagys MD and Hilsenroth MJ (2002) Distinctive activities of cognitive-behavioral therapy: A review of the comparative psychotherapy process literature. *Clinical Psychology Review* 22: 671-706.
10. Ji JL, Xu J (1989) The Status quo and Trend of Cognitive Therapy. *Chinese Mental Health Journal* 3: 129-132.
11. Li D, Li ZJ (2009) Review of Researches on Cognitive Behavioral Therapy from 1996 to 2006. *Chinese Journal of Behavioral Medicine and Brain Science* 6: 559-560.
12. Wang GH, Liu ZJ, Lu N (2010) The Efficacy of Cognitive-behavioral Therapy Combined with Antidepressants for Depression: A Meta-analysis. *Journal of Preventive Medicine Information* 26: 511-518.
13. Wang N, Li ZJ (2006) Evidence-Based Research on the Efficacy of Cognitive-Behavioral Therapy for Depressive Disorders. *Chinese Journal of Clinical Psychology* 14: 416-418.
14. Gao Y, Gong YC, Guo FL, Hu KY, Zhang RX, et al. (2003) Comparative Study of Treatments with Cognitive Behavioral Therapy in Depression. *Chinese Journal of Behavioral Medical Science* 4: 460.
15. Sang WH, Du B, Zhang XY, Liu HL, Zhang YH, et al. (2009) Comparative Study on Efficacy of Cognitive-behavior Therapy and Pharmacotherapy and Compliance in Treatment of Minor Depression. *China Journal of Health Psychology* 17: 1046-1048.
16. Zhang L (2003) The efficacy of cognitive-behavioral therapy in the treatment of depression. *Chinese Journal of Clinical Rehabilitation* 7: 479-480.
17. Jia JD, Yang JZ, Yu X, Song XQ, Long JL (2011) Effect of Cognitive Behavior Therapy on the Efficacy and Quality of Life of Patients with Depression. *China Journal of Health Psychology* 19: 1411-1413.
18. Li J, Qian YP, Wang XZ, Wang JW (2008) Paroxetine, cognitive-behavioral therapy, and their combination in mild depression. *Shanghai Archives of Psychiatry* 20: 342-345.
19. Song ZQ, Liu GL, Han GL, E HH (2006) Comparison between the combination of medical treatment with cognitive therapy and simple medical treatment. *Chinese Journal of Nervous and Mental Diseases* 32: 275-276.
20. Yang YX (2011) The influence of CBT on the depressive state and quality of sleep in depression. *Journal of Psychiatry* 24: 134-135.
21. Jones J, Hunter D (1995) Consensus methods for medical and health services research. *BMJ: British Medical Journal* 311: 376-380.
22. Zeng G (1994) Modern Epidemiology: Methods and Applications. Beijing: Publishing House of Beijing Medical University and Peking Union Medical College.
23. Wampold BE (2001) Contextualizing psychotherapy as a healing practice: Culture, history, and methods. *Applied and Preventive Psychology* 10: 69-86.
24. Thase ME, Callan JA (2006) The role of homework in cognitive behavior therapy of depression. *Journal of Psychotherapy Integration* 16: 162-177.
25. Bennett-Levy J (2003) Mechanisms of change in cognitive therapy: The case of automatic thought records and behavioural experiments. *Behavioural and Cognitive Psychotherapy* 31: 261-277.
26. Guo WB, Yao SQ, Hang ME, Wu DX (2005) Role of Automatic Thoughts and Attributional Styles in Major Depression: A Multifactorial Analysis. *Psychological Science* 28: 392-394.
27. Han LX, Han B (2012) Cognitive Behavioral Intervention for Depression. *Chinese Journal of Rehabilitation* 27: 102-103.
28. Truax PA, Addis ME, Koerner K, Gollan JK, Gortner E, et al. (1996) A component analysis of cognitive-behavioral treatment for depression. *Journal of Consulting and Clinical Psychology* 64: 295-304.
29. Dimidjian S, Hollon SD, Dobson KS, Schmaling KB, Kohlenberg RJ

(2006) Randomized trial of behavioral activation, cognitive therapy, and antidepressant medication in the acute treatment of adults with major depression. *Journal of consulting and clinical psychology* 74: 658-670.

30. Longmore RJ, Worrell M (2007) Do we need to challenge thoughts in cognitive behavior therapy?. *Clinical psychology review* 27: 173-187.

31. McManus F, Van Doorn K, Yiend J (2012) Examining the effects of thought records and behavioral experiments in instigating belief change. *Journal of behavior therapy and experimental psychiatry* 43: 540-547.