Resolving a difference between cognitive therapy and rational emotive behaviour therapy: towards the development of an integrated CBT model of psychopathology

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Abstract

Purpose – *The field of cognitive-behavioural therapy contains many different theoretical models of psychopathology, with each discipline ascribing greater emphasis to a particular cognitive process or organisation of beliefs. This paper seeks to propose a method of integrating the two most widely practiced and researched schools of CBT; Beck's cognitive therapy (CT) and Ellis's rational emotive behaviour therapy (REBT).*

Design/methodology/approach – *Although there exist a large degree of similarity between the two therapeutic approaches, the two models do differ in relation to their respective hypothesises regarding the core psychological variable in psychopathology. Cognitive theory hypothesises that negative representational beliefs are of central importance whereas rational emotive behaviour theory hypothesises that negative evaluative demands lie at the core of psychological disturbance. This paper evaluates these competing predictions on the basis of the available empirical literature.*

Results – *The empirical literature provides greater support for the organisation and interrelations of the irrational beliefs proposed by REBT theory over CT theory, however the research data clearly indicate the importance of the cognitive variables stressed by CT theory in the pathogenesis of psychological distress. Based on the available evidence an integrated CBT model which incorporates elements of both CT and REBT theory is presented. It is proposed that this integrated model can serve as the stepping-stone toward a larger, single, coherent CBT model of psychopathology.*

Research limitations/implications – *Few empirical studies have directly compared the competing predictions of CT and REBT theory. If future research supports the findings presented in this paper, the proposed model can serve as a template for the development of a unified, general-CBT theory of psychopathology.*

Practical implications – *The integrated model presented in this paper can serve as a guiding theoretical model for therapeutic practice which takes into account therapeutic methods from both CT and REBT.*

Originality/value – *This paper proposes the first theoretical model which incorporates the competing theoretical conceptualizations of psychological distress from the two main schools of CBT.*

Keywords *Cognitive therapy, Irrational beliefs, Cognitive-behavioural therapy, Rational emotive behaviour therapy, Individual psychology, Mental illness, Beliefs*

Paper type *Conceptual paper*

The basics of cognitive-behavioural therapy

Cognitive-behavioural theoretical conceptualizations of various psychological disorders have proven themselves to be the most thoroughly and rigorously investigated (Barlow, 2008; Chambless and Hollon, 1998) and empirically supported (Butler *et al.*, 2006; Chambless and Ollendick, 2001; Engels *et al.*, 1993; Epp and Dobson, 2010; Lyons and Woods, 1991) psychological models currently proposed. Cognitive-behavioural therapy (CBT)-based therapies are predicated upon the theory that psychological disorders are

the result of dysfunctional cognitive processing (Ellis, 1962, 1994; Beck, 1976). David and Szentagotai (2006) explain that from the CBT perspective, complex human processes such as cognition, affect, and behaviour are considered to be ''cognitively penetrable''. This implies that such processes are the direct result of some form of conscious or unconscious cognitive processing, and that if changes are affected in a person's cognitive processes, either through direct or indirect means, changes can be brought about in an individual's cognitive, emotional, and behavioural responses.

Within the CBT tradition there are numerous approaches including cognitive-behavioural modification (Meichenbaum, 1977), multimodal therapy (Lazarus, 1976), dialectical behaviour therapy (Linehan and Dimeff, 2001), acceptance and commitment therapy (Hayes *et al*., 2003), and reality therapy (Glasser, 1965; see Kuehlwein and Rosen, 1993, for a more detailed review). Two of the most influential and widely used approaches within the CBT tradition are rational emotive behaviour therapy (REBT: Ellis, 1958, 1962, 1994) and cognitive therapy (CT: Beck, 1963, 1976, 2011).

Each approach within the CBT tradition is similar by virtue of the fact that there is a theoretical agreement that cognitive variables mediate the impact of stressful events on the development of cognitive, emotional, and behavioural distress (a diathesis-stress model). However, each approach within the CBT field has a unique and distinct diathesis-stress model related to the specific kinds of (dysfunctional) cognitions that are hypothesised to be the key etiopathogenetic mechanisms in the development of psychopathology (David and Szentagotai, 2006). This differential focus on various types of cognitive variables means that each approach within the CBT field has a distinct model of psychopathology, and consequentially, a distinct clinical approach to the treatment of psychopathology.

The theory of CT

The CT model of psychopathology as outlined by Beck (1976, 2011) and Leahy (2003), among many others, is a schema-based, information-processing model of psychopathology. According to Beck *et al.* (1990, p. 4), ''Schemas are the cognitive structures that organize experience and behavior; beliefs and rules represent the content of the schemas and consequently determine the content of thinking, affect and behaviour''. In other words, schemas are particular kinds of cognitive structures which are comprised of an organised set of beliefs which, when activated, can influence a person's cognitive processes including memory and attention (Segal, 1998; Williams *et al*., 1988), ultimately leading to distortions in conscious thought which in turn impacts upon affective and behavioural responses. Maladaptive schemas are hypothesised to develop during childhood and adolescence, but can develop later in life too, and thus represent very stable cognitive patterns that once activated by internal (e.g. endocrine factors or ingestion of drugs) or external triggers (e.g. experiencing a traumatic event) lead to biased information processing that causes a person to make systematic negative interpretations of life events that are congruent with the content of the maladaptive schema (Beck, 1972, 1987). Schemas which are of a dysfunctional and negative nature represent cognitive vulnerability factors for the development of psychopathology. Vulnerability has been defined as an ''endogenous, stable characteristic that remains latent until activated by a precipitating event'' (Clark and Beck, 2010, p. 102).

According to Beck (2011), the specific content of these schemas are comprised of a person's ''core'' and ''intermediate'' beliefs. Core beliefs are fixed, global, overgeneralized, unconditional, and absolutistic beliefs that a person holds about oneself, others, and/or the world in general. These beliefs are hypothesised to represent the core cognitive variables in the development and maintenance of psychopathology. According to the cognitive model people generally form both positive and negative core beliefs early in life and these core beliefs become highly influential in determining how a person interacts with the world. During emotional distress, negative core beliefs become activated and information is then processed in a biased fashion which serves to reinforce the activated negative core belief (Neenan and Dryden, 2011). Beck (2011) has posited that negative core beliefs about the self-relate to three main areas; helplessness, unlovability, and worthlessness.

CT theory posits that as a result of a person's core beliefs, a number of ''intermediate beliefs'' are formed (Beck, 2011). Leahy (2003) and Neenan and Dryden (2011) explain that intermediate beliefs are the various rules, assumptions, or attitudes that a person holds and directs towards themselves, others, and/or the world in general. Like core beliefs, intermediate beliefs also tend to be rigid, absolutistic, overgeneralized,and overinclusive. Maladaptive assumptions or dysfunctional attitudes often take the form of conditional ''if . . . then . . . '' or ''unless . . . then . . . '' statements while a person's ''rules for living'' tend to be expressed within rigid ''must'', ''have to'', ''ought to'' and ''should'' statements. Beck *et al.* (1985) have suggested that intermediate beliefs relate to three broad categories; acceptance, competence, and control. These rules and assumptions are intimately linked with the underlying core beliefs and if the terms of these rigid rules or assumptions are violated, the underlying core belief becomes activated.

Once activated, core and intermediate beliefs lead to specific and identifiable cognitive distortions which Beck (1976) termed ''negative automatic thoughts''. These are thoughts which enter into consciousness automatically, reflecting certain negative biases or distortions in thought, which are accepted as valid and true by the individual, and contribute to disturbed emotions and maladaptive behaviours (Beck and Dozois, 2011; Leahy, 2003). Automatic thoughts tend to be situational specific, unlike intermediate and core beliefs, which are more general in nature.

The CT theory of psychopathology therefore is a multilevel model of psychopathology. At the most conscious, surface level of analysis, are negative automatic thoughts such as ''If I go to the party nobody will talk to me''. The emotional and potentially maladaptive behavioural consequences of negative automatic thoughts are related to the person's deeper level cognitions such as their intermediate beliefs ''I must be liked and approved of by everyone I meet'', and their core beliefs, ''I'm unlovable''. In other words, negative automatic thoughts are evaluated with respect to intermediate beliefs which develop from, and are linked to, core beliefs. dysfunctional schemas, comprised as they are of core and intermediate beliefs, once activated, give rise to the distortions and biases in conscious thought by influencing memory retrieval and the focus of attention on information congruent with the content of the dysfunctional schema (Leahy, 2003; Beck, 2011). A crucial aspect of Beck's cognitive model of psychopathology is that the presence of a dysfunctional schema is a necessary condition for the development of psychopathology but it is not a sufficient condition. Some kind of relevant activating stimuli is necessary to trigger the activation of the dysfunctional schema which then leads to distorted thinking, disturbed emotional reactions, and maladaptive behavioural responses (Beck and Dozois, 2011; Kovacs and Beck, 1978).

The theory of REBT

REBT's cognitive model of psychopathology is organised around Ellis's (1958, 1962, 1994) ''ABC'' model of emotional disturbance. This model outlines the key tenet of REBT, and the wider field of CBT, that cognitions are the main mediators and determinants of a range of complex human responses including cognitive, emotional, and behavioural responses. According to the ABC model, ''A'' represents the myriad of activating events or adversities which a person will face throughout their life in which some aspect of their personal domain (Beck, 1976) comes under threat. Subsequent to the experience of this activating event (which can be an internal or external stimulus) a person is likely to experience a range of cognitive, emotional, and behavioural consequences representing ''C'' in the ABC model. These consequences may be functional, adaptive, and healthy or they may be dysfunctional, maladaptive, and unhealthy. According to Ellis's model, the determining factor in whether a person will experience functional/ healthy/adaptive consequences or dysfunctional/unhealthy/maladaptive consequence subsequent to the experience of a negative activating event depends upon the kinds of beliefs (''B'') a person holds about that activating event.

The particular cognitive variables that the theory of REBT is organised around are rational and irrational beliefs and these beliefs represent specific kinds of evaluative or appraisal beliefs (David *et al.*, 2002). Rational beliefs are beliefs which are empirically sound, logically coherent, and/or pragmatic. The characteristic nature of rational beliefs moreover

is that they are flexible and non-extreme. Irrational beliefs, contrastingly, are beliefs which are not grounded in empirical reality, are logically incoherent, and/or are non-pragmatic. The characteristic nature of irrational beliefs is that they are rigid and extreme (Ellis *et al.*, 2010; Dryden and Neenan, 2004).

According to REBT theory then, if a person responds to a negative activating event with a set of rational beliefs they are likely to experience functional cognitive, healthy negative emotional, and adaptive behavioural consequences, respectively. On the other hand, when a person holds a set of irrational beliefs about the same negative activating event that person will experience dysfunctional cognitive, unhealthy negative emotional, and maladaptive behavioural responses, respectively. REBT works at relieving psychopathology by identifying these irrational beliefs and disputing (''D'') such beliefs so as to bring about a change in a person's belief system whereby they adopt a new set of rational and efficient (''E'') beliefs which will serve to eradicate their cognitive-emotional-behavioural disturbances (David and Szentagotai, 2006).

REBT's theory of psychopathology is simple and parsimonious and avoids elaborate explanations for the development of psychological disturbance. In essence, REBT theory is solidly evolutionary based and biologically focused (Dryden and Neenan, 2004). It diverges from many other counselling approaches by stressing more vigorously the role of biology rather than the role of the environment in influencing human cognition, emotion, and behaviour. It must be noted, however, that REBT theory does not ignore the role of the environment and fully recognises that the environment interacts with our innate biological tendencies to disturb ourselves. The central precept of REBT's theory of psychological disturbance is that humans have an innate tendency to exaggerate our flexible preferences (rational beliefs) into rigid demands (irrational beliefs) (Ellis, 1994; Wallen *et al.*, 1992). REBT theory recognises that all humans are born as goal-seeking animals who strive to fulfil their general and idiosyncratic goals. As such, humans have an innate disposition to prefer and desire the achievement of one's ambitions. However, as Ellis discovered, humans also have an innate tendency to transmute these flexible preferences and desires for the fulfilment of one's goals into rigid, absolutistic, and dogmatic demands. This process of raising one's preferences into demands is hypothesised to lie at the core of psychological disturbance (David *et al.*, 2010).

This process which Ellis termed demandingness is the primary irrational appraisal mechanism in the development of psychopathology, according to REBT theory. These rigid demandingness beliefs give rise to a set of secondary irrational appraisal beliefs which are extreme in nature. Catastrophizing beliefs reflect a person's evaluation that getting what they believe they must not get, or not getting what they believe they must get, is as bad a situation as anything could be; completely catastrophic. Low frustration tolerance beliefs reflect an individual's belief that one is incapable of tolerating not having what they believe they must have, or of being utterly incapable of experiencing any kind of happiness so long as their demands are not met. Depreciation beliefs reflect the global, overgeneralized, and negative evaluations a person makes of oneself, others, and/or the world in general when oneself, others, or the world fails to live up to the person's self-created or self-imposed demands. The interaction between these primary and secondary appraisal beliefs about a given activating event produces the specific kinds of cognitive distortions, unhealthy negative emotions, and maladaptive behavioural consequences that are characteristic of various forms of psychopathology (David, 2003).

In REBT's ABC theory there are two distinct type of A's (Dryden and Neenan, 2004, pp. 7-8). The first is the situational A which reflects a neutral and objective description of the specific activating event. The second is the critical A, which is the individual's own subjective description, representation, interpretation, or inference about the meaning of the actual situation. REBT theory states, in contrast to CT theory, that distorted cognitive representations of reality are not the proximate cause of disturbed cognitive, emotional, or behavioural responses; rather it is the evaluative irrational beliefs that represent the proximate causes of such dysfunctional consequences. Essentially, how a person evaluates or appraises their own subjective representation of an event, by means of rational or irrational beliefs, ultimately determines their cognitive, emotional, and behavioural responses.

Ellis *et al.* (2010) and David and Szentagotai (2006) have described this crucial distinction between REBT's and CT's respective theories of psychopathology in terms of Abelson and Rosenberg's (1958) distinction of ''hot'' and ''cold'' cognitions (David and Szentagotai, 2006). Abelson and Rosenberg (1958) define cold cognitions as those that are reflective of the processes of representation, description, or knowing, whereas hot cognitions are defined as those that are reflective of the process of appraisal or evaluation. In other words, CT theory postulates that cold cognitions are the proximate causes of psychopathological responses while REBT theory views cold cognitions as distal causes of psychopathological responses and hot cognitions as the proximate causes of such responses. REBT's theory of psychopathology is therefore congruent with Lazarus' (1991) appraisal theory of emotions which states that although representational cognitions contribute to appraisal, it is only the process of appraisal itself which gives rise to emotions. REBT theory is as such consistent with what is currently the most accepted model of emotions in cognitive psychology (Smith *et al.*, 1993; David, 2003).

Similarities and differences between CT and REBT

It is clear that CT theory and REBT theory share much in common; both theories are organised around Ellis's ABC model of psychopathology, and both models view the same irrational beliefs as integral to the development and maintenance of psychopathology. Where the two theories diverge in their most important and crucial respect is in regards to the organisation and interrelationship between these irrational beliefs. CT theory hypothesises that negative depreciation beliefs lie at the core of psychological distress and that these beliefs effect conscious thought, emotions, and behaviour through a series of dysfunctional intermediate beliefs represented by demandingness beliefs, catastrophizing beliefs, and/or low frustration tolerance beliefs (Figure 1).

Contrastingly, REBT theory hypothesises that the process of demandingness is the core psychological construct in the emergence and development of psychological distress and that its effect on conscious thought, emotions, and behaviour is mediated by a series of dysfunctional intermediate beliefs represented by depreciation beliefs, catastrophizing beliefs, and/or low frustration tolerance beliefs (Figure 2).

This theoretical distinction goes beyond mere academic interest as it directly influences the theoretical conceptualizations of specific psychological disorders, and consequently the therapeutic formulations. In CT-based theoretical formulations and treatment manuals for specific forms of psychopathology (Beck *et al.*, 1979; Clark and Beck, 2010; Ehlers and Clark, 2000). Demandingness beliefs are rarely included in these models, are not specifically targeted for cognitive restructuring unless the patient specifically demonstrates

Figure 1 CT model of the interrelations of irrational beliefs

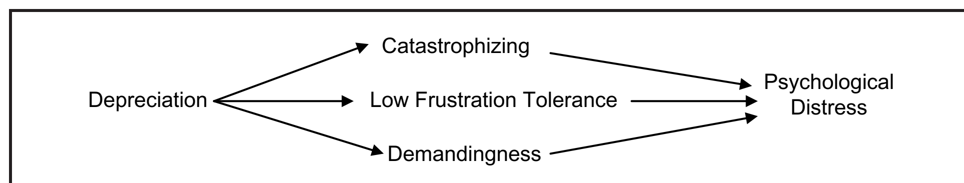
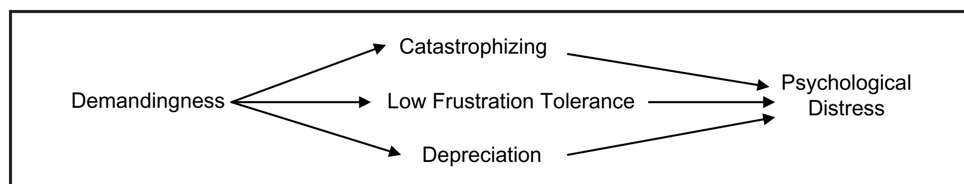


Figure 2 REBT model of the interrelations of irrational beliefs



or reports these types of cognitive distortions in their conscious thinking. Alternatively, REBT-based theoretical formulations and treatment manuals for specific forms of psychopathology (David *et al.*, 2004; Ellis, 2001) specify that demandingness beliefs are the most important and central cognitive variables in the emergence of psychopathological responses and therefore special emphasis is placed on identifying and restructuring these cognitions. The major implication of this distinction is that if the REBT hypothesis is correct, then current CT (and, by extension, CBT) treatment approaches are largely ignoring, or at the very least, greatly underestimating the most important dysfunctional cognitive process of all. In order to gain a clearer picture of which model is more accurate, a review of the relevant empirical literature is necessary.

Empirical review of the competing predictions of CT and REBT theory

Szentagotai and Freeman (2007) investigated the REBT hypothesis that evaluative cognitions represent the proximate causes of emotional disturbance while representational cognitions reflect the more distal causes. Their study involved clinical patients suffering from major depressive disorder and assessed the impact of distorted automatic thoughts on the development of depressed mood. Results from the study showed that distorted automatic thoughts only affected an individual's mood when such thoughts were experienced in the presence of an irrational belief. Consistent with REBT theory, cold cognitions (distorted automatic thoughts) were shown to be distal causes in changes to the participant's mood whereas hot cognitions (irrational beliefs) were shown to be the proximate causes of changes in mood.

Solomon *et al.* (1998) attempted to test the core hypothesis of REBT theory through the application of a research design which compared levels of irrational beliefs between a remitted-depression group and a never-depressed group. This design allowed the researchers to identify whether the presence of irrational beliefs posed a risk factor for the development of depression, or if irrational beliefs were merely a correlate of depression. Soloman *et al.* (1998) used two measures of irrational beliefs and a priming method to attempt to activate latent irrational beliefs. Results of the study indicated that no differences existed in the endorsement of irrational beliefs between the two groups suggesting that these beliefs fluctuate with depression level contradicting the predictions of REBT theory. However, Soloman *et al.* (2003) replicated the study, this time also using a measure of irrational beliefs that would identify the specific and idiosyncratic kinds of demandingness beliefs held by depressed clients, which REBT theory hypothesises are at the core of psychopathological disorders such as depression. In line with their predictions, Soloman and colleagues found that although there were no differences in the rates of endorsement of general irrational beliefs between the remitted-depression group and the never-depressed group, there were very large and statistically significant differences between the groups on the specific measure of demandingness beliefs. The remitted-depression group were nine times more likely than the never-depressed group to hold at least one strong self-demand, and 70 per cent of the remitted-depression group possessed at least one strong self-demand compared to just 20 per cent of the never-depressed group. These results support REBT's hypothesis that demandingness beliefs are a central psychological construct in the maintenance of depression (Ellis, 1987) and that irrational beliefs represent cognitive vulnerability factors that lead to the development of psychopathology (Ellis, 1994).

Szentagotai *et al.* (2008) produced evidence to support the findings of Soloman *et al.* (2003) when they analysed the mechanisms of change that occurred during a randomized clinical trial comparing the efficacy of REBT, CT, and pharmacotherapy for the treatment of major depressive disorder (see David *et al.*, 2008, for details of the trial). All three treatment approaches were equally efficacious at post-test, however, at a six-month follow-up REBT, but not CT, was found to be significantly better than medication at reducing levels of relapse (on one of two measures of depression). Their analyses showed that REBT proved more efficacious at reducing levels of implicitly held irrational beliefs (demandingness beliefs) than both CT and pharmacotherapy. The authors proposed that this factor accounted for REBT's significantly better results at the six-month follow up compared to pharmacotherapy.

Although REBT proved significantly better at restructuring implicitly held irrational beliefs than CT, the rates of relapse in the REBT treatment group, while lower, were not statistically significantly lower than the CT treatment group. Szentagotai and colleagues suggested that the psychosocial skills acquired through CT served to protect patients from redeveloping clinical symptoms despite the presence of certain implicitly held irrational beliefs.

In an attempt to determine the algorithmic-representational nature of irrational beliefs as described by REBT theory, Szentagotai *et al.* (2005) performed a series of implicit and explicit memory recall quasi-experiments. It was hypothesised based on substantial prior research findings (Schwartzberg, 1997; Williams *et al.*, 1988) that if any of the irrational belief processes (demandingness, catastrophizing, low frustration tolerance, and depreciation beliefs) were represented as schemas in the cognitive structure they would have a direct effect on the explicit memory tests. Specifically, schema-congruent information would be better recalled then schema-incongruent information. Results from the quasi-experiments showed that demandingness and depreciation beliefs are represented in the cognitive system as evaluative schemas as they were found to bias memory retrieval of both schema-congruent and schema-incongruent information (DiGiuseppe, 1996) while results showed that catastrophizing and low frustration tolerance beliefs had no impact on memory recall therefore these beliefs are more likely represented in the cognitive system as propositional networks (Dryden, 1984). There are two major implications from the results of this study which provide strong support for REBT's theory regarding the interrelationship of irrational beliefs.

First, it was found that even when participant's self-report levels of demandingness beliefs were low, once these beliefs were in the presence of high catastrophizing, and/or high low frustration tolerance, and/or high depreciation beliefs, demandingness beliefs still biased memory recall. This finding suggests that even when individuals are not consciously aware that they are holding demandingness beliefs, these beliefs still impact upon one's cognitive processes. This finding supports Ellis' (1994) hypothesis that demandingness beliefs always accompany the other irrational beliefs and that demandingness beliefs are often stored within the implicit, rather than the explicit, memory system.

The second major implication that can be derived from the findings of Szentagotai *et al.* (2005) is in relation to the depreciation belief process. Negative depreciation beliefs about oneself are well established to be an important core belief in certain forms of psychopathology including depression (Beck, 1976; Beck *et al.*, 1979; Ellis, 1994), and depression is also known to bias memory retrieval (Williams *et al.*, 1988). Szentagotai *et al.*'s (2005) research findings demonstrated that every time self-depreciation beliefs had an effect on memory recall there was also found to be a demandingness-belief effect. The two processes are intimately linked in other words. Ellis (1987) has consistently argued that Beck's CT model of depression (Beck *et al.*, 1979) is incomplete as it does not take into account the primary role played by demandingness beliefs. Ellis (1987, 1994) argued that negative self-depreciation beliefs always exist along with a primary self-directed demandingness belief. This hypothesis brought about considerable criticism from those within the CT community. Marzillier (1987) and later Brown and Beck (1989) argued that although demandingness beliefs were sometimes involved in depression, demandingness beliefs were neither specific to, nor necessary for, the development and maintenance of depression. According to the CT model of depression (and psychopathology more generally), demandingness beliefs are viewed as part of the intermediate belief system. This finding from Szentagotai *et al.* (2008) and Solomon *et al.* (2003) provide substantial empirical support for Ellis' (1987) and REBT's hypothesis that demandingness beliefs are at the core of depression and are always present along with negative self-depreciation beliefs.

Factor analytic research has supported the interrelations between the irrational beliefs as proposed by REBT theory, which findings indicating that catastrophizing, low frustration tolerance, and depreciation beliefs are all associated with each other, and all three processes are related directly to demandingness beliefs (Fulop, 2007; Bernard, 1998; DiGiuseppe *et al.*, 1988).

David *et al.* (2002, 2005a, b) examined the interrelations of the irrational beliefs within the paradigm of Lazarus's (1991) appraisal theory of emotions and found that demandingness

beliefs were highly correlated with primary appraisals, and more strongly associated with primary appraisals than with catastrophizing, low frustration tolerance, and depreciation beliefs. Furthermore, catastrophizing, low frustration tolerance, and depreciation beliefs were highly related to secondary appraisals. The results of these two studies support the primary appraisal role of demandingness beliefs and demonstrated that the effect of demandingness beliefs on the development of emotions is mediated by the secondary appraisal mechanisms of catastrophizing, low frustration tolerance, and depreciation beliefs, as predicted by REBT theory.

The competing CT and REBT predictions regarding the meditational relationship between these irrational beliefs was then specifically tested by DiLorenzo *et al.* (2007) through the use of meditational analysis. The researchers examined the interrelations of the irrational beliefs on the development of exam-related distress at two time points (at the beginning of a college semester and immediately prior to the sitting of an important exam). Their results showed that at both time points each irrational belief process was significantly correlated with exam-related distress. At time 1, the effect of demandingness on the development of distress was completely mediated by catastrophizing, low frustration tolerance, and depreciation beliefs. At time 2, the effect of demandingness was completely mediated by catastrophizing and depreciation beliefs but not by low frustration tolerance beliefs. These results provide strong empirical support that not only do irrational beliefs about specific events give rise to psychopathological responses but that the interrelations between the irrational beliefs are as hypothesised by REBT theory.

Conclusion and future directions

The current paper is by no means unique in its discussion regarding the distinctive features of CT and REBT. Nearly a decade ago an effort was made by the pioneers of both forms of therapy to address the similarities and differences between the two models. Padesky and Beck (2003) argued that although both models share a large degree of similarity, the fundamental difference lies in CT's commitment to scientific empiricism as its guiding principle for theory development and modification, along with therapeutic evaluation, whereas REBT, they argued, was philosophically rather than empirically derived and driven. Ellis's (2003) initial discussion regarding the similarities and differences in the two approaches was similar to Padesky and Beck's in that his discussion centred on the philosophical, historical, and therapeutic similarities and differences between the two models. Ellis did, however, strongly emphasise that REBT theory fundamentally differs from CT in regards to the hypothesised central role played by evaluative demandingness beliefs in the development and maintenance of psychological distress. Ellis's (2005) second paper on the topic served to correct Padesky and Beck's (2003) assertion that the fundamental difference between the two therapeutic models related to CT being an empirically based therapy in contrast to REBT being a philosophically based therapeutic approach. Ellis (2005) convincingly argues that REBT and CT are both empirically and philosophically orientated therapies and their respective philosophies and commitment to scientific empiricism are evidence of a high degree of similarity. However, Ellis also stressed that REBT tends to be much more explicit in stressing and advocating the philosophical underpinnings of its theory than CT and crucially REBT incorporates these philosophical principals as central features of its therapeutic approach.

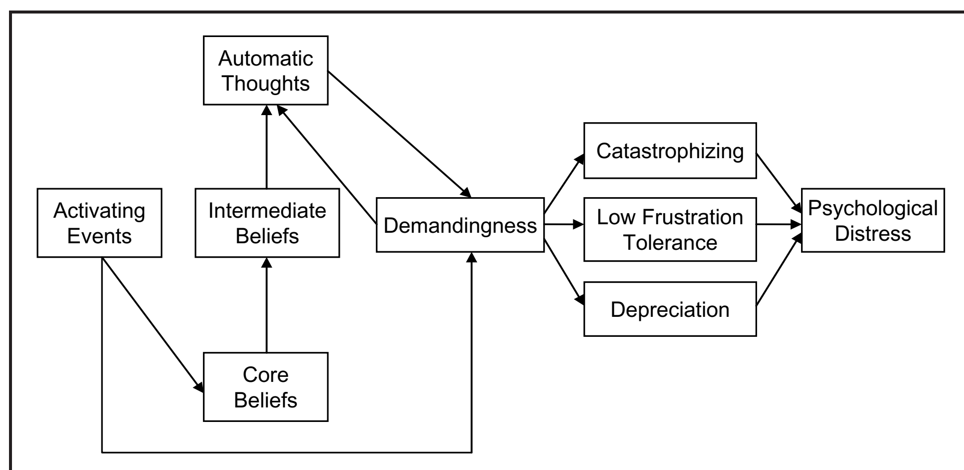
These discussions on the similarities and differences between CT an REBT are highly informative but unfortunately did not serve to resolve the differences both parties identified, or even to suggest an empirical method by which these differences could be resolved. The present article proposes that rather than focusing on a discussion of the philosophical or therapeutic similarities and differences, a more fruitful approach is to clearly elucidate a key theoretical distinction that is fundamental in distinguishing CT theory and REBT theory, and axiomatically their therapeutic approaches, and evaluating the evidence relevant to this topic. By approaching this difficulty empirically rather than theoretically or philosophically it is possible to determine which of the model's competing theoretical predictions is most strongly supported by the empirical data, and then to subsequently derive a theoretical model which incorporates key elements of both approaches in a coherent and empirically supported manner.

As previously outlined the data that is currently available provides considerable empirical support for the predictions of REBT theory over CT theory regarding the organisation and interrelations of the irrational beliefs, and specifically that demandingness beliefs appear to be the core cognitive variable in psychopathological responses. Beck's CT is unquestionably the most efficacious form of psychotherapy available today with an overwhelming body of supportive evidence for a wide variety of psychiatric, psychological, and medical disorders (Butler *et al.*, 2006; Epp and Dobson, 2011). The preeminence of the field of ''CBT'' with respect to all other schools of psychotherapy is almost entirely due to the efforts of the CT community, both in relation to the validation of its therapy and its theoretical models. However, despite how successful CT interventions have been demonstrated to be, many individuals who receive CT remain unresponsive, with estimates as high as 30-40 per cent depending on the disorder (David and Szentagotai, 2006). We fully agree with the views of David and Szentagotai (2006) that it may be possible to improve these response rates, along with increasing the scientific integrity of the wider CBT field, by deriving an integrated CBT model of psychopathology (Figure 3).

It is our belief that the theoretical model described successfully encapsulates the various components of both REBT theory (irrational evaluative beliefs) and CT theory (dysfunctional representational beliefs) in a parsimonious and empirically consistent manner. It is fully consistent with Ellis's (1958, 1962) original ''ABC'' model of psychological disturbance. Activating events, which can be either external or internal cues, trigger the activation of schematic structures (core beliefs, demandingness beliefs). Once these schematic structures become activated they give rise to systematic biases in information processing leading to identifiable cognitive distortions (automatic thoughts) in conscious thought. These automatic thoughts are subsequently evaluated by means of rational or irrational beliefs; the primary irrational appraisal mechanism being demandingness beliefs and the secondary irrational appraisal mechanisms represented by catastrophizing beliefs, low frustration tolerance beliefs, and/or depreciation beliefs. The process of irrationally appraising one's distorted representational automatic thoughts, which themselves arise as a consequence of the activation of underlying dysfunctional representational (core beliefs) and appraisal (demandingness beliefs) schematic structures, gives rise to the development of cognitive-emotional-behavioural dysfunctioning. As such, core beliefs, intermediate beliefs, and automatic thoughts constitute the distal cognitive causes of psychological distress while irrational beliefs represent the most proximate cognitive cause of psychological distress.

It is necessary to note that often many of the belief types represented in the current model can be identified and recognised in conscious thought. Negative core beliefs, demandingness beliefs, and catastrophizing beliefs are all frequently identifiable in conscious thought and have frequently being described in the CT literature as specific categories of negative automatic thoughts (Beck, 1976, 2011; Leahy, 2003). We argue that

Figure 3 Integrated CBT model of psychological distress



although often identifiable in conscious thought, these thoughts are more accurately conceptualized as the conscious awareness of underlying belief processes that more frequently operate at an automatic and unconscious level and thus should not be classified as part of the automatic thought system but recognised as discrete belief processes.

This model is suggested not as a conclusion, but rather as a desired commencement to unify the field of CBT. As detailed at the beginning of this article, there currently exist a large number of distinct schools that come under the umbrella term of ''CBT''. This approach of an ever growing number of unique schools of CBT has had certain advantages in that each discipline has highlighted or introduced important cognitive processes not otherwise considered as significant in the development of emotional disturbance by many of the other approaches. It has also allowed for the development of unique and effective cognitive and behavioural interventions in order to bring about symptom relief.

Despite the benefits that have accrued, it is our contention that the current trajectory of the field of CBT is ultimately a deleterious one as the evolution of an increasing number of distinct approaches undermines the scientific integrity of the field of CBT, which prides itself on its adherence to scientific scrutiny. We believe the field of CBT would be well served by researchers focusing their efforts on how to bring together the disparate theoretical models into a single integrated, coherent, and empirically derived model. This could not only function as a means of creating greater scientific coherency with respect to the theory, but could well lead to the development of treatment interventions that have the potential to increase the success rates from what is currently enjoyed. David *et al.* (2003) have discussed the current trend among ''CBT'' therapists to practice a ''cocktail-school of cognitive-behaviour therapy'', in which therapist's avail of a variety of intervention strategies drawn for the various CBT schools, but without any guiding theoretical formulation of the development of psychopathology or any consideration of the hypothesised theory of change. This approach is deeply unscientific, however, the development of an integrated CBT model of psychopathology which is informed by the discoveries of the respective schools could easily solve this problem, as therapists could draw on a variety of therapeutic techniques, as needed, in the services of creating cognitive restructuring that is at all times driven by, and in reference to, a sound theoretical understanding of the development and maintenance of psychological distress.

Our effort in this paper has been to highlight one crucial distinction that exists between the theories of CT and REBT and to present a model that resolves and integrates these differences. It is our hope that future researchers will continue this effort by advancing our model in a way that further incorporates many other important cognitive variables in a logical and empirically driven manner.

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