ANGER: SPECIFIC COGNITIVE AND DEVELOPMENTAL FACTORS

An investigation into the specific associations between anger, early maladaptive schemas and parenting

By
MONICA MAY MAUD

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UNIVERSITY OF BALLARAT

SCHOOL OF BEHAVIOURAL, SOCIAL SCIENCES AND HUMANITIES

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Statement of Authorship

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ABSTRACT

Three studies were undertaken to explore cognitive underpinnings of anger. Study 1 investigated Beck's Cognitive Content Specificity Hypothesis that specific cognitive content is associated with particular emotions in relation to anger (n = 240), and found limited specificity for Trait Anger and Depression. Study 2 explored Beck's Primacy Hypothesis that cognitions underlie emotions by means of emotion induction interventions (n = 127), and showed a slight indication of emotion induction for anger and anxiety. Study 3 explored the psychometrics of the Young Parenting Inventory, then examined the interrelationship between adverse parenting, and offspring cognitive schemas and emotions, and found specific relationships between some adverse parenting practices and offspring schemas and emotions (N = 144). Results were discussed in terms of the contribution of these studies to understanding trait anger, and implications for clinical practice and future research were outlined.

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OVERVIEW

The Issues

After a decade in private practice I had much evidence that patients found cognitive treatment methods helpful, especially for anxiety and depression. These cognitive approaches grew out of the work of Ellis (1962), Beck (1967; 1976) and that of later therapists (Kendall & Watson, 1986; Salkovskis, 1996;Young, 1990, 2002), all of whom pointed to the importance of thought in emotional and mood disorders. Beck and his colleagues went as far as to suggest that specific types of thoughts are associated with particular emotions: for example, that depression is associated with thoughts of failure and defectiveness, and anxiety with thoughts of future danger (Clark, Beck, & Beck, 1994). My patients appeared to confirm this. Beck also predicted that, in time, specific thoughts would also be found to be associated with emotions such as anger.

When undertaking a placement with a marginalized group, I found many of my clients were very angry. I suspected their anger was linked to earlier trauma, and as a result, set out to explore what was known about anger. My findings became the foundation for Chapter 1, which reviews current studies of anger, and outlines some of the different theories proposed to explain anger. I discovered that there was little research that related specifically to cognitions associated with anger, and so decided to investigate Beck's prediction that specific thoughts would be found to be associated with anger.

In trying to explore these cognitions, I looked first at Beck's theory, which suggests a link between emotions and thoughts, and then at Young's model, which suggests there is a direct link between particular types of adverse cognitions and emotional and personality disorders. These issues are explored in Chapter 2.

Young claimed that particular cognitions can become habits, or, to use his terms, that a person develops Early Maladaptive Schemas (EMSs). He also held the view that specific types of negative parenting give rise to particular types of maladaptive cognitive schemas. For that reason I also decided to explore whether there were particular cognitive themes associated with anger, and whether any specific adverse parenting experiences were particularly associated with these.

Both Beck and Young used the term 'schema' (Beck, 1976) or 'maladaptive schema' (Young, 1990) to describe cognitive habits which acquire the power to arouse emotions such as anger, depression or anxiety. The concept of schema is addressed in Chapter 2, focusing mainly on Beck's and Young's explanations of how schemas operate. I undertook three studies to explore different aspects of these relationships.

In Study 1 (Chapter 3) I examine whether there are any cognitive themes specifically associated with anger, rather than with depression or anxiety. One of the tensions that occurred in Study 1, as well as in the other two studies, was how to present the findings about anger when using a comparative approach. Whilst anger was the area of major interest, findings also emerged about the depression and anxiety because they were used as points of comparison. So, whilst the focus is anger, any findings that emerge about anxiety and depression are presented along with any findings made about

anger. Whilst this may appear to deflect from the focus on anger, in fact such contrasts rather serve to heighten the findings about anger.

In Study 2 (Chapter 4) I tested Beck's Primacy Hypothesis which states that specific thoughts cause particular emotions. This was achieved by means of 'emotion induction.' Groups of participants were asked to focus on the schemas found in Study 1 to discriminate between high and low anger, between high and low depression, or between high and low anxiety. These schemas were identified by means of discriminant analysis data which showed which schemas discriminated most clearly between participants providing high or low scores on the anger, depression and anxiety measures.

In Study 3 (Chapter 5) I tested Young's contention that specific types of adverse parenting are associated with particular cognitive schemas, and hence with offspring anger, depression or anxiety. Young's model, by focusing on three levels of variables, implied a mediation model, although he did not state this directly. Study 3 used Young's Parenting Inventory (YPI) as a retrospective measure of parenting. The YPI presented an additional challenge because, although derived from clinical practice, it was untested psychometrically. So the first task in Study 3 was to examine some of the psychometric qualities of the YPI. Once it was established that the YPI was a reliable and apparently valid measure, the other questions could be addressed. Study 3 sought to discover whether there was any specific connection between adverse parenting and offspring maladaptive schemas; whether there were links between particular types of parenting and offspring anger, depression, or anxiety; and whether schemas mediated the effect of parenting on offspring emotions. In Chapter 6, I make an overview of the three studies. Next, I discuss how the current studies fit the assumptions of the cognitive model.

model. Finally, in Chapter 7, I assess what the current studies have added to our understanding of anger, and how anger related to depression and present a new model of anger.

CHAPTER 1

INTRODUCTION TO ANGER

Overview

In this chapter there is an outline of current research on anger. Initially, there is a definition of anger, then a look at angry behaviour, the functions of anger, and at anger triggers. Next, the physiology of anger, the genetic and temperamental influences on anger, and the part played by socialization and personality development are examined. Then there is a discussion of disordered anger and anger management. Finally, the relationship between cognition and anger is discussed.

Defining Anger

Anger is one of a range of emotions experienced by humans. Emotions are understood to be very ancient features of humans and other animals and relate to survival and life regulation. Damazio (1994, 1999) described emotions as the "fairly high-level component sandwiched between the basic survival kit (e.g., regulation of metabolism; simple reflexes; motivations; biology of pain and pleasure) and the devices of high reason" (Damazio, 1999, p. 54). Whilst part of a survival system which operates automatically in lower animals, in humans, emotions also relate to higher cognitive processes (LeDoux, 1996, 2000). There appear to be a set of basic survival emotions (Darwin, 1872; Izard, 1992; Ekman, 1992), included amongst these are rage and anger (Gray, 1982; Gray & McNaughton, 2000).

Anger is an internal, bodily felt state, ranging from mild annoyance, irritation and

frustration, to rage or fury (Deffenbacher, 1999). Kassinove and Sudholsky (1995) summarized anger thus:

> anger refers to a label given to a constellation of specific uncomfortable subjective experiences and associated cognitions (i.e., thoughts, beliefs, images, etc.) that have various associated verbal, facial, bodily, and automatic reactions. It is a transient state, in that it eventually passes, and it is a social role, in that our culture or subculture allows for the display of certain kinds of behaviors associated with the internal experience, but punishes others. Thus, anger is felt in people's conscious awareness, and is communicated through verbalizations, and bodily reactions. Some of the bodily reactions (e.g., flushing of the face, standing up, leaning forward, etc.) can be observed by others. Others (e.g., an increased heart rate, pupillary changes, sweating, etc.) typically are not (Kassinove & Sukhodolsky, 1995, p.11).

Beck defined anger as the emotion associated with a person perceiving that he or she was "the object of *deliberate* physical attack, criticism, coercion, thwarting, rejection, deprivation or opposition" (Beck et al., 1979, p.66). Beck contended that where an individual encounters "noxious" situations, which he interprets as directly impinging on his domain, that is, on himself, his possessions, status, or rights, he is likely to feel anger. Whilst these noxious situations present no actual danger, the individual sees them as unjustified, unfair, or unreasonable, and often blames some 'offender' for this 'toxic' state of affairs.

Despite the profusion of anger-related words in English, a search of psychological literature reveals only a small number of anger concepts. The main

references are to anger and hostility (Anderson, Anderson, Dill, & Deyser, 2003; Butterfield, Formeris, Feldman, & Beckham, 2000; Carmody, Brumer, & Sachinkp, 1999). Less frequently there is reference to rage (Morgan & Nickson, 2001). There is one reference to resentment, but only in the context of forgiveness (Neto & Mullet, 2004), and there are none to sulking, grumpiness, or chronic anger. Whilst there is a sizeable literature on aggression (Archer, 1988; Moyer, 1968, cited in. Neihoff, 1999), and, whilst aggression and anger can overlap, as discussed below, anger and aggression are normally seen as different (Spielberger, Johnson, Russell, Crane, Jacobs, & Worden, 1985).

Anger is generally described as a transitory emotional state; it can be manifested as a brief feeling, lasting a few seconds or minutes. If anger lasts hours or days, it is described as a mood, which is a more enduring emotional state. If anger persists for months or years it is described as a chronic emotional disorder, and, if it lasts for years, or a lifetime, it is described as a personality trait (Oatley & Jenkins, 1996).

Anger has been distinguished from both aggression and hostility (Spielberger et al., 1985). Hostility is typically seen as a lasting trait involving a negative attitude toward certain individuals or groups. Usually it involves angry feelings, which, in turn, can motivate aggressive behaviours, such as the destruction of objects, or injury of persons (Spielberger et al., 1985). Aggression involves destructive or punitive behaviour directed towards others (Topalli & O'Neal, 2003). Aggression is often, though not inevitably, associated with anger (Spielberger et al., 1985). Sometimes aggression occurs without anger, as when a vandal scratches an expensive car of an unknown owner. Conversely, sometimes anger occurs without aggression, as when an employee is unexpectedly told to

work late when the employee has already made other arrangements. Here the employee may feel angry but silently comply.

Moyer (1968) identified eight types of aggression, each found in the presence of different stimuli, for example, predatory aggression, found in the presence of prey, and 'inter-male' aggression, found in the presence of a strange male. Archer (1988), on the other hand, suggested there were only three types of aggression: aggression as a solution to a problem; protective aggression when there is a threat to young; and competitive aggression, when there is a threat to status or an adequate share of resources. Averill (1982), when exploring the relationship between anger and aggression, found that most anger episodes were non-aggressive, with sixty percent of angry incidents resulting in calming activities, such as talking things over, and with only about 10% of anger episodes being accompanied by aggression (Averill, 1982).

Behaviour associated with anger is often considered problematic because of its impact on other people (Deffenbacher, Lynch, Oetting, & Kemper, 1996). Angry behaviour can range from sour facial expressions, quiet, internal mumblings, or mild protestations, to extremely violent outbursts. Anger incidents include arguments, school-yard fights, assaults, brawls, domestic violence, or even homicide (Deffenbacher, Oetting, Lynch, & Morris, 1996). High anger levels are involved in many homicides, for example, in the USA 40% of all women murdered are killed by an angry spouse (Averill, 1983). In Australia, around 80 women are killed each year as a result of domestic disputes (McLennan, 1996; Stott Despoja, 2004; Mazza, Dennerstein, & Ryan,1996).

Functions of Anger

When people were asked to track their anger in 'anger diaries,' on average they became angry 7.3 times per week, and annoyed 23.5 times per week. In 75% of cases they became angry with loved ones or people they liked (Averill, 1982). Their motives for anger were to assert their authority, to improve their image, or to 'get even' for previous wrongs (Averill, 1982). This exemplifies the fact that anger serves a variety of adaptive functions. It promotes self-defence and mastery, and regulates social and interpersonal behaviour. As part of the response-to-threat system, anger functions as an important flight or fight motivator (Novaco, 1976). Children's anger, as a feature of attachment, ensures survival (Bowlby, 1973); and anger in infants is associated with mastery of new skills (Abe & Izard, 1999).

Anger's main function is to serve as a signal that something is wrong in the social environment, and it motivates individuals to regulate their interpersonal behaviour (Lemerise & Dodge, 2000). It also directs interest and attention (Dunn, 1988, cited in Abe & Izard, 1999) and prompts persons 'to think about what one can and cannot legitimately demand' (Mascolo & Griffin, 1998). Often anger leads to discussion and negotiation, which can help angry persons gain a better understanding of social rules, and teach them to consider the situation from another's perspective (Dunn, 1988; Nelson & Aboud, 1985). Anger also elicits behaviour from others, which can serve to regulate interactions, and contribute to problem solving (Lemerise & Dodge, 2000).

Novaco (1976) outlines a range of other functions of anger. It is energizing, so often interferes with cognitive processes, so that reactions become impulsive and is disruptive. It has 'expressive,' 'self-promotional' and 'defensive' functions. It functions

as the 'guardian of self-esteem,' motivating an individual to stand up for him/herself (Novaco, 1996).

Novaco showed that anger has a potentiating function, that is, it induces a sense of potency, of being in charge. It has instigative functions, so can also instigate aggression, as described previously. Anger can also bring secondary gains for the angry person because others accede to their wishes. This encourages them to use anger in similar situations. Because anger can be so rewarding, some people become very attached to it (Novaco, 1996a).

Anger Triggers

As discussed earlier, anger can be triggered by cognitive sources. For example, Novaco thought anger arises from how a person perceives a situation (Novaco, 1975, 1976, 1977, 1979). When a person perceives a loss of power, or that their power has been challenged, he or she is likely to feel angry. In fact, in 85% of cases anger occurs in response to some perceived challenge (Averill, 1982).

Common cognitive triggers for anger are incidents such as being cut off by another car, an out-of-order machine, being in a situation reminiscent of a previously anger-provoking one, perceiving that someone has made a 'blameful or shameful' attack on oneself (Eckhart & Deffenbacher, 1995), or perceiving disrespect towards oneself (Miller, 2001). Beck (1976) included triggers such as being subjected to an unpleasant experience which threatens one's safety or self-esteem; perceiving malice; being prevented from doing something one wants to do; having one's rights infringed; and not being accorded privileges to which one feels entitled.

Perceived assaults can be direct, as when there is direct criticism from another, or indirect, as when another boasts about their successes (Beck, 1976). Beck thought anger could also be triggered by 'hypothetical transgressions,' in situations when a person's personal rights are not directly under attack, yet the person disapproves of another's behaviour, for instance, when another person eats messily. Even though this does not directly infringe the person's rights, or even threaten them, it 'could have,' and even this is sufficient to trigger anger.

Hypothetical threats also occur when a person perceives unfairness or injustice towards him or herself or to another, or when a person sees an attack as intentional, sees violation of laws they respect, or perceives that another person has breached their personal moral code. Such indirect situations can arouse anger as strongly as direct infringements (Beck, 1976). From this, it can be seen that anger is not simply an automatic, mechanical response, but is strongly mediated by how a person perceives an event, and how relevant the event is for him or her.

Another view is that anger is a more mechanical experience. For example, Berkowitz thought that anger was triggered mechanically in response to frustration (Berkowitz, 1993). He claimed that anger is a very basic emotion, an almost automatic physiological response to any negative experience, and that anger and aggression are closely linked as 'natural' responses when a person is frustrated. Although Berkowitz acknowledged there were some cognitive components to anger, he thought that anger was largely the result of a mechanical overflowing of frustration in aversive situations. First, a person feels some negative affect. This gives rise to a low order 'primitive' processing and this leads on to 'rudimentary anger' or the 'fight' or 'aggression-related' tendency.

Next, a higher level of processing begins, when the person makes attributions and applies personal rules. At this point he or she becomes irritated, annoyed, or angry. When anger is accompanied by aggression, this comes about because the person remembers previous times when he or she was angry (Berkowitz, 1993).

Anger has also been linked to 'prior mood' (Butler, 1993; Clark, 1986; Keltner, Elsworth, & Edwards,1993; Teasdale, 1988, 1996, 1999). For example, Butler (1993) found that where a person was already in an angry mood, this affected how they responded to new events. For example, 'paranoid thinking' was exacerbated in those persons who were already angry when they were asked to make judgments in a simulated murder trial.

Physiological Components of Anger

LeDoux's (1996) research on the psychophysiology of emotion showed that the amygdala, the 'brain's alarm system,' is responsible for the survival responses that occur when an individual is under threat. When particular areas of the amygdala were stimulated experimentally, depending on the precise location of the stimulation, one of three survival responses arose. There were outbursts of rage accompanied by attack; fear or panic, accompanied by flight; or a 'warm, floaty feeling' accompanied by 'appeasement' behaviour, that is, 'excessively friendly behaviour' (LeDoux, 1992). These findings clearly showed that anger initially occurs in the primitive, survival part of the brain.

In threat situations, there are two levels of response. First, a direct, automatic thalamus-amygdala response, in which sensory stimuli are processed in the sensory

to the amygdala, to be acted on automatically. This is what LeDoux describes as the 'quick and dirty,' or 'low road' response. The second level response proceeds from the 'sensory thalamus' to the 'sensory cortex' (LeDoux, 1992, p. 164). Here any emotional stimulus is appraised before feedback is sent to the amygdala, and before any emotional response is made. This second process, what LeDoux calls the 'high road' of the cortical process, is slower and more complex than the automatic 'low road,' thalamus-amygdala response.

In the first, 'quick-and-dirty' thalamus-amygdala route, the amygdala registers external stimuli. If these relate to survival, the amygdala produces an almost instantaneous automatic response. Next, a quarter of a second later, the information also reaches the frontal cortex, where it is contextualized, and a rational plan of action is developed. If the situation concerns survival, the bodily reaction already begun by the amygdala is continued; but, if the rational decision is to respond verbally rather than to react physically, the cortex damps down the automatic reaction. This decision is registered by the hypothalamus, then relayed to the amygdala, and activity there is also calmed down. In this way, emotions can be held in check by 'higher' cortical functions of the brain.

These two levels of processing mean that even a very angry person does have the ability to calm him or herself. This is because the higher level of processing allows him or her, when angry, to appraise a situation before acting, rather than being limited to responding automatically. This is particularly advantageous in social settings, because cognitive processing adds shades of meaning not available at the automatic level. This ability to override automatic survival emotions by means of cortical processes brings a

flexibility that is not available through the automatic path (LeDoux, 1992).

The Effect of Previous Trauma and Stress

Anger has long been associated with emotional trauma. In fact anger is often seen as a characteristic feature of clinical disorders relating to trauma or acute grief (Chemtob, Novaco, Hamada, & Gross, 1997). For example, anger is associated with Post-Traumatic-Stress Disorder (PTSD) (Chemtob, Novaco, Hamada, Gross, & Smith, 1997; Lasko, Gurvits, Kuhne, Orr, & Pitman, 1994). High levels of anger have been found in female victims of crime (Riggs, Dancu, Gershuny, Greenberg, & Foa, 1992), and in veterans with combat-related PTSD (Chemtob, Hamade, Roitblat, & Muroake, 1994). Anger is often intrusive in PTSD, and situations perceived as threatening often trigger heightened arousal, 'hostile appraisal,' and 'antagonistic behavior' (Chemtob, Novaco, Hamada, & Gross, 1997). Anger is also associated with Borderline Personality disorder, itself strongly associated with early trauma (Famularo, Kinscherff, & Fenton, 1991; Koeningsberg, Kernberg, Stone, Appelbaum, Yeomans, & Diamond, 2000).

This relationship between anger and trauma has yet to be fully explained. Novaco (1996) suggests the links between trauma and anger arise because trauma 'resets' the person's 'activation and inhibition patterns' in accordance with perceived threat. This serves to shift the person into automatic 'survival mode,' so that when a person encounters a situation similar to the previous traumatic one, this gives rise to cognitive distortions, which results in anger (Novaco, 1996, p.171). However, this does not explain why a person becomes angry rather than afraid.

It is known that if a person is already highly stressed, it takes less to trigger the cognitive expectancies that are associated with emotions like anger (Novaco, 1977). When stress is high, even a remote or trivial stimulus can precipitate anger. Persons who experience high stress levels, or who frequently experience negative life events, are more likely to react emotionally, for instance, by becoming angry (Kessler, 1997; Novaco, 1977).

Uncontrollable Anger

Sometimes anger appears to be uncontrollable. Two explanations have been offered for how emotional control breaks down (Carter, 1998). The first is that signals sent back from the cortex to the limbic system are too weak or undirected to override the automatic amygdala activity. An example of this is found in infants and children, who, because of the relative weakness of their cortical signals, have far more emotional outbursts than adults do. One reason for this 'weakness,' is that the axons carrying the signals from the prefrontal lobe (where rational processing of emotion takes place) back to the amygdala, do not mature fully until adulthood. The amygdala, on the other hand, is more or less mature at birth, so is capable of full activity. As a result, a young child's brain is essentially unbalanced, and the child's immature cortex is no match for its powerful, mature amygdala (Carter, 1998). This is not to suggest that an infant does not also have the capacity for prefrontal activity, because many of the incidents that trigger temper-outbursts in infants are based on prefrontal activity, such as frustration, or 'wanting' something, such as a toy, or access to a place, or to touch a forbidden object (McLachlan, personal communication, 2005).

The second explanation for uncontrollable anger in adults suggests that the amygdala can be activated in the absence of any outside stimulus which simultaneously arouses the cortex. This can occur when there has been damage to the cortex. Such damage prevents the cortex damping down and inhibiting automatic amygdala activity (Raine, 2002; Scarpa & Raine, 1997, 2000). This effect is illustrated by the fact that some people convicted of violent crimes show low cortical activity, which suggests they have lost the ability to damp down the amygdala (Raine, Meloy, Bihrle, Stoddard, Lacasse, & Buchbaum, 1998). Thirdly, rage and anger have also been associated with even 'minor concussions' accompanying damage to the left temporal lobe (Amen, 1998).

Genetic and Temperamental Factors in Anger

Emotions like anger have been found to have genetic and temperamental foundations (Akiskal, 1996; Cadoret, Leve, & Devor, 1997; Chess, & Thomas, 1996; Heusmann, Lefkowitz, & Eron, 1984; Kagan, 1982; Plomin, 1990). Amen (1998) found a genetic element in "rageaholic" behaviour, when an individual flares up over inconsequential incidents, such as being brushed against.

Anger can also be transmitted through biological processes, such as contagion, in a manner similar to yawning. 'Anger contagion' refers to the phenomenon whereby one angry person expresses anger, which appears to set off anger in others (Lewis & Saarni, 1985). Such 'contagious' behaviour might be explained by the recently discovered phenomenon of mirror neurons. Rizzolatti & Craighero (2004) showed that mirror neurons fire in the presence of another individual carrying out a goal directed behaviour and might account for some instances in which one person's angry behaviour is copied by

others.

Developmental Features of Anger

Emergence of anger. Developmental psychologists have looked at emotional development, and investigated when various emotions arise (Izard, 1979). Basic emotions, which include happiness, interest, surprise, fear, anger, sadness and disgust, are thought to be present from the earliest weeks of life (Campos, Caplovitz, Lamb, Goldsmith, & Stenberg, 1983). Others have questioned this and Steiner (1979), for example, noted that whilst newborns register disgust in response to sour tastes, anger only appears at about three months of age. Because emotions in infants and children can only be inferred, a number of systems have been developed to examine children's emotions. These usually involve infants' facial expressions. One system is the Facial Action Coding System (FACS), which uses photographs of babies' expressions to catalogue the positions of different facial muscles in various emotions (Ekman & Friesen, 1978). With this system, it becomes clear that anger occurs earlier than had previously been thought, namely at about two months of age (Izard, Hembree, & Huebner, 1987). Two-month old babies express anger in response to frustration. For instance, babies who have previously been able to turn on music by pulling on strings, show anger when they are no longer able to turn on the music (Lewis, Allesandri, & Sullivan, 1990).

Anger and attachment. When infants' attachment needs are threatened or frustrated, they show high emotional arousal, particularly anger (Ainsworth, 1972). Sometimes anger is directed at the person preventing the child from gaining proximity to

the attachment figure, while at other times it is directed at the attachment figure him or herself (Ainsworth, 1972). When separated from their mothers, infants show anger as well as sadness and distress (Bowlby, 1969, 1973; Malatesta, Grigoryev, Lamb, Albin, & Culver, 1986). When children perceive their parents are unavailable, as happened in a prolonged separation, or even when separations are temporary, anger appears to motivate children to overcome obstacles in order to be reunited with their parent figure (Bowlby, 1973). Often anger appears to be the only way a young child has to communicate reproach to the attachment figure, perhaps hoping to discourage him or her from becoming unavailable in the future (Bowlby, 1973).

Bowlby (1973) distinguished two types of anger, functional and dysfunctional anger. He saw functional anger as 'the anger of hope,' where anger is a protest reaction to 'negative attachment behaviour' of others, as when a parent does not respond to an infant's cries. Functional anger is helpful, because it often gets others to stop their negative behaviour and to attend to the child. Functional anger also teaches a child how to battle to overcome obstacles. When attachment is insecure, another type of anger is expressed, dysfunctional anger - 'the anger of despair.' If a child's functional anger does not get others to modify their behaviours, or, if the child is threatened with abandonment or rejection, the child may express dysfunctional anger, which is manifested in overwhelming tantrums, or even in episodes of destructive behaviour. Because parents often punish or reject this type of behaviour, dysfunctional anger is counter-productive, particularly when a caregiver misreads a child's anger and retaliates with anger, punishment, or disengagement. Such dysfunctional anger only serves further to weaken the relational bonds between the child and parents (Lyons-Ruth, Alpern, & Repacholi,

1993).

Like children, adults can respond angrily to threats to attachment. For instance, when a spouse threatens to leave his or her partner, the insecure partner often displays bouts of frightened anger, reminiscent of the protests found in babies and young children, when they are threatened with abandonment (Weiss, 1975).

Adult attachment style affects a person's anger proneness, their anger expression and their anger goals. For example, Mikulincer (1998) found that adults classified as having 'secure-attachment' cope better with separation, and display mainly functional anger by participating in problem-solving, whereas those classified as having 'anxious-ambivalent-attachment' cope less well with separation. They are prone to intense anger, show a more hostile attributional bias, and expect that their significant others will be unavailable or insensitive to their needs. They also lack anger control skills and tend to ruminate on their angry feelings. Those adults classified as having 'avoidant' attachment withdraw after separation and manifest a second form of dysfunctional anger - 'dissociated anger,' in which there is a disjunction between what they report they are experiencing and their actual physiological responses. For example, they report that are not angry, yet their physiological responses belie this. As well as showing differences between behavioural and physiological responses, there are cognitive differences between the various attachment groups as to whether they attribute hostile intent to others or not.

Anger socialization. In discussions of anger, the perennial nature-nurture question lies just below the surface (Harkness & Super, 1985; Lewis & Saarni, 1985). There is strong evidence that emotions like anger, as well as being hard-wired, are

affected by learning, and socialization (Harre, 1986; Lewis & Saarni, 1985; Rizzolatti & Craighero, 2004). Both anger and aggression have been found to be subject to socialization (Eron, Huesmann, & Zelli, 1991; Patterson, Capaldi, & Bank, 1991). Families and peers influence children's expressions of anger, and aggressive behaviour, either as models, or through direct instruction on how to act in emotional states (Debaryshe & Fryxell, 1998). Anger can be socialized directly through didactic teaching, for example saying to a child, "Go to your room till you've calmed down!", or anger can be socialized indirectly, through contact with an angry model. In these cases, socialization occurs through imitation, identification, and social learning (Renk, Phares, & Epps, 1999).

A mother's behaviour influences her children's expression of anger. For example, mothers have been found to ignore angry girls but to 'reward' angry boys with attention, thus making it likely that boys will use anger on future occasions (Radke-Yarrow, Richters, & Wilson, 1985). How a mother handles an angry child has an important effect on what anger-control skills her child develops (El-Sheikh & Cheskes, 1995). For example, when mothers are calm in the face of their child's anger, their children show greater social competence (Denham, 1993). A mother expressing a lot of anger seems to interfere with her children's social learning. For example, children of angry mothers show more 'difficult' behaviour than do the children of less angry mothers (Crockenberg, 1981). Children from coercive, hostile families use more aggression, perhaps as means of self-protection (Patterson, 1985). Conversely, mothers who have had to defend themselves against physical aggression sometimes want to teach their daughters to defend themselves, so deliberately tease their daughters and teach them to

fight back (Miller & Sperry, 1987).

Parents can also teach children emotional control. Parents who respond to their offspring by talking about their own emotions, who are supportive, and show empathy towards their children, produce children with greater anger control skills (Roberts & Strayer, 1987). Where parents respond to their children's anger with firmness, and help their children deal with the cause of their distress, their offspring develop higher levels of social competence than do the children of parents who are 'too responsive to the negative emotions' (Roberts & Strayer, 1987). Children's emotional continence, that is, their ability to handle their anger, is influenced by how their parents respond to the child's emotions, particularly anger (Roberts & Strayer, 1987). When parents of older children respond to their child's displays of negative emotion without also giving some direction on how to manage anger in socially appropriate ways, this appears to reinforce their child's negative displays (Snyer & Patterson, 1986).

Children who witness anger among family members, or have been exposed to frequent parental conflict, show more negative emotional reactions, such as anger, fear, shame, and sadness, particularly when the conflict is over the child, or something the child has done (Debaryshe & Fryxell, 1998). When parents acquiesce to their children's negative behaviours, that is, they 'give in' to their angry child, this has the effect of rewarding their child's anger and serves to increase 'coercive' family interactions (Debaryshe & Fryxell, 1998; Patterson, 1982).

Because people from different cultures have different anger levels, this seems to indicate that cultural factors also play a part in anger. For example, in Inuit society, where parents use an indulgent parenting style with their infants, by age six, their

children show hardly any anger (Briggs' study, as cited in Oatley & Jenkins, 1996). Likewise, Thai children have few anger based disorders in comparison to USA children (Weisz et al., 1987). This suggests that socialization plays some part in anger behaviour, because different cultures have different 'display rules' for anger. These regulate to whom, where, and when anger, and other emotions, can be expressed (Lemerise & Dodge, 2000). When individuals do not follow these rules, this raises problems, even for young children. For instance, even very young children tend to dislike those children who do not follow their culture's display rules (Casey & Schlossler, 1994).

There are also cultural differences in levels of anger. For instance, a study examining anger proneness in Spanish, Dutch and Japanese people, showed that 'anger proneness' was similar in Spanish and Dutch persons, but higher in Japanese persons (Ramirez, Fijihara, & Goozen, 2001). This strongly suggested that cultural 'anger' patterns are socialized through modelling, or the use of reward and punishment.

While anger is often punished, it has been noticed that anger and aggression increase in children who have suffered severe punishment (Magai & McFadden, 1995). Whilst punishment suppresses behaviours such as whining, it does not suppress emotions such as anger, and parental use of physical punishment is associated with offspring anger, in both boys and girls (Magai, Distel, & Liker, 1995). Pre-school and primary children who are frequently punished by caregivers show more aggression than those who are not punished often (Lyons-Ruth, Alpern, & Repacholi, 1993; Main & Hesse, 1990). Even when parents punish their children in non-physical ways, such as with rejection, anger, criticism, disappointment, ridicule, coldness, or withdrawal of parental love, their offspring show more angry feelings, more depressed affect, and more 'preoccupied

attachment' (Magai, Hunzinker, Mesias, & Clayton Culver, 2000).

Personality and Anger

Anger can become a lasting trait. This is because one of the fundamental properties of emotions is that they can readily become habits. When habitually expressed, emotions are susceptible to "structuralization within the personality" (Magai & McFadden, 1995). Once established, such emotional patterns are described as traits or personality characteristics.

These characteristics strongly influence how persons process information, and whether they use coping or defensive strategies in a particular situation (Magai & McFadden, 1995). One such emotional pattern is trait anger, which is manifest as an angry dispositional tendency, irritability, sensitivity to slights, cynicism, and argumentativeness (Magai & McFadden, 1995, p.257). For example, 'angry' men and 'angry' women have been found to behave in uncontrolled ways, responding more angrily and intensely than do their non-angry counterparts in similar situations (Deffenbacher, 1992).

Trait anger predisposes an individual to perceive situations in a biased manner. It also leads to significantly more long-term negative consequences for these angry persons (Deffenbacher, 1992). For instance, persons high on trait anger often manifest significant depression, or feel significantly more disgusted, foolish, or ashamed of themselves after an angry episode, while those low on trait anger report feeling significantly more relieved and more satisfied after an anger incident (Tafrate, Kassinove, & Dundin, 2002).

Children too have been found to manifest early characteristic personality patterns. For example, some children manifest 'shy' patterns, while others show angry or 'explosive' patterns (Caspi, Elder, & Bem, 1987, 1988). Some children showed angry personality configurations involving anger-proneness, aggression, and hostility (Magai & McFadden 1995). In particular, children assessed as 'insecurely-attached' and those assessed as 'aggression-prone' show lower thresholds of anger arousal and express more anger than their non-aggressive counterparts (Magai & McFadden, 1995). Some 5 – 11 year olds already show behaviour that has a 'driven,' reactive quality, similar to that found in adult Type A Behaviour Pattern (TABP). Such behaviour is associated with several predisposing factors including a temperamental irritability, having parents who modelled TABP, and a critical family climate (Magai & McFadden, 1995). Personality traits have also been attributed to persons developing particular sets of cognitions which bias their interpretation of situations in favour of anger provocation (Young, 1990).

Negative Effects of Anger

For many years, arising from psychoanalysis, there has been an accepted 'truth' that not 'venting' or expressing anger overtly results in harmful 'repression' (Freud, 1920). There is some support for this, as it has been found that persons who do not express their anger become more depressed than those who do (Lester, 1989; Robbins & Tanck, 1997). Yet, there have also been counter findings. An examination of the relationship between anger expression, coping style, and well being, has shown that, rather than depression being reduced through anger, the more anger a person expresses, the greater is their level of stress and depression, and the lower their wellbeing and

coping levels (Doing & Bishop, 1999). Venting anger has also been found to increase anger levels, and often leads to unwanted outcomes (DiGuiseppe, 1995). Furthermore, trait anger in early adolescents is associated with diminished general well-being, less vigour, and less inclination to change (Mahon, Yarcheski, & Yarcheski, 2000).

Finally, there are numerous studies showing that anger has adverse health consequences (Appendix A). In particular, anger is associated with coronary heart disease (Chesney, 1985; Chesney &, Rosenthal, 1985; Frasure-Smith, Lesperance, & Talajic, 1995; Friedman, & Rosenman, 1959; Spielberger, Johnson, Russel, Crane, & Worden, 1985; Spielberger, Krasner, & Soloman, 1988).

Disordered Anger

Beck (1976) thought it was possible to distinguish 'normal' anger from 'disturbed,' abnormal or pathological anger. He concluded that there should be diagnostic categories for 'clinical' expressions of anger, just as there are for clinical expressions of fear (such as phobias), anxiety (such as panic disorder), and depression. Beck thought that what distinguishes disordered emotions from normal emotional responses, is that there are always cognitive distortions in the disordered responses. While in normal emotional responses, cognitive appraisals are 'reasonable,' in disturbed emotions, internal, cognitive factors serve to "confound the individual's appraisal of reality" (Beck, Butler, Brown, Dahlsgaard, Newman, & Beck, 2001). This theme is returned to in Chapter 2.

Managing Anger

Numerous well crafted empirical studies have shown that anger is very amenable to modification (Deffenbacher, 1995, 1999; Deffenbacher, Thwaites, Wallace, & Oetting, 1994; Deffenbacher, Lynch, Oetting, & Kemper, 1996; DiGiuseppe, 1995; Digiuseppe & Tafrate, 2003; Digiuseppe, Tafrate, & Eckhart, 1994; Mayne & Ambrose, 1999; McKay, & Rogers, 1996; Moon & Eisler, 1983; Novaco, 1977, 1999; Wilson, 1984). Because most angry people display cognitive distortions (Eckhardt, Barbour, & Davidson, 1998), many anger management programmes focus on these cognitions. Most anger management programmes foster skills, such as teaching persons to recognize that they are becoming angry, and show steps necessary for staying in control. They teach problem solving, and develop assertiveness and stress management skills. A plethora of empirically supported CBT self-help books have emerged to teach these skills (Deffenbacher & McKay, 2000; Potter-Effron, 1994; McKay & Rogers, 2000).

Such anger management programmes teach individuals to become aware of their thoughts and to question the veracity of these thoughts (Beck, 1976; Beck & Fernandez, 1998; Chemtob, Novaco, Hamada, & Gross, 1997; Ellis, 1962, 1977; Hamberger & Lohr, 1980). Persons are also trained to recognize signs of anger, which they can then use as cues for them to employ coping strategies for resolving conflict (Novaco, 1996).

Many training programmes have been found to have beneficial effects, even for 'resistant' and difficult groups. For example, male spouse abusers (Faulkner, Stoltenberg, Cogen, Nolder, & Shooter, 1992) and 'psychiatric male adolescents,' after anger management training programmes, both showed significantly increased anger-control (Feindler, Ecton, Kingsley, & Dubey, 1986). Even young children, when

encouraged to exhibit self-control, became more 'emotionally continent' than those allowed to display tantrums (Carter, 1998; Feindler, 1995).

Through practice, it is possible for persons to learn to control anger (Feindler, 1995; Garrison & Stolberg, 1983; Ollendick & King, 2000). Possibly this occurs because brain cells, such as those which inhibit the amygdala, when regularly stimulated, become more responsive and so easier to activate on future occasions (LeDoux, 1992). This means that practice in controlling anger, even for young children, makes anger management easier. By such means, anger can be reduced and its unpleasant social effects mitigated (Jacobs, 2003). In addition, the negative health consequences are decreased. From the success of these cognitively-based programmes it becomes clear just how important cognitions are in anger generation and in anger management.

Cognitive Factors in Anger

Whilst anger is related to survival, as discussed earlier, it is not simply a reflex. As with other emotions, anger reflects the workings of underlying cognitive processes such as 'attention, motivation, memory, judgment, decision making, and problem-solving' (Clore, Ortony, Dienes, & Frijda,. 1993, p.81). This means that, in any negative situation, a person has a choice of possible responses. For instance, when a woman has been the butt of a joke, she can become angry, take the situation as a joke, or simply ignore it. Her response is not simply a reflex reaction but is the result of decision-making.

The role of cognitive appraisal in anger was highlighted by Clore et al. (1993). They formulated a complex social model to explain anger. Rather than seeing anger as a

unitary concept, they differentiated it into several distinctive states, each reflecting particular underlying cognitive appraisals. For instance, in the presence of any potentially anger-provoking event, an individual appraises the situation in terms of his or her own goals, standards, and attitudes. The event is seen as desirable or undesirable, praiseworthy or blameworthy, appealing or unappealing. In the light of these appraisals, different responses can be triggered: frustration, reproach, resentment, or anger. Frustration arises in situations when there is an undesirable outcome, or the person is prevented from reaching a goal, but no-one is to blame. An example of this would be when a person is trying to read a newspaper, but the wind keeps blowing it off the table. Reproach is felt when someone else has violated the person's standards, or the person attributes blame to another, for instance, when another person loses a borrowed book. Resentment is felt when the person deems someone else to be unworthy in relation to the outcomes gained by them, for example, when a person is passed over for promotion and the job is awarded to someone less competent. Anger is seen to be a combination of frustration and reproach, for example, when a person loses a game to someone who has cheated. If the game had been lost simply as the result of a lack of skill, the person might have felt disappointment, but not anger. Anger arises when there is a combination of disapproval of somebody else's behaviour, an undesirable outcome, and someone to blame.

Anger has been associated with a number of cognitive factors, such as values, personal rules, self-schemas, attitudes and goals, all of which determine whether or not a person becomes angry (Deffenbacher, 1999). Some studies point to the role of 'locus of control,' that is, whether or not an individual believes he or she has any control over a

situation, or feels controlled by someone or something (Lester, 1989; Young, 1991). For example, T. L. Young (1991) found that both anger and depression are associated with an 'external locus of control' – the belief that the person is controlled by external factors.

Other studies have focused on appraisal and expectancy (Dodge, Pettit, McClaskey, & Brown, 1986), as when an individual finds what he expects to find, such as when an individual expects others to behave aggressively (Ellis & Tarfrate, 1997; Magai, 1999). 'Angry' persons show a hostile attributional bias, so tend to view their interpersonal interactions negatively (Deffenbacher, 1992). Angry and aggressive children show cognitive distortions and biases when encoding social cues (Crick & Dodge, 1994; Dodge & Frame, 1982; Dodge & Somberg, 1987). They expect more negative experiences than do children who are not angry (Dodge et al., 1986; MacLeod & Byrne, 1996).

Anger has also been associated with unstable high self-esteem (Baumeister, Smart, & Boden, 1996; Novaco, 1996), and with feeling that one's self-esteem is threatened (Izard, 1977). Anger arises when a person perceives injustice (Skarlicki & Folger, 1997). It is also associated with thoughts of vengeance against a transgressor (Digiuseppe & Froh, 2002; Enright & Fitzgibbons, 2000).

How persons perceive situations depends on their expectations. Expectations seem to determine whether or not a person becomes angry (Novaco, 1996). Anger can also occur in response to stress from cognitive sources, such as when a person perceives that environmental demands are disproportionately greater than his or her coping resources (Novaco, 1995), or it can reflect how a person felt prior to an incident. These feelings influence a person's judgments, and can render his or her perceptions of who was to blame somewhat inaccurate, an effect known as the 'reverse-rose-coloured glasses' effect (Clore

et al., 1993, p. 82). Such expectational biases can impact even on simple tasks such interpreting an ambiguous facial expression (Magai, 1999).

How individuals come to perceive their world in a particular manner and what automatic cognitions they make have also been studied. It appears that these perceptions and expectations are influenced by how they were treated when young (Ingram, Kendall, Smith, Donnel, & Ronan, 1987; McDermut & Haaga, 1994). From these early experiences a child develops a view of what he or she can expect from others in the future.

Conclusion

Anger is a complex emotion. It is linked to 'hard-wired,' self-protective, survival responses. It appears very early in life and, whilst linked to temperament, it is also socialized. It involves physiological responses, cognitions, and behaviour. It can motivate a person to overcome obstacles, and defend values. When it is overwhelming, chronic, or vented in destructive ways, anger becomes a problem. However, it is possible for persons to learn to manage their anger. Even though anger is such an important human emotion, a perusal of the psychological literature shows that there are far fewer references to anger than to depression or anxiety. Consequently, anger has been described as the 'misunderstood emotion' (Tavris, 1984), or 'the forgotten emotion' (Diguiseppe, Tafrate, & Eckjjhart, 1994). While there have been a range of studies of anger, as this review shows, there has not been a study of the particular cognitions associated with anger. In the following chapter, the theme of cognitions in relation to anger and other emotions is further developed.

CHAPTER 2

COGNITIONS AND THE ORIGINS OF EMOTIONS

Overview

In this thesis, the primary interest is the relationship between specific cognitions and anger. However, because there is only a limited amount of information about this, this chapter begins with an outline of what is already known about the relationship between cognitions and two other emotions, specifically, depression and anxiety. This includes two current explanations of these relationships: Beck's Cognitive Content Specificity hypothesis and his Primacy hypothesis, which are examined in relation to anger in comparison with depression and anxiety; and Young's hypothesis about the effects of early negative parenting on offspring schema development.

Background

There have been a variety of explanations offered of how affective disorders arise and operate (Ellis, 1962; Epps, & Kendall, 1995; Hollon, Kendall, & Lumry, 1986; Ingram, Miranda, & Segal, 1998; Leahy, 2003). The explanations highlighted in this chapter are Beck's (1972) and Young's (1990). These were chosen because they link specific emotional disorders to particular cognitions. Beck and others have claimed that depression and anxiety are associated with distorted cognitions, (Beck, Laude, & Bonnert, 1974; Beck, 1976; Beck, 1990). Beck also claimed that anger too would be found to be associated with specific distorted cognitions.

Distorted, automatic cognitions are sometimes known as 'maladaptive schemas'

(Young, 1990). When present, schemas automatically bias an individual's perceptions, and give rise to specific emotions (Clark, Beck, & Alford, 1999). Schemas, or as Beck describes them, "integrated cognitive-affective motivational programmes," are thought to develop as a results of prior experiences (Beck, 1972, 1990). They include beliefs, which are views that have become fixed as the result of repetition, such as , "I am unlovable"; attributions of causality, which refer to how a person explains what happens to him or herself, such as "I always mess things up"; and conditional beliefs, such as "If someone is cross, then it must be my fault" (Beck, 1990, p. 32). Whilst cognitive schemas can be both 'adaptive' and 'maladaptive,' in the main, in clinical settings, and in this thesis, the schemas that are of interest are the maladaptive ones, particularly those which relate to anxiety, depression, or anger.

Such cognitive habits produce self-fulfilling prophecy effects. For instance, when an individual developed these fixed, automatic expectancies, they lead him to make immediate negative attributions. In turn, these attributions trigger emotions like anger, depression or anxiety (Beck, 1990). For example, Beck (1976) found evidence that depression was specifically associated with certain cognitive content, and anxiety specifically with other content. From this, he predicted that anger would be found to be associated with yet other specific cognitive content.

Young thought that dysfunctional, automatic cognitive schemas arise from experiencing regular, adverse early experiences, particularly from adverse parenting (Young, 1990; 1994). He thought maladaptive schemas mostly arise early in life; they go unquestioned, and so become 'truths' for the affected individual (Young, 1990). The results of this is that they become fixed, tenacious beliefs that last a life time. In this way,

early adverse life events lead to the development of automatic cognitive schemas (Young, 1990), which, in turn, give rise to later affective and personality disorders (White & Widom, 2003; Young, Klosko, & Weishaar, 2003). Once formed, these long-standing automatic cognitive habits influence what an individual perceives and how he construes events. In situations reminiscent of those early experiences, the individual automatically repeats cognitive patterns that he acquired early in life. In this way, schemas predispose a person both to interpret social stimuli in a particular way, and to express or inhibit certain kinds of emotion (Magai et al., 2000). Early attachment experiences also become incorporated into personality by means of the formation of automatic cognitive schemas (Magai et al., 2000). Whilst such acquired automatic cognitive responses might once have had survival functions, they can be dysfunctional when they operate in non-life-threatening situations.

What are Schemas?

In the last two decades the term schema has had an increasingly wide usage, and the term has acquired a number of slightly different meanings and designations. A number of variants of the term have also been used, such as 'scheme,' as well as closely related terms such as 'memory structures' (Williams, Watts, MacLeod, & Mathews, 1997), 'internal working models,' (Bowlby, 1988), 'patterning of appraisal,' 'structures of knowledge' (Jenkins, Oatley, & Stein 1998), 'cognitive structures' (Clark & Steer, 1996), 'assumptions' (Leahy, 2003), 'hot' cognitive attributes (Smith, Haynes, Lazarus, & Pope, 1993), and "enduring latent cognitive structures" (Clark & Steer, 1996). The term schema has also been used to describe cognitive processes in which large amounts

of information are processed 'quickly and simultaneously, outside awareness' (Shiffrin & Schneider, 1977). It has been used to explain how complex information that is encoded in the memory, and yet is outside of conscious awareness, nonetheless influences how a person experiences the world and how he or she behaves (Kihlstrom, 1999). The term has also been used to explain how this information is organized into information processing units, which, though outside awareness, when activated automatically, "guide attention, perception, memory and experience" (Paivio & Greenberg, 1998, p. 230).

The term schema has been used in both clinical and cognitive psychology. Each discipline has sought to explain and encapsulate an individual's idiosyncratic interpretation of events, while looking for any common underlying psychological mechanisms. Cognitive psychology focuses on the more 'cognitive' elements of schemas, and sees schemas as the "scaffolding for the assimilation of information" (Anderson, 1984). Schemas determine the orderly manner in which memory encodes and retains information, editing and summarizing this information to allow attention to be focused on important elements (Anderson, 1984). Schemas are critical components of the cognitive mechanisms that allow persons to understand, intuitively, their present experiences by referring back to similar past experiences (Williams et al., 1997). Cognitive psychologists also use the term schema to describe any consistent internal structure which acts as a template for new information (Williams et al., 1997), allowing it to be integrated efficiently with existing memories. Such explanations focus more on the functions of schemas, but seldom examine the emotional impact of schemas, or look at how schemas relate to emotions. That is a topic of more interest to clinical psychology.

Clinical psychology focuses on the link between cognitions and emotions, as well as on the consistent, internal, unconscious, cognitive phenomena which can automatically arouse strong emotions. Clinical psychology sees schemas as knowledge structures that give rise to a readiness to respond in a particular manner, and to experience one emotion rather than another (Jenkins, Oatley, & Stein, 1998; Young et al., 2003). In the clinical context, schemas are thought to involve three elements: "the activation of core self-organizations as well as primary and secondary cognitions and behavioural/action systems" (Paivio & Greenberg, 1998, p. 241). The next section explores some of these links between cognitions and emotions, and how these cognitive motivators might be acquired.

The Cognition-Emotion Link

What was not clarified by the previous definitions of schemas was how emotions and cognitions are linked, and how this link arises. One way to understand the link is to return to the work of LeDoux (1992, 1996). He researched one emotion in detail - fear. He discerned certain similarities between conscious emotional feelings and conscious thoughts. Both involved "the symbolic representations in working memory of subsymbolic processes carried out by systems that work unconsciously" (LeDoux, 1992, p. 299). He found that emotional feelings differed from thoughts, because they were generated by different brain systems. Moreover, because emotions were linked to survival, they involved more brain systems and activated many more response systems than 'thoughts' did. He found that cortical activity can activate response systems, such as motor systems, but only after activating the emotion system in the amygdala.

LeDoux found that the emotional and cognitive systems, whilst discrete, are linked, with each system mediated by separate but interacting brain systems (LeDoux, 1996, p. 69). This means that persons can recognize the presence of a threat before they are able to ascertain what the threat is. This primitive, automatic, emotional appraisal system is directly linked to the emotional activation system, so it can automatically activate emotional responses. By contrast, the more developed cognitive system is not linked automatically to the response system. This feature gives the cognitive system greater flexibility than the automatic system, but makes it a little slower. The links between the cognitive system and the behavioural response systems occur in systems such as the amygdala. Through these links, conscious thoughts are able either to activate or override the emotion system (LeDoux, 1996).

Cognition and Anxiety, Depression and Anger

This section looks at some of the links between cognitions and emotions. As already mentioned, cognitions have been found to be all important in anxiety and depression (Beck, 1967). Beck suggested that emotions arise when schemas are triggered (Beck, et al, 1990, p. 24). For instance, Beck and his colleagues found that depression and sadness are invoked by the perception of loss, deprivation, or defeat, while anxiety is marked by perceptions of danger and personal vulnerability. Whilst Beck did not formally explore the specific cognitive content associated with anger, on the basis of his clinical experience, he predicted that anger would be associated with cognitions that concern perceptions of loss of rights or status, and with perceptions of offence and injustice (Clark, Beck, & Alford, 1999, p. 77).

On the basis of his early research, Beck proposed his Cognitive Content Specificity Hypothesis. This stated that particular emotions are associated with specific thoughts, and, as a result, it is possible, simply by looking at the cognitions attached to an event, to distinguish between emotions like sadness, depression, anger and anxiety. For example, when a person is preoccupied with danger, such a person will experience anxiety; when a person's focus is on loss, this will be associated with depression; when a person's focus is on the unacceptable behaviour of an offender, on injustice or denial of rights, this will be associated with anger.

Young (1990), like Beck, thought disordered emotions, and disordered personality patterns, are linked to maladaptive cognitive schemas. Such schemas arise out of dysfunctional development experiences. They become activated in situations that are similar to those in which they originated, which causes the individual to react emotionally, automatically, and without stopping to assess the prudence of their reaction.

Such processing shortcuts indicate the presence of underlying schemas (Young, 1990), adaptive or maladaptive. The shortcuts indicate that a person has become sensitized to certain emotional situations, probably through exposure to early traumatic experiences (Young, 1990; 1994; Young, Weinberger, & Beck, 2001). Such experiences give rise to biased cognitive perceptions, "disturbed attitudes, invalid premises, unrealistic goals and expectations" (Young et al., 2003, p. 7).

Young also noticed an association between specific early maladaptive schemas in offspring and offspring reporting that they had experienced particular types of adverse parenting. For instance, when patients reported that, as children, they had had to suppress important aspects of themselves to gain parental love, attention, or approval, Young found

these patients scored highly on the Subjugation Schema. He also noticed a link between such early adverse parenting experiences of children and anger, expressed directly in outbursts of temper or passive aggressive behaviour, or expressed indirectly, as in substance abuse (Young et al., 2003). Young claimed that anger is associated with Subjugation because subjugation involves an "excessive surrendering of control to others because one feels coerced – usually to avoid (others') anger, retaliation, or abandonment" (Young, 1990, p. 15).

While Young's model remains untested, there is other evidence to confirm that social information processing is influenced by an individual's early experiences. For example, children harshly disciplined by their parents, show higher levels of maladaptive social information processing than do children who have been disciplined less harshly (Weiss, Dodge, Bates, & Pettit, 1992). Bowlby found that children's negative 'internal working models' (Bowlby's version of cognitive schemas) arose out of early attachment difficulties (Bowlby, 1988). Paivio and Greenberg (1998) claimed there was a special class of schemas, formed in early attachment relationships. They affect a person's sense of self, become the basis for the individual's patterns of thinking, and determine the 'underlying tone of a person's whole emotional life' (Paivio & Greenberg, 1998, p. 231). Such emotional schemas are thought to arise from having had early negative social or relational experiences. These experiences impact on a child's neural development, particularly on the right-brain development and function, and they affect how an individual perceives emotional states of others (Voeller, 1986). Having such experiences has been found to compromise an individual's attachment, their empathy development, and their affect-regulation (Perry, Pollard, Blakely, Baker, & Vigilante, 1995).

Not only do schemas become distillations of previous relationship experiences, they also become templates for what these individuals expect from others in the future (Baldwin, 1992). Even infants develop schemas or expectancies of how to 'be with another person' on the basis of early experiences. For example, it has been shown that when a baby wants to play with her mother, she becomes animated and tries to elicit a response from her mother. When the mother is depressed, she does not respond to the child, and the child comes to expect that any attempts he or she makes to instigate play will be greeted with rejection. In this way, the child's motive for play becomes associated with an expectation of disappointment, and this view of others becomes the basis for the child's future relationships (Stern, 1994).

How Schemas Arise

Clinical psychologists like Beck and Young took the view that emotional disorders reflect the presence of underlying maladaptive schemas (Beck, 1972; Young,1990; Young et al., 2003). Young claimed that maladaptive schemas arise from three sources: they arise either from trauma in childhood or later; they arise from not having one's emotional needs met; or from being over-indulged as a child (Young, 1990). Beck's and Young's models are described next. Each model accounts for how cognition and emotion are linked, how schemas develop and operate, and how emotions may become chronic.

Cognitive Content Specificity and Emotions

Beck's schema model. Thirty years ago Beck (1976) discerned links between maladaptive cognitive schemas and affective disorders such as depression or anxiety. As a result, he developed a model to explain this link (Beck, 1970, 1976, 1985). He and his colleagues (Beck, Emery, & Greenberger, 1985) deduced that there were three schema levels: individual 'cognitive schemas;' groups or constellations of schemas, which they also called 'cognitive sets'; and an overriding 'cognitive mode' which operates at a higher level and determines which set of schemas operates at any particular time.

Beck and his colleagues proposed that maladaptive schemas arise from repeated exposure to trauma. Such trauma causes an individual to develop schemas 'with a dysfunctional or maladaptive orientation.' For example, a person who has had a close relative die slowly from a deteriorating illness, may become overly sensitive to any signs or symptoms that might be an indication of a similar disease (Clark & Steer,1996, p. 76).

Beck and his colleagues asserted that affective states like depression and anxiety, and even personality disorders, all arise as a result of faulty information processing (Beck, 1967, 1976). They saw direct links between emotions and these "integrated cognitive-affective-motivational programs" (Beck et al., 1990, p. 28). They suggested that all maladaptive emotions are related to cognitive events such as thoughts, reminiscences, or images. For example, when confronted with rudeness, a person will feel angry if the rudeness and anger are linked by an intervening thought such as, "How dare you speak to me like that!" Another person confronted by rudeness might feel anxious, particularly if his or her prevailing schema is "I am not competent in this situation" (Beck et al., 1990).

Beck and his associates hypothesized about the nature of the link between cognitions and depression and anxiety, and they proposed that each emotional state is associated with specific cognitions, and that 'every psychological disorder has a distinctive cognitive profile which is reflected at all levels of cognitive functioning' (Clark & Steer, 1996, p. 78). This contention is known as Beck's Cognitive Content Specificity hypothesis.

Although the Cognitive Content Specificity hypothesis predicts that cognitions and emotions are linked, it does not indicate precisely how emotions and cognitions are related to one another. This question was addressed in Beck's next hypothesis – his Primacy hypothesis. This proposed that biased cognitive processing **leads to** a corresponding change in an individual's emotional and behavioural responding. In other words, the hypothesis predicted that the relationship is temporal and unidirectional; that cognitive processing occurs before the emotion is experienced.

Specific cognitive stressor (Predominant Schema) → Particular emotion

Beck illustrated his primacy hypothesis with an story about a teacher reprimanding two students for talking in class. One student reacts hostilely, contests the teacher's comments, and criticizes the teacher. The other student withdraws, appears sad, and remains silent. Beck suggested that the first student thought that she had been treated in a belittling manner, so she felt angry and retaliated. The second thought the teacher's correction showed that the teacher disapproved of her, so she felt ashamed and sad, and

she withdrew. While this illustrates how idiosyncratic cognitions can be, it does not fully explain how a particular schema becomes dominant or prominent.

Beck (1976) thought that once sensory information was received, the overall schema mode operating at that time activates individual or constellations of schemas. The schema mode focuses attention, thereby helping the individual to obtain meaning out of any sensory input. For example, a shooting pain in the knee would be focused on differently by someone who knew it to be a symptom of a degenerative disease, than it would by someone who did not.

Modes are suggested to be networks of systems which integrate cognitive, affective, motivational and behavioural schemata. They act in synchrony to produce goal-directed strategies (Scott, 2001). When a particular cognitive mode is operating, it engages particular cognitive schemas, or constellations; then, by means of internal cognitive processes, these schemas involuntarily engage the person's emotions. In this way, it is the cognitive processes, not external stressors, that trigger the person's emotions. Or, as Beck explained it, an individual's cognitive set is activated by his or her prior dominant mode. Beck illustrated this with an example. He suggested that persons in different 'modes' react differently in the same situation. For example, when faced with a test, a person operating in a 'depressogenic mode' approaches the test expecting to fail, whereas a person whose dominant mode is hostility approaches the test with an expectation that teachers have tried to trick the students.

Any mode currently operating focuses the person's attention on any stimuli that support this prevailing mode, and focuses attention away from those stimuli which do not. This encourages the person to process data in ways which encourage bias,

overgeneralization, and misinterpretation. In this way, the active schema mode not only focuses attention, but also 'deactivates' any schemas or schema constellations which do not fit the active mode (Beck et al., 1990).

In normal functioning, systems of 'self-evaluations' and 'self-directions' develop and "operate more or less automatically" (Beck et al., 1990, p. 36). For example, in a depressive mode, thoughts, such as "I am worthless," become automatic or hypervalent, and this gives rise to depression. Modes represent, "in energy terms, the shift ... away from normal cognitive processing by the negative schemas that constitute the depressive mode. " (Beck et al., 1990, p. 33). Yet, this explanation does not distinguish how modes operate from how schemas operate, nor does it explain how the dominant mode becomes dominant at a particular time.

Testing Beck's Model

Studies of cognitive content specificity sought to discover whether there was any specific, distinctive, discriminating, cognitive content associated with anxiety or depression. Specificity studies showed that the content of depressed patients' thought included a past-orientation and distinctive and characteristic concerns about failure and loss. They also showed that the content of anxious patients' thought has a future orientation, and is primarily concerned about present threat and danger, or displays concerns about future danger (Beck, Emery, & Greenberg, 1985; Clark, Beck, & Beck, 1994). The themes associated with depression and anxiety specifically relate to what Beck et al. call the 'cognitive triad' of 'self, future, or the world." That is, they reflect how a person sees him or herself, what the person expects will happen in the future, and how a

person thinks others view him or her. For example, depressed persons cannot imagine themselves feeling better in the future, while anxious persons expect the future to be filled with threat (Clark, Beck, & Beck, 1994). When anxiety, depression and anger were compared, it was found that anxiety was uniquely predicted by thoughts of threat, depression by thoughts of loss and threat; and anger by thoughts of transgression and loss (Wickless & Kirsch, 1988). Specificity studies revealed that anxious and depressive cognitive content in children is significantly correlated with behavioural symptoms; for example, anxious cognitive content was associated with nervous behaviour; depressive cognitive content with behavioural withdrawal (Jolly, 1993).

Other specificity studies (Beck, Brown, Steer, Eidelson, & Riskind, 1987; Clark, Beck, & Brown, 1989; Greenberg & Beck, 1989; Laurent & Stark, 1993) offered a less clear picture. Whilst there was unequivocal support for the content specificity hypothesis in relation to depression, there was less support for cognitive content specificity in relation to anxiety (Beck et al., 1990; Beck et al., 1992; Beck et al., 1987; Greenberg & Beck, 1989; Steer et al. 1994). Even in studies which showed that anxious individuals reported more threat and danger cognitions, there was little evidence that there was specific cognitive content associated with anxiety (Beck et al., 1987; Burgess & Haaga, 1994; MacLeod et al. 1986).

In conclusion, there have been numerous studies examining Beck's cognitive content specificity hypothesis (Beck et al., 1990; Beck et al., 1985; Beck, Rush, Shaw, & Emery, 1979), but the degree of support for emotions being a function of specific content is only moderate. So it appears, that while Beck's model identifies links between cognitions and emotions, it does not elaborate on the nature of the links. Neither does it

explain how particular schemas develop, nor explain how specific cognitive modes come to dominate an individual's thinking, and there is no clear picture given of how specific schemas come to acquire their power to trigger particular emotions. Some of these matters were taken up by Young.

Young's model. Young's models draws on Beck's model, as well as drawing on psychodynamic, attachment, and Gestalt models. This makes it a rather complex model. It includes concepts such as schema formation, schema maintenance, modes, and coping styles (Young, 1990; Young et al., 2003). It also details the specific origins of different early maladaptive cognitive schemas. In particular, Young (1990) takes up the issue of how specific developmental experiences contribute to the development of specific schemas.

Based mainly on his work with individuals with personality disorders, Young discerned various patterns of dysfunctional beliefs that his patients held. He named them Early Maladaptive Schemas (EMSs). Whilst Young and his colleagues found EMSs present in both clinical and nonclinical populations, they asserted that EMSs are more extreme in clinical populations.

Young et al. (2003) deduced that cognitive schemas are mostly formed early in life, and that once they are formed, they persist, even after they no longer apply. For example, when a parent has been physically overbearing with his offspring, his offspring, even when a fully grown adults, may still feel fear or anxiety in the presence of the parent, even in cases where the offspring is stronger or bigger than the parent. Young suggested that some schemas develop after a child has acquired language, while others

are preverbal, that is, they originate before the child has acquired language. In such cases, any cognitive content is presumed to be added later (Young et al., 2003).

Young and his colleagues (2003) hypothesized that schemas have biological origins, that they are the result of "emotions and bodily sensations stored in the amygdala system" (p. 26). They hypothesized that specific EMSs arise in response to particular 'toxic,' negative parenting practices. For example, they arise in response to specific experiences of abandonment, abuse, emotional deprivation; from over-identifying and becoming enmeshed with significant others; or are a result of being over-indulged and feeling entitled to special privileges. Such negative experiences prevent a child meeting his or her 'core emotional childhood needs,' such as the need for 'attachment, autonomy, freedom to express valid needs, emotions, spontaneity and play, and the need for realistic limits' (Young et al., 2003, p. 9). For Young, parenting makes a vitally important contribution to offspring developing maladaptive schemas. Such schemas themselves become the wellspring of subsequent affective and personality disorders.

From the information about their early childhood given to him by his patients, Young (1990) identified 15 types of negative parenting. He deduced that each type of negative parenting related to a particular type of maladaptive schema. For example, he contended that an Abandonment schema arises from having parents who have been remote or absent; or a Subjugation schema arises from having very demanding parents. Although not stated in this form, Young and his colleagues imply that most maladaptive schemas are associated with negative parenting practices, and that each specific type of maladaptive schema is associated with a particular type of emotional disorder. In Young's model, the

relationship between personal history, and subsequent emotional disorders can be represented in the following manner.

Adverse History → Development of Cognitive schema → Emotional Disorder

Once an individual has developed a schema, Young et al. (2003) thought that schemas are triggered when the individual "enters environments reminiscent of childhood environments that produced them" (p. 61). According to Young, whenever an individual finds him or herself in such situations, the amygdala unconsciously activates the emotion originally associated with that event. Alternatively, the individual can be aware of these events, but, even in such cases, "emotions and bodily sensations are activated more rapidly than the cognitions" (Young et al., 2003, p.29). Once developed, schemas "fight for survival" in an attempt to preserve cognitive consistency. Even though schemas cause suffering, they are 'comfortable' because they are known. The effect of this familiarity is to attract the individual towards the very situations that will trigger their schemas. This feature then perpetuates the individual's schema thinking. A example of this is the person who is attracted to people who treat him or her as his or her parents once did. So, having cold, rejecting or withholding parents gives rise to schemas like Abandonment, and this attracts the individual to others who are cold, rejecting and withholding. Although Young mainly described how schemas develop in relation to personality disorders, he also claims that dysfunctional emotions, including depression and anxiety, have similar origins to personality disorders (Young et al., 2001).

Critique of Young's Model

Whereas Beck's content specificity hypothesis has been extensively researched, Young's model does not seem to have been subjected to an equivalent level of research, no doubt, partly because of its comparatively recent development. Even though Young et al. (2003) report the wide enthusiasm that has been shown for their way of exploring maladaptive schemas on the Young Schema Questionnaire (YSQ) schemas, and even though they enumerate the many languages into which the YSQ has been translated, they do not appear to have tested Young's underpinning model.

When Young et al. (2003) discussed the issue of 'empirical support' for their model, they pointed mainly to studies that have investigated the psychometric attributes of the YSQ, not to how specific schemas relate to particular types of parenting, nor to how particular schemas relate to particular disorders. Instead, the only support they offered for their model is circumstantial, by referring to the work of LeDoux (1996) and van der Kolk (1987). With this circumstantial support, they claimed that 'emotions and body sensations (are) stored in the amygdala' (Young et al., 2003, p. 28). Neither did Young et al. seem to have considered that negative cognitive features, such as hopelessness or optimism, could instead be the product of mood or anxiety disorders rather than the cause of them, if so, that the presence of a disorder would explain poor problem-solving, rather than poor-problem solving being responsible for depression (Joiner, Vohs, Rudd, Schmidt, & Pettit, 2003).

Whilst this criticism may appear damning, their model appears worth testing given that it has stirred so much interest. Other studies have already shown that there is a relationship between early adverse experiences and later cognitive and emotional distress

(Persons & Rao, 1989). It would indeed be helpful to have a clearer understanding of the relationship between adverse parenting, early maladaptive cognitive schemas, and trait anger, depression, and anxiety.

Conclusion

This chapter examined a range of diverse interpretations of schemas. Whilst it did not focus primarily on anger, it gave a fuller background to cognitive schemas - about what they might be, and how they might arise. It examined Beck's and Young's models of how particular cognitions become linked to specific emotions, and it raised some concerns about these models.

This examination of the literature raised several questions about anger, and some of them will be addressed in the present thesis. Firstly, there is the question of whether there is any cognitive content that is specifically related to anger, which might distinguish it from depression and anxiety? Secondly, there is the question of whether, as Beck expected, specific cognitions induce a particular emotion? Next, there is the question of whether there are particular types of early parenting experiences that are associated with later trait anger, depression or anxiety. Finally, there is the question of whether there is an interrelationship between parenting, offspring maladaptive cognitive schemas, and trait anger, depression and anxiety?

CHAPTER 3

STUDY 1: COGNITIVE SPECIFICITY, ANGER, DEPRESSION AND ANXIETY

Overview

Study 1 sought to discover more about the cognitive aspects of anger. It was a comparative, correlational study which investigated Beck's Cognitive Content Specificity Hypothesis that there are specific cognitive schemas associated with anger which distinguish anger from depression and anxiety. In this chapter there is a discussion of some of the methodological issues that were faced, followed by a consideration of the aims of the study, the hypotheses, the method and results. Finally, there is a discussion of the findings and limitations of the study.

Background

Undertaking a study of cognitive specificity in relation to anger requires some measure of cognition. As with any cognitive specificity study, a number of difficulties arise when measuring cognitions (Clark, 1988), mainly because cognitions are abstract concepts. However, psychology has traditionally overcome this difficulty by defining variables operationally, that is, in terms of predetermined behavioural indicators. For example, constructs like cognitive schemas are measured in terms of scores obtained on a schema questionnaire, even though this might appear tautological.

Some cognitive psychologists, arguing that the schemas which underlie emotions are not directly available to conscious perception, have attempted to assess schemas

indirectly, for example, by using non-cognitive behavioural indicators such as response times on Stroop word identification tasks (MacLeod & Mathews, 1991). This approach was not adopted in Study 1, largely because response times give no information about the content of cognitions, and it is precisely this that is the point of interest in this study.

A number of studies have examined specificity of cognitive content. Most of these studies have assumed that cognitive content can be revealed by questionnaires (Beck et al. 1987; Clark, 1988; Greenberg & Beck, 1989; Ingram et al., 1997, Platts, Mason, & Tyson, 2005), using measures like the Cognition Checklist (CCL) (Beck et al., 1987), the Dysfunctional Attitudes Scale (DAS) (Weissman & Beck, 1978), and the Attributional Style Questionnaire (Ingram et al., 1987). However, because the items in these scales focus mainly on cognitions associated with depression or anxiety, none of them was suitable for tapping cognitions associated with anger. For that reason Study 1 employed a more recently developed scale, Young's Schema Questionnaire (YSQ), because it covers a broader range of cognitions.

The YSQ was derived from information revealed to Young by his patients during his extensive experience as a clinician. It features 16 schemas that are intended to reflect the entire range of cognitions that are associated with normal emotional life. As such the YSQ provides a wider range of types of cognitive schemas than are available in the CCL or DAS.

The disadvantage of the YSQ is that, as yet, it is untested in this type of research. Furthermore, although psychometric studies of the YSQ have been carried out (e.g., Schmidt, Joiner, Young, & Telch, 1995), the extent to which the schemas overlap and the manner in which they relate to schemas identified by other measures remain largely

unknown. Nonetheless, the comprehensive range of schemas - which are discussed later - allows a fuller investigation of cognitions associated with emotions than has previously been available, and it appeared the most suitable tool for a specificity study of this type.

Comorbidity of Emotions

Whilst the main focus of Study 1 is to investigate cognitive content specificity in relation to anger, it is also expected that, because categories of emotions are not absolute, there might be some overlap between emotions. In addition, at times two emotions may occur together, for example, both anxiety and depression co-occur in Mixed-Anxiety and Depression Disorder (First, Frances, & Pincus, 2004). Such comorbidity would seem to suggest that there might be cognitive schemas common to both emotions. It is accepted that anxiety and depression co-occur (Brown & Barlow, 1992; Kendell, & Watson, 1989), but the relationship between anger and the other emotions is not as clear. For example, while anger has been named as one of the symptoms of Dysthymia or Major Depression (First, Frances, & Pincus, 2004), the nature of the relationship between anger and depression has not been elaborated upon. When anger and depression are found together, it is not clear whether anger is merely a symptom of depression, or whether this co-occurrence reflects comorbidity, nor is it clear whether there are shared cognitive elements for anger and depression. For example, Fava, Anderson, and Rosenbaum, (1990) found that where anger attacks co-occurred with anxiety and other affective disorders, there were poorer treatment outcomes. This seems to suggest that the interrelationship between anger, depression and anxiety is more complex than anger merely being a symptom of depression. Rather, it suggests that there may be an additive

effect when there is comorbidity.

In addition, if anger was simply a manifestation of depression, it would be present in all depressed patients, which it is not. Only about a third of depressed outpatients were found to suffer from an 'angry kind of depression,' and these patients, in addition to feeling depressed and irritable, had tantrums (Fava, 1998; Rosenbaum, Fava, & Pava, 1993), suggesting that the 'angry-depressed' patients were a discrete group. When they were treated with antidepressants, their depression lifted and their rage subsided. Fava (1998) took this as circumstantial evidence for there being some link between anger and depression. Fava's model does not explain why two thirds of patients who were depressed were not angry. It is possible the effects Fava noticed resulted from a comorbidity of anger and depression.

In addition, no diagnostic system is absolute. Some writers have suggested that emotions differ only in degree, not type, and that each emotion is just a different point on a continuum (Kendall & Watson, 1989). If this continuum model was correct, there would be some point that was shared by two abutting emotions, which might suggest an explanation for comorbidity. To guard against blurring of the distinctiveness of each emotion, suitable analytic techniques will be deployed to account for possible 'overlap' in the emotions.

Aims of Study 1

The main aim of Study 1 was to explore cognitive schemas associated with anger, depression and anxiety in a non-clinical population. To achieve this it was necessary to have a clear idea of the three emotions of interest, as well as the cognitions associated with each one. These are discussed next.

Anger

Because there is a dearth of empirical studies on the cognitions associated with anger, the hypotheses formulated here in regard to anger were mainly based on the observations of Beck (1976), Young (1999) and Bowlby (1969, 1973, 1980). In the light of these, it was expected that those YSQ schemas which highlight themes of personal exploitation, loss of entitlement, and injustice would be associated with anger. A close reading of the YSQ schemas revealed that some appear to reflect these themes. They are: Mistrust, Entitlement, Insufficient Self-Control, Subjugation, Abandonment, and Punitiveness.

The themes of Mistrust/Abuse directly relate to exploitation. They reflect concerns and expectations that others will intentionally hurt, abuse, humiliate, cheat, lie, manipulate, or take advantage of one, for example, Item 2, 'I feel that I cannot let my guard down in the presence of other people, or else they will intentionally hurt me.' There is also an expectation that the individual 'always gets the short end of the stick' (Young, 1990, p. 57), for example, Item 5, 'I am usually on the lookout for people's ulterior motives.' From this, it was expected that Mistrust/Abuse would be closely associated with anger.

The themes in Entitlement also relate to 'rights.' Some items refer to feeling superior to others, or to being entitled to special treatment, or to not being 'bound by the rules of reciprocity that guide normal social interaction' (Young, 1990, p. 59). For example, Item 69 states, 'I feel that I shouldn't have to follow the normal rules and conventions other people do.' Another schema relating to rights and injustice is Punitiveness, as reflected in Item 71, 'People who don't 'pull their own weight' should get

punished in some way.' It was expected that Punitiveness would relate more to anger than to depression or anxiety.

The themes in Insufficient Self-Control reflect difficulties in controlling emotions and impulses. An example is Item 72, 'If I can't reach a goal, I become easily frustrated and give up.' In addition, there is 'an exaggerated emphasis on discomfort avoidance: avoiding pain, conflict, confrontation, responsibility, or overexertion at the expense of personal fulfilment, commitment, or integrity' (Young, 1990, p. 59). In some ways the content of these items can be seen to refer to personal rights, only here, the individual seems to have an exaggerated sense of personal rights, so feels exempt from observing social rules. Because of this, it was expected that Insufficient Self-Control would also be associated with anger.

Young (1990) discerned a specific connection between Subjugation and anger, so this connection was also explored. The items of Subjugation reflect features such as being submissive, feeling coerced, giving in to others, and giving others control over one's behaviour, emotional expression, and decision making. As Young pointed out, subjugation often occurs because persons fear others will get angry or abandon them if they express their desires or opinions. Young suggested such persons often feel trapped and are angry with those perceived to be in control. So it was expected that the Subjugation schema would be specifically associated with Anger.

Bowlby (1973) found anger was one of the ways in which children responded to abandonment. Mikulincer (1998) found that adults with attachment problems reacted in the same way. The YSQ includes a schema which addresses this theme. The Abandonment schema reflects the view that the world is unreliable and unstable, that one

cannot expect support from others because they are unpredictable, angry, will die, or abandon one for someone else (Young et al., 2003). Given these previously established links between abandonment and anger, this connection was also explored, however, it was also noted that some of the expected hallmarks of anger were not present in Abandonment items. For example, there were no rights implied in the Abandonment items. In addition, Abandonment clearly relates to loss and danger, both of which were previously found to be associated with depression and anxiety. So it is possible that there might be some cognitive overlap found between emotions related to Abandonment. However, because there have been no suggestions by Beck and others that there can or will be cognitive overlapping, no specific hypotheses were developed in relation to this aspect.

YSQ Punitiveness was also expected to be associated with anger because of items such as Item 84, "I hold grudges, even after someone has apologized" and Item 86, "I get angry when people make excuses for themselves, or blame other people for their problems." Both directly address the issue of anger.

These schema themes were incorporated into Hypothesis 1. It was expected that:

Hypothesis 1.

The correlation between the following YSQ schemas and Anger would be high and positive: Mistrust/Abuse, Entitlement, Punitiveness, Insufficient Self-Control, Abandonment, and Subjugation.

A subsidiary hypothesis was that this set of schemas would relate more strongly to Anger than to Depression or Anxiety.

Depression

Depression, defined as Major Depressive Disorder in the DSM-IV-R, is associated with specific behavioural symptoms such as chronic low-level depressed mood, poor appetite, insomnia/hypersomnia, low energy or fatigue, social withdrawal, decreased activity, reduced effectiveness and productivity (First, Frances, & Pincus, 2004). It also features specific cognitive elements such as low self-esteem, poor concentration, difficulties in decision making, feeling hopeless, being self-critical, seeing oneself as uninteresting, incapable, inadequate, and a generalized loss of interest or pleasure (First, Frances, & Pincus, 2004). In addition, as mentioned earlier, it includes feelings of guilt and brooding about the past, and feeling irritable or excessively angry (First, Frances, & Pincus, 2004, p. 377).

Clark and Beck (1994) characterized depression as the emotion which reflects a lack or loss of something important for a person's happiness, such as a lack of competence in reaching goals, or a lack of possessions, wealth or status. Depressed individuals have been found to hold negative views about self, world, and future, feeling they are 'losers,' inferior, or inadequate, and being pessimistic and self-critical. They see themselves as deficient in the attributes they need to achieve their goals. Sometimes they give up, seeing no point in continuing, and at times are suicidal (Clark & Beck, 1994). Some studies have found evidence of cognitive specificity in relation to depression. For example, research shows that depressed patients specifically think about failure and hopelessness, loss and self-devaluation (Beck et al., 1985; Burns & Eidelson, 1998; Clark et al., 1994; Clark, Beck, & Beck, 1994). As Beck described it, a depressed person has "a

negative conception of the self, a negative interpretation of life's experiences, and a nihilistic view of the future" (Beck, 1979, p. 84).

The YSQ Schemas which appear to mesh with these depression themes include Emotional Deprivation, Defectiveness/Shame, Social Isolation, and Self-Sacrifice. Emotional Deprivation involves themes of lacking or lack, as demonstrated in Item 1, 'Most of the time, I haven't had someone to nurture me, share him/herself with me, or care deeply about everything that happens to me.' Defectiveness/Shame reflects themes of lacking, as shown in Item 21, 'No man/woman I desire could love me once he/she saw my faults.' Social Isolation also reflects themes of loss, as shown in Item 20, 'I always feel on the outside of groups.' Self-Sacrifice includes items such as Item 47, "I feel that I have no choice but to give in to other people's wishes, or else they will retaliate or reject me in some way." Other losses or lacks are implied. In Enmeshment there is the theme of personal deficiency, for example, Item 42, 'I have not been able to separate myself from my parent(s) the way that other people my age seem to.'

Because Beck and others (Clark et al., 1994) found depression was related to cognitions of failure, it was expected that depression would relate to the Failure to Achieve, as reflected in Item 22, 'I'm not as intelligent as most people when it comes to work (school).' It was also expected that depression would be marked by Unrelenting Standards - another schema that raises the issue of failure, as shown in Item 64, 'I can't let myself off the hook easily or make excuses for my mistakes.' Failure is also implied in the schema of Functional Dependence, as shown in Item 32, 'I think of myself as a dependent person, when it comes to everyday functioning.' In the light of this, it was expected that Depression would be associated with all these schemas.

Hypothesis 2 was that:
The correlation between the following YSQ schemas and Depression would be high and positive: Emotional Deprivation, Defectiveness/Shame, Social isolation, Self-sacrifice, Enmeshment, Failure to Achieve, Unrelenting Standards, and Dependency/Incompetence.

In addition, it was expected that this set of schemas would correlate more highly with Depression than with Anger or Anxiety.

Anxiety

In DSM-IV-R (2004) the term Anxiety incorporates a range of disorders, each with specific features, but there is no overall definition of Anxiety. Characteristics of anxiety are behavioural, as in panic, or cognitive, as in catastrophic cognitions such as fear of losing control or fear of dying. Other cognitive characteristics include concerns about catastrophes, injury, particular situations, certain objects, or humiliation, or preoccupation with persistent thoughts, as in Obsessive Compulsive Disorder.

Beck (1979) suggested that anxiety is experienced in situations where the individual considers him or herself to be in imminent, literal danger, or where there are 'threats of physical harm, serious illness, economic disaster, or social rejection' (p. 62). Anxiety is also associated with the prospect of losing something important, such as social approval; or having one's personal weaknesses exposed. At its core, anxiety is associated with a sense of vulnerability (Beck et al., 1985). Previous research did show that anxious patients had distinctive and characteristic concerns about present and future threat, danger to self, future, or world (Beck et al., 1985; Clark et al., 1994).

In the light of this, it was expected that anxiety would relate in some way to danger. Two schemas appear to have themes which relate to danger. One is Vulnerability to Harm, for example, Item 38, 'I worry about being attacked.' The other is

Emotional Inhibition, which also suggests that it is dangerous to show one's feelings, as in Item 59, 'I control myself so much that people think I am unemotional.' It was expected that schemas which feature threat, would be more closely associated with Anxiety than with Anger or Depression.

> *Hypothesis* 3 was that:
> The correlation between the following YSQ schemas and Anxiety would be high and positive: Vulnerability to Harm, and Emotional Inhibition.
>
> In addition, these two schemas would be more closely linked to Anxiety than to Anger and Depression.

Summary of Hypotheses

Given the extensive set of schemas and the three emotions, the hypotheses outlined above contain many variables. To aid comprehension, a summary table is provided in Table 1.

Table 1

Summary of YSQ Schemas Hypothesized to be Associated with each Emotion

YSQ Schema Type	Anger	Depression	Anxiety
Hypothesis 1			
Mistrust/Abuse	X		
Entitlement	X		
Punitiveness	X		
Abandonment	X		
Subjugation	X		
Insufficient Self-control	X		
Hypothesis 2			
Emotional Deprivation		X	
Defectiveness/Shame		X	
Failure		X	
Self-Sacrifice		X	
Social Isolation		X	
Unrelenting Standards		X	
Dependency		X	
Enmeshment		X	
Hypothesis 3			
Vulnerability			X
Emotional Inhibition			X

X = High Positive Association Expected

Method

Participants

Participants were a nonclinical sample drawn from students and the wider community in Ballarat, a large, regional, Australian city, with a population of 80,000. The sample was sought in non-clinical settings as recommended by Garber and Hollon (1991) (See Appendix B for further details). Adults were approached in public and educational settings, for example, in canteens, waiting areas, shops, businesses, on the street, in hairdressing salons, at a fire station, television network offices, or in libraries. Approximately 90% of those approached agreed to take the questionnaire. There was a noticeably higher acceptance rate for women, and those who declined were mainly men, who, when they heard the topic, made comments such as 'I don't have any of them' (i.e., emotions). However, agreeing to take the questionnaire did not guarantee return of the questionnaire. The final sample included 242 adults (18 years old or above), 84 men (34.7%), and 158 women (65.3%). The return rate was 60%. Participants were offered a $2 "Scratchy" in appreciation of their contribution.

Demographics

The age and gender distribution is shown in Table 2. Nearly 80% were 30 years or over. The median age was 40 years of age, and the full breakdown of age and gender is presented in Table 2.

Table 2

Age Distribution of Study 1 Population

	Men		Women	
Age Groups	N	%	N	N
18 – 19 years	3	1.2	0	3
20 – 29 years	45	17.8	13	32
30 – 39 years	69	27.3	28	41
40 – 49 years	62	24.5	21	41
50 – above	63	26	22	41
Total	242	100	84	158

Materials

The questionnaires comprised seven parts: a statement of informed consent (Appendix C); Demographics items (Appendix D); Young Schema Questionnaire (YSQ-S1) (Appendix E); the State Trait Anger Scale (STAS) (Appendix F); and the Depression Anxiety Stress Scale (DASS) (Appendix G). Six versions of the questionnaire were prepared, varying the order in which the scales were presented. All versions commenced with the demographic questions, then the other three scales were added, so that each of the six possible orders was equally represented.

Instruments

Young's Schema Questionnaire (YSQ-S1). *The YSQ* is a self-report instrument specifically developed by Young (1990) to explore and assess cognitive schemas

(Appendix E). The YSQ-S1 was based on statements which Young encountered in his work with personality-disordered patients (as diagnosed on Axis II of DSM-IV). There are two forms of the YSQ, the YSQ-L, the long form composed of 250 items and the YSQ-S1 (short form) composed of 75 items from the long scale. The short version was used in the present studies.

When the psychometric properties of the YSQ were examined (Lee, Taylor, & Dunn, 2000; Schmidt, Joiner, Young, & Telch, 1995; Stein & Young, 1992), the YSQ subscales were found to possess adequate test-retest reliability. When convergent and discriminant validity were tested, there was significant correlation between the YSQ and the Positive and Negative Affect Scale (PANAS) - Negative Affect, (PANAS-NA), r = .67, and a significant negative correlation with the PANAS - Positive Affect, (PANAS-PA), r = -.59. The YSQ also correlated significantly with Beck's Dysfunctional Attitudes Scale (DAS), r = .60, (Schmidt, et al., 1995). The YSQ has been found to have good internal consistency (Lee, Taylor, & Dunn, 2000). When the long and short versions of the YSQ were compared using a clinical group (bulimic patients) and a non-clinical group, it was found that, whilst the 205-item form gave a level of depth not available with the shorter 75-item short form, the psychometric properties of each version were very similar (Walter, Meyer, & Ohanian, 2001).

A factor analysis of the long version of the YSQ revealed 15 factors (Lee et al., 2000; Schmidt et al. 1995; Stein & Young, 1992). These were Abandonment (ab), Mistrust/Abuse (ma), Emotional Deprivation (ed), Functional Dependence (de), Vulnerability to Harm (vh), Enmeshment (em), Defectiveness/Shame (ds), Failure to Achieve (fa), Subjugation (su), Emotional Inhibition (ei), Self-Sacrifice (ss), Unrelenting

Standards (us), Entitlement (et), Insufficient Self-Control (is), Social Isolation (si). Different numbers of items loaded onto the factors. Young developed a short form of the scale, the YSQ-S1, which is factorially 'purer' than the longer 250-item form because it is composed of the five highest loading items for each factor. Recently Young (2001) revised his YSQ scale, and added a sixteenth subscale consisting of 14 'Punitiveness' (pu) items which, at the time that Study 1 was undertaken, were psychometrically untested. However, because they had some content relevant to anger (for example, Item 86, "I get angry when people make excuses for themselves, or blame other people for their problems"), they were included. The psychometric examination of the YSQ in the present study is described in the Results section.

Each item was scored on a 6-point Likert scale. These were 1 = *Completely untrue of me*, through to 6 = *Describes me perfectly*. The overall score range for each subscale lay between 5 and 30.

State Trait Anger Scale. A number of different instruments are available for measuring and tapping different aspects of anger. The one selected for these studies was the State Trait Anger Scale (STAS) (Spielberger, Gorsuch, & Lushene, 1970, cited in Corcoran & Fischer, 2000). The STAS (Appendix E) has been widely used for three decades. It is composed of 30 items which differentiate between relatively transient emotional responses or 'State Anger' which are reflected in answers to the generic question, 'How I feel now,' and the relatively enduring emotional responses, or 'Trait Anger,' in answer to the question, 'How I usually feel.' There are 15 items directed to State Anger, and 15 for Trait Anger.

The STAS has good psychometric properties, and has shown convergence with other anger questionnaires such as the Multidimensional Anger Inventory (MAI), and Framingham Anger-In (FI) scales (Corcoran, 2002). An inter-correlation matrix has been found to support the convergent and discriminant validity of these measures except for the Anger-In (Brood) subscale of the MAI and the FO scale (Riley & Treiber, 1989). Other research has confirmed the measure's concurrent validity (Spielberger et al, 1985), and discriminant validity (Deffenbacher, 1992, 1995). The STAS is rated as having very good reliability with excellent internal consistency of 0.87 to 0.91 recorded in a number of different populations (Corcoran, 2002). Analysis of reliability in the current study found that Cronbach's alpha for the Trait Anger items was .88.

Items were responded to on a 4 point Likert scale: 1 = *Not at all,* through to 4 = *Very much so*. The possible Total scores for Anger range from 15-60. Higher scores indicate higher levels of Anger.

Depression Anxiety Stress Scale (DASS). Whilst there are many scales to assess depression and anxiety, the Depression, Anxiety, and Stress Scale (DASS) (Appendix G) was selected because it covered both emotions, and so avoided the need for two separate scales. Additionally, the DASS has been found to be a valid measure, and it is relatively brief (Lovibond & Lovibond, 1995).

The DASS (Lovibond & Lovibond, 1995) was developed to measure depression, anxiety, and stress over the previous week. There is a long form of the DASS which has 42 Items, and a short form DASS-21, with 21 items. The short form was used in this study. Items describe how a person felt over the past week. Statements such as 'I

couldn't seem to experience any positive feeling at all' were used to tap depression, and statements like 'I felt close to panic' were used to tap anxiety. The stress items were not included.

Adequate reliability has been demonstrated with a Cronbach's alpha for depression of .91; and a Cronbach's Alpha for anxiety of .84 (Lovibond & Lovibond, 1995). When the reliability for depression and anxiety was examined in the current study Cronbach's alpha for depression was .88, and for anxiety .80. The scale has also shown adequate convergent and discriminant validity (Crawford & Henry, 2003).

Items were responded to on a 4-point Likert scale: 0 = *Did not apply to me at all*, through to 3 = *Applied to me very much, or most of the time*. Total scores for Depression and Anxiety ranged from 0 – 21, with high scores indicating high depression or anxiety.

Procedure

The protection of the welfare and privacy of all participants is of paramount concern in any psychological research. All methods, scales and inventories were submitted to the University of Ballarat's Ethics Committee in accordance with University of Ballarat Ethics Policy. The committee approved the manner in which individuals would be approached; the token of appreciation ($2 "Scratchy" Tattslotto lottery ticket); how procedures would be explained, and how participants would be given the opportunity to change their minds about participating, should they so wish. In addition, because there was a small possibility that a longer-lasting mood could be aroused either by answering the YSQ, DASS or STAS, a Wellbeing Statement (Appendix H) was included for all participants and was retained by them on completion of the

questionnaires. This gave each participant some empirically supported techniques (Barlow, 2001) for overcoming any uncomfortable 'mood' that might be triggered by their participation. This Wellbeing Statement also included suggestions of where to seek help, should this be necessary, giving relevant telephone numbers.

Participants were randomly presented with one of six versions of the 'Emotions Questionnaire' to complete at a time and place of their choosing. After completing the questionnaire, they posted it back to the researcher anonymously in the stamped, addressed envelope provided to them. Four hundred questionnaires were distributed, and 242 were returned, a return rate of 60%. Data were analysed using SPSS 10.00.

Results

The results are presented in three parts. First, psychometric data from the principal components analyses of the YSQ-S1 and from the Punitiveness items are offered, then descriptives for schemas and emotions and, finally, the correlational analyses are presented. Occasionally there were missing data. When this occurred, an individual's mean score for that subscale was entered.

Psychometrics of YSQ.

An exploratory principal components analysis was undertaken on the 75 item YSQ – S1 scale - excluding the punitiveness items - using Promax with Kaiser Normalization rotation. Convergence occurred within 10 iterations. The analysis produced 16 components. Thirteen of them precisely mirrored those found by Stein and Young (1992) in that the five highest loading items on each component were the five

items designated by Young as those making up the subscale. In the remaining three components, item loadings were very similar to those found by Stein and Young, but there were occasional small differences. For example, in Factor 5 (Defectiveness/ Shame), the five anticipated items all displayed the highest loadings but were joined by a sixth item that loaded slightly more strongly (0.37) with this factor than it did with its designated subscale (0.34). Furthermore the fifth item in this subscale also loaded rather more weakly on its corresponding factor (0.45) than most, though it remained the highest loading for this item. Given that there was such a close concordance between the factors found in Study 1 factor analysis and those of Stein and Young (1992), the original Young subscales were used for all analyses.

A second exploratory principal components analysis included the original 75 items and the new punitiveness items. Twenty factors emerged, sixteen of them matching those found in the previous analysis with Items 32 and 66 standing out as poor exemplars of the designated subscales. The remaining four factors all featured the fourteen punitiveness items. The first punitiveness factor comprised six items, the second four items, and the remaining two factors, two items each.

There was no suggestion that the punitiveness items loaded on any other factor. Despite the lack of homogeneity in the items, it was thought reasonable to combine these items as a sixteenth factor, while acknowledging that further work is required to refine this subscale.

Emotions

This section explores the scores achieved on the STAS and DASS for Anger, Depression and Anxiety. In an attempt to reflect equivalent levels of emotion, the

measures of depression and anxiety, which measured how a person felt over the last week, were matched only with Trait Anger scores, because these referred to longer lasting anger, rather than a passing emotion. When reporting results from the STAS and DASS emotions, the term Anger is used rather than Trait Anger, and capital letters are used to distinguish STAS Trait Anger from anger in general, Depression (DASS Depression) from depression in general, and Anxiety (DASS Anxiety) from anxiety in general.

Measures of Spread for STAS and DASS and YSQ.

Descriptive statistics were calculated for the total scores for Anger, Anxiety, and Depression. The possible range for STAS Anger was 15-60, for DASS Depression 0 – 21, and for DASS Anxiety 0 – 18 (one item was omitted from the DASS scale in error in this study). For the YSQ, the possible range was from 89–534. These data are shown in Table 3.

Table 3

Descriptives for STAS, DASS and Total YSQ

Total Scores	Mean	SD
Anger	25.08	6.63
Anxiety	1.78	2.52
Depression	3.31	3.71
Total YSQ	155.71	44.99

N = 242

All measures appeared to be normally distributed with a slight suggestion of a positive skew. There appeared no need to transform scores given the size of the departure from normality.

Examining emotions. To explore how anger related to depression and anxiety, the Total Anger, Total Anxiety and Total Depression scores were correlated with one another (Table 4).

Table 4

Correlation of STAS and DASS Scores.

	STAS	DASS	
Emotion	Total Anger	Total Anxiety	Total Depression
Total Anger	1.00		
Total Anxiety	.28**	1.00	
Total Depression	.37**	.52**	1.00

N = 242, **p<.001

Whilst the measures assessed discrete emotions, significant correlations were found between all emotions. Particularly strong correlations were found between Total Anxiety and Total Depression; slightly less strong correlations occurred between Total Anger, Total Depression and Total Anxiety.

How Cognitive Schemas Relate to Emotions

Because of the significant degree of correlation between emotions, partial correlations were undertaken to explore the specific relationships between cognitions and each emotion, while controlling for the other two emotions. This allows an examination of the relationship between each schema and that aspect of the emotion not shared by the other two emotions. Results are shown in Table 5.

When discussing the various schemas measured on the YSQ, the YSQ schemas are designated with a capital letter, for example, Abandonment.

Table 5

Partial Correlations of YSQ Schema Types and Trait Anger, Anxiety and Depression.

YSQ Schema Types Predicted to be associated with:	Emotions		
	Total Anger	Total Depression	Total Anxiety
	(Controlling for Depression and Anxiety)	*(Controlling for Anger and Anxiety)*	*(Controlling for Depression and Anger)*
Anger (Hypothesis 1)			
Mistrust and Abuse	.41***	.29***	.14*
Entitlement	.45***	.01	-.07
Punitiveness	.37***	.21**	.04
Abandonment	.28***	.34***	.15*
Subjugation	.05	.40***	.18**
Insufficient Self-Control	.38***	.31***	-.04
Depression (Hypothesis 2)			
Emotional Deprivation	.12*	.33***	-.00
Social Isolation	.16 **	.40***	.06
Defectiveness/ Shame	.17**	.36***	.07
Failure	.13*	.18**	.05
Self-Sacrifice	-.05	.17**	.12
Unrelenting Standards	.19*	.18**	-.09
Enmeshment	.13*	.28***	.09
Dependency/Incompetence	.11	.18**	.17**
Anxiety (Hypothesis 3))			
Vulnerability/Harm	.23***	.33***	.35***
Emotional Inhibition	.13	.36***	-.03

*N = 242, * $p < .05$; ** $p < .01$; *** $p < .001$. Two-tailed*

The coefficients for the partial correlations between each schema and the three emotions were not compared directly. There is no generally accepted method of comparing partial correlations that would parallel Fisher's Z test used for zero-order correlations (McNemar, 1962). Furthermore, the schemas are not independent of one another and repeated use of any test of difference between partial correlation coefficients would require a very conservative alpha level. Instead the general trends in the partial correlation coefficients are considered across each set of schemas.

Anger

When Anxiety and Depression were controlled for, partial correlations of YSQ Schema types and Total Anger showed that the schemas most strongly associated with Anger were Entitlement, Mistrust and Abuse, Insufficient Self-Control, and Punitiveness ($r > 0.30$). Whilst Anger was significantly associated with all but four of the other YSQ Schema types, the associations were less strong. In summary, of the six schema types predicted to be associated with Anger, five were significantly correlated, four were correlated more highly with Anger than with Depression or Anxiety, and two were more strongly associated with another emotion.

Depression

When Anger and Anxiety were controlled for, partial correlations showed, as predicted, that Total Depression was most strongly associated with Social Isolation, Defectiveness/ Shame, Emotional Deprivation, Enmeshment, Dependency/Incompetence, Failure, Self-Sacrifice, Vulnerability/Harm, and Emotional Deprivation. In addition,

Subjugation, Emotional Inhibition, and Abandonment were more highly correlated with Depression than with Anxiety or Anger. In fact, Depression was significantly associated with all YSQ schema types except Entitlement.

Anxiety

When Anger and Depression were controlled for, partial correlations of YSQ Schema types and Total Anxiety showed that only Vulnerability was most strongly associated with Anxiety, and that even Vulnerability was not exclusively associated with Anxiety. Anxiety was significantly associated with only five schemas. A summary table of the expected and actual outcomes is presented in Table 6.

Table 6

Summary of Expected and Actual Associations between Schemas and Emotions

YSQ Schema Type	Anger	Depression	Anxiety
Schemas uniquely associated with one emotion			
Entitlement	X● ***		
Self-Sacrifice		X● **	
Schemas shared by two emotions			
Insufficient Self-control	X● ***	***	
Punitiveness	X● ***	**	
Subjugation	X	● ***	**
Unrelenting Standards	● **	X **	
Dependency		X● **	**
Enmeshment	*	X● ***	
Defectiveness/Shame	**	X● ***	
Failure	*	X● **	
Social Isolation	*	X● ***	
Emotional Deprivation	**	X● ***	
Emotional Inhibition		● ***	X
Schemas associated with three emotions			
Vulnerability	***	***	X● ***
Abandonment	X ***	● ***	*
Mistrust/Abuse	X● ***	***	*

X = Predicted to be strongly associated, ● = Highest correlation found.

Significance of correlation * $p < .05$; ** $p < .01$; *** $p < .001$

Discussion

The aims of Study 1 were to explore the relationships between cognitive schemas and anger, depression and anxiety within a normal, non-clinical, convenience sample.

The Relationship between Cognitions and Emotion

Each emotion is discussed in terms of the cognitive themes that were identified with it. Next, there is some discussion about whether these themes were the ones predicted by Beck to be associated with each emotion.

Anger

Because there have not been many studies that examine the specific cognitions that are associated with anger, Study 1 tested Beck's predictions. He thought that Anger would be associated with the perception of an erosion of one's rights, and a retaliation for this loss of rights.

The schemas that, at the outset, were predicted would be associated with Anger were: Mistrust/Abuse, Entitlement, Punitiveness, Insufficient Self-Control, Abandonment, and Subjugation, and the subsidiary hypothesis was that this set of schemas would relate more strongly to Anger than to Depression or Anxiety. The schemas found to be most closely associated with Anger were: Entitlement, Mistrust and Abuse, Insufficient Self-Control, Punitiveness, and Unrelenting Standards.

The only cognitive content exclusively associated with Anger was Entitlement. All the other schemas strongly associated with Anger were also significantly associated

with Depression, or, in the case of the Vulnerability schema, with Depression and Anxiety.

The cognitive components of anger are complex. First, Anger is associated with others. It is linked to mistrust of others, and having to defend and protect oneself and one's rights. This view sees that others cannot be trusted, which makes one vulnerable. Consequently, one has to stand up for oneself, and punish those who have injured one. Next, Anger is related to self. The first self-theme relates to self-indulgence. Not only do angry people feel that they have to defend themselves, they also demand more rights for themselves than they accord to others. They think they are special, and feel entitled to special treatment. The second self-theme relates to self-doubt. Anger is also related to Defectiveness/Shame schema, to not feeling good enough. It is also related to Unrelenting Standards, and having to meet inordinately high standards, perhaps to prove to oneself that one is good enough. So, as well as being about defending oneself, Anger is related to poor self-esteem, self-criticism, and having to prove oneself.

The cognitive themes associated with Anger concern caring only for one's self - not others, not being obligated to others, not being able to trust others because they let one down, and feeling punitive towards those who let one down. Yet, in common with Depression, Anger is also about self-doubt.

Given that the hypotheses proposed at the outset of Study 1 about which YSQ schemas would be specifically related to Anger were based on themes suggested by Beck (1976), it appears that Beck's predictions were largely correct: anger is specifically related to the perception of an erosion of one's rights; it is about not being able to trust others. There was some overlap found between some cognitions and other emotions however, and

the only exclusive cognitive content associated with Anger concerned Entitlement and Punitiveness.

Bowlby's assertion that Anger and Abandonment are linked was supported; however Abandonment was more strongly associated with Depression and Anxiety, than with Anger. Young's assertion that Subjugation is associated with anger was not supported at all. Instead Subjugation was mainly associated with Depression, and to a lesser extent with Anxiety. It seems that angry persons are less likely to passively submit and more likely to contest when they perceive a loss of their rights.

Because none of the YSQ items referred to elements such as an interest in fairness or social justice, this meant that the findings reported here about the cognitive content associated with each emotion, cannot be seen as the full picture. It also means that there is yet more to be learnt about anger.

Depression

Previous studies had shown that depression was specifically related to themes of failure, loss, and defectiveness (Clark, Beck, & Beck, 1994). The YSQ schemas predicted to be associated with Depression in this study were those which featured these themes. Again, Beck's predictions were borne out. Just as in previous studies, Depression was found to be associated with loss, or a 'lack' of something. In addition, there was a strong theme of isolation, aloneness, and a lack of friends.

The schemas that were predicted and demonstrated to be specifically associated with Depression were: Social Isolation, Defectiveness/Shame, Emotional Deprivation, and

Enmeshment, and to a lesser extent Failure, Dependency/Incompetence and Self-Sacrifice. The only exclusive cognitive content associated with Depression was Emotional Inhibition, and, to a lesser extent, Self-Sacrifice. Apart from these two schemas, all other schemas that were associated with Depression were also associated with one or more of the other emotions.

Almost all of the cognitive schemas included in the YSQ were strongly associated with Depression. In fact, there were more associated with Depression than with Anger and Anxiety combined. It appears that in Depression, the person judges him/herself harshly, and feels more socially isolated than Beck and his colleagues noticed in previous studies (Clark & Steer, 1996). Whilst previous studies (Beck et al., 1985; Clark et al., 1994) highlighted the importance of the association between Depression and failure, this study found failure was less prominent than the other themes.

The constellation of cognitive themes associated with Depression were marked by isolation, or 'distance from' something, such as isolation from others; isolation from success, isolation from love and acceptance or isolation from one's emotions.

The hypotheses proposed at the outset of the study in relation to Depression were upheld. Emotional Deprivation, Defectiveness/Shame, Social isolation, Self-sacrifice, Enmeshment, Failure to Achieve, Unrelenting Standards, and Dependency/Incompetence were all related to Depression, and more highly related to Depression than to Anger or Anxiety. In addition to the original themes that Beck and his associates found to be associated with depression, a new range of cognitive themes have been linked with Depression.

Anxiety

Previous studies which looked at the cognitive content associated with Anxiety were equivocal about what themes related to Anxiety. For example, they either found that Anxiety was related to danger (Beck et al., 1985; Clark et al., 1994), or they found no specific cognitive themes associated with Anxiety (Beck et al., 1987; Clark et al., 1989; Greenberg & Beck, 1989; Laurent & Stark, 1993). It was therefore anticipated that this anomaly might be clarified when using a wider number of schemas, as provided by the YSQ. In particular, building on Beck, it was hypothesized that Anxiety would be related to: Vulnerability to Harm, and to Emotional Inhibition.

As in previous studies, Study 1 found that Anxiety was most strongly associated with Vulnerability. However, Vulnerability was not exclusively associated with Anxiety, but also with Depression and Anger. Anxiety was significantly associated with a number of shared cognitive themes, namely, Subjugation, Dependency/Incompetence, Abandonment and Mistrust/Abuse, but always at a lower level than were Depression or Anger. Emotional Inhibition was related to Depression, not Anxiety.

The cognitive themes associated with Anxiety suggested that anxious persons feel they are victims of fate or of others' actions. They do not feel they are lacking, nor do they feel excluded by others. The constellation of cognitive themes associated with Anxiety relates to how the world treats one: 'I am open to attack,' 'I am vulnerable.' As with previous studies, Study 1 showed that Anxiety is less frequently linked to cognitions in general than are Depression and Trait Anger. Apart from links to Vulnerability, Dependency and Subjugation, Anxiety is not significantly associated with the cognitive

schemas presented in the YSQ. This restricted cognitive content associated with Anxiety is similar to some of Beck's earlier findings (Beck et al., 1985).

This dearth of specific cognitions associated with Anxiety may reflect the fact that Anxiety is in some way different from anger or depression. It appears that Anxiety is a more diffuse state, not especially marked by specific thoughts. This effect may reflect the fact that the Anxiety items of the DASS refer to a range of different types of anxiety, such as General Anxiety, Phobia, or Panic. It is possible that each type of anxiety relates to particular set of distinctive cognitions such as those pertaining to health (Schmidt, Joiner, Staab, & Williams, 2003), so that the specific links apply to only one anxiety state and not to others. Another possibility is that anxiety is less linked to cognition, that it relates to survival and so operates at a more automatic level than Depression or Anger. However, this seems unlikely because Anxiety is effectively treated by CBT, which specifically uses changes in cognition when managing anxiety (Clark & Fairburn, 1997).

Relationship between Anger and Depression

Whilst Depression and Anger have often been found together, and whilst anger is listed on the DSM-IV-R as one of the symptoms of depression and PTSD (First, Frances, & Pincus, 2004), the exact nature of the relationship between anger and depression is unclear. While there were some distinct cognitions associated with Anger, and others specifically related to Depression, there were also numbers of cognitive themes shared by both Anger and Depression. Both were significantly linked to Mistrust/Abuse and Punitiveness, Abandonment, and Insufficient Self-Control. Despite sharing these, there

were more differences than similarities. This suggests that Anger and Depression are distinctive and discrete cognitive experiences.

Whilst Anger and Depression share some cognitive elements, each was associated with a quite different constellation of cognitive schemas. Depression was associated with loss, aloneness, and subjugation, and Anger with defending self, demanding special rights, and to a lesser extent, with self-doubt. In the light of this, the contention that Anger is merely a symptom of depression or dysthymia appears to be incorrect.

Conclusions

Beck's cognitive content specificity hypothesis was partially supported. Specific maladaptive cognitive content was found in relation to Anger and Depression. As with previous studies (Beck et al., 1987; Clark et al., 1989; Greenberg & Beck, 1989), the specific cognitive content associated with Anxiety was less marked. The cognitive themes associated with Depression and Anxiety were similar to those that Beck found previously. The themes associated with Anger were, in the main, the ones that Beck predicted.

After examining cognitive themes associated with each emotion, it was possible to discern constellations of schemas which appeared to characterize each emotion. As previously mentioned, Anger was associated with fighting back, protecting rights, and demanding special rights for oneself; Depression was associated with feelings of isolation, Subjugation, and Emotional Inhibition; Anxiety was associated with

Vulnerability, Dependency and Subjugation. Nonetheless, there was also much shared cognitive content between the different emotions. Anger and Depression shared some elements; and some cognitive themes were common to Anger, Depression and Anxiety.

Overall, then, whilst there was some support for the Beck's cognitive specificity hypothesis, some cognitive content had general emotional valency, as when Vulnerability related to all three emotions. These results raise the question of why, or how, a person having these cognitions can feel any of three emotions. Perhaps certain constellations of cognitions need to occur together before they arouse a specific emotion.

Limitations

All measures used in the study relied on self-report, whether for tapping cognitive content, or reporting mood. This raises the usual concerns about self-report, such as whether people tell the truth, or respond in the manner they think a researcher wants them to. In an attempt to overcome some of these concerns, and also to prevent any participant feeling pressured, in this study all participants were volunteers. Participants completed the questionnaire in private, and returned it anonymously.

As in any study, the questions that can be investigated are limited by the measures that are used. Whilst the YSQ provided a greater range of cognitions than previously used in specificity studies, the results could not be seen to give the final or complete range of possible cognitions. For example, resentment and hostility were not reflected in the YSQ. It therefore remains for future work to confirm the results using different instruments. Until then, it must also be acknowledged that by only using the YSQ, the

findings in relation to the range and overlapping relationships between cognitions and emotions could, in part, reflect the properties of this particular measure.

The anger measure was rather self-oriented, focusing mainly on what annoys me, what I do, or feel like doing, when I get frustrated, but it did not tap anger arising from concerns about social justice, or about how others are treated. As Clore and Ortony (1991) pointed out, anger has a number of other dimensions, not all concerned with self, and it can also be more concerned with values and morality (Fransson, Biel, & Dahlstrand, 1997). None of these dimensions was tapped by the STAS.

In addition, it was a measure of trait anger that was used in the analysis, while depression and anxiety were assessed using the DASS, which asks for feelings experienced over the previous week. The YSQ instrument required participants to consider what they generally thought. This would suggest that it might be less reliable in exposing the relationships between prevalent modes of thinking and feelings of depression and anxiety that had only been experienced over the previous week. Future examinations of this area might benefit from measures that tap more consistent dispositions of depression and anxiety.

In a similar vein, it must be recognised that the study used a convenience sample drawn from a non-clinical population and that some of the relationships might have been clarified had a clinical group been investigated. It is not anticipated that radically different results would emerge from a clinical sample but it remains possible that among people who experience emotional extremes, the specific set of cognitions associated with their prevailing emotional state might have been more distinctive.

Future Studies

Whilst Study 1 showed some association between specific cognitive content and particular emotions, and thereby partially confirmed Beck's Cognitive Content Specificity Hypothesis, it could not throw light on the nature of the direction of the relationship between cognitions and emotions, in other words, whether emotions elicit these cognitions, or, as CT would hold, that cognitions elicit emotions. It is important, that, as well as discovering which specific cognitions are associated with what particular emotions, that there be some test of whether any specific cognitions associated particular emotions, actually elicit particular emotions, or whether they simply correlate with general states inspired by other events. This question is pursued in Study 2.

CHAPTER 4

STUDY 2: DO SPECIFIC SCHEMAS ELICIT PARTICULAR EMOTIONS?

Overview

Study 2 explored the nature of the link between cognitions and emotions and tested whether prior emotions enhanced the effect of cognitions on emotion. There were three emotion induction conditions, each using the cognitions found in Study 1 to discriminate between high and low levels of anger, depression, or anxiety. Initially, there is some discussion of issues associated with emotion induction, then the method and results are presented, and the findings are discussed.

Background

Whilst LeDoux (1996) showed that emotions are survival responses under the direction of the amygdala, he also showed that emotions can be damped down and overridden by activity in the prefrontal cortex. LeDoux showed that the cortex can also stimulate arousal systems - a finding which seems to accord with one of the founding assumptions of Cognitive Therapy, namely, that thoughts lead to emotions (Beck, 1976; Beck et al., 1985; Beck et al., 1990).

Cognitive therapy appears to have moved on from the tentative questions raised by its founders. It seems that now these foundational points are no longer questioned (Beck, 1996; Follette, Ruzek, & Auberg, 1998; Leahy, 2003; Simos, 2002). For example, the assumption that 'thoughts create feelings' has become a self-evident 'truth' in cognitive therapy as demonstrated in a recent practitioners' guide to cognitive therapy:

Leahy (2003) states, "the fundamental assumption guiding cognitive therapy is the individual's interpretation of an event determines how he or she feels and behaves" (p. 8). To this he added "two foundational points ... worth considering: (1) *Thoughts* and *feelings* are distinct phenomena. (2) Thoughts create feelings (and behaviour)" (p. 9).

Because Cognitive Therapy (CT) has grown so popular in recent years, as attested to by the raft of publications that propound and expound CT (Beck, 1995; Barlow, 2001; Follette, Ruzek, & Auberg, 1998; Leahy, 2003), it is important constantly to ensure that its development is grounded in research. To this end, Study 2 has returned to the foundations of CT.

While Study 1 indicated some association between specific YSQ schemas and particular emotions, it could not indicate the direction of this relationship. That is, it could not indicate whether cognitions elicited emotions, or whether, on the contrary, the emotion elicited the cognition. So two explanations of how cognitions relate to emotion, Beck's and Teasdale's, are the focus of Study 2.

Beck held the view that cognition 'mediates affect and behaviour' (Beck, 1987, p.77). This view is encapsulated in his Primacy Hypothesis which proposed that biased cognitive processing leads to a corresponding change in the individual's emotional and behavioural responding. This hypothesis clearly indicates the direction of the emotion-generation process: emotions are triggered by specific cognitions. Recently, Leahy (2003), when elaborating on Beck's model, listed a series of thoughts and the feelings that the thoughts would induce. For example, he claimed that the thought "I'll never be happy again" triggers hopelessness. Likewise, the thought "life is not worth living" makes a person suicidal; and the thought "I should give myself credit for trying" makes a

person proud and happy. This degree of certainty appears to indicate that this model has already been clearly and unequivocally demonstrated, so from Beck's Primacy Model, it would be expected that angry thoughts would induce anger, depressed thoughts depression and so on, as illustrated in Figure 1.

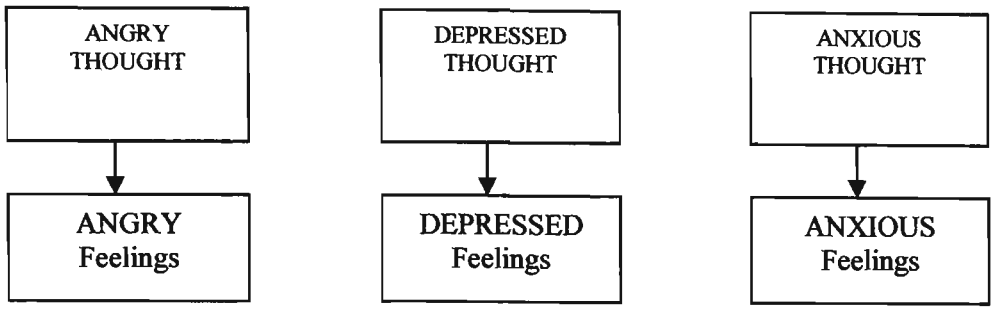


Figure 1. Beck's Primacy Model of the relationship between cognition and emotion.

Whilst this Primacy Hypothesis is a founding assumption in Cognitive Therapy, a literature search showed that few, if any, studies have tested it formally. The question that remains is whether a passing thought is really a sufficient stimulus to trigger an emotion.

Several writers (Butler, 1993; Ingram, & Ritter, 2000; Keltner et al., 1993; Teasdale, 1988. 1996, 1999) have suggested that for emotions to be elicited by thoughts, other pre-conditions are necessary. For example, Teasdale (1998) suggested that the idea that mere thought can trigger an emotion oversimplifies the relationship, and suggested that it is the mood a person is in prior to the thought, that determines what effect the thought has.

Prior Mood → Particular Cognitions → Emotion

Prior mood, in this case, is defined as a generalized predisposition or as a prevailing emotional state. Butler (1993) found prior mood played a part in determining how a person responded. For example, when a person was in an angry mood prior to an incident, he or she was likely to respond angrily to any new event. This view is encapsulated in Teasdale's model as illustrated in Figure 2.

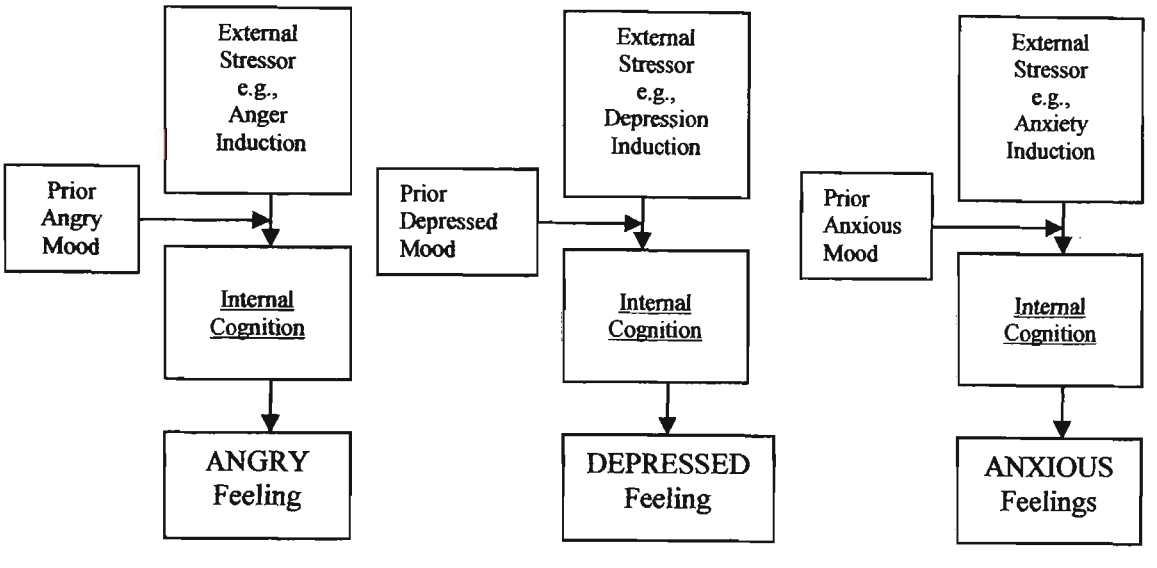


Figure 2. Teasdale's model of the relationship between cognition and emotion.

Aims

Study 2 aimed to test both Beck's and Teasdale's models using cognitions derived from the YSQ to induce emotions. First, it aimed to discover whether, when participants focused on the YSQ schemas associated with anger, they experienced angry feelings; whether participants focusing on schemas associated with depression, experienced depressed feelings; and whether those focusing on schemas associated with anxiety, experienced anxious feelings. Second, it aimed to discover whether a person's prior

emotional condition enhanced the effect of emotion induction; that is, whether participants who were angry prior to anger induction experienced more angry feelings after anger induction than those participants who were less angry; whether participants who were more depressed before depression induction showed more depression after depression induction than those who were less depressed initially, and so on. Because the DASS and STAS both refer to emotional states during the past week, they were employed as measures of prior emotions.

Issues of Emotion Induction

When seeking to test whether emotions were induced by specific thoughts, it seemed important to select 'thoughts' that had previously been associated with each emotion. It was decided that the best way to approach this was to identify which schemas in Study 1 best distinguished persons high on anger, depression or anxiety from persons who were low on these emotions, and to use these cognitions as the basis for mood induction.

To induce emotions in Study 2 participants were required to read those items specifically associated with either anger, depression or anxiety. They were then asked to think of instances in their own lives when they had experienced situations similar to those outlined in the schema items, and to write briefly about these. It was hoped that this would activate the associated schema, and induce the emotion associated with the schema.

One difficulty that arises in this type of study, is how to name the affective product achieved after induction. This process of producing an affective state has traditionally

been called 'mood induction.' However, because, in the first chapter of this thesis, 'emotion' was distinguished from 'mood' - with mood being defined as a long-lasting emotional state. It is therefore important to note that when the terms 'mood induction' or 'induced mood' are used in the context of Study 2, they describe any change in affect that occurs after an induction activity, rather than suggesting the induction of a lasting emotion.

Hypotheses

In summary, Beck (1987) asserted that specific cognitions arouse particular emotions; and that biased cognitive processing leads to a corresponding change in the individual's emotional responses. Given this, it was expected that participants, when exposed to the schemas shown in Study 1 to distinguish between high and low levels of anger, depression, or anxiety, would show correspondingly greater changes in the targeted emotion.

Hypothesis 1 proposed that:

> In comparison with their post-induction scores for Feeling Anxious or Feeling Depressed, participants completing Anger -Induction would show significantly higher positive rating on 'Feeling Angry.'
>
> Likewise, Depression Induction participants would show significantly higher ratings of Depressed Feeling; and after Anxiety Induction, participants would show higher Anxious Feelings.

Given that there was also evidence that prior emotional state can influence a person's subsequent emotional state, (Butler, 1993, 1999; Keltner et al., 1993; Teasdale, 1982, 1988, 1996), this relationship was also explored.

Hypothesis 2 proposed that

> In comparison with those providing low prior-anger scores, those providing high prior anger scorers would show significantly more angry affect after anger induction.
>
> Likewise, those high on prior depression would show significantly more depressed affect after depression induction; and those high on prior anxiety, significantly more anxious affect after anxiety induction.

Method

Participants

All participants were non-clinical volunteers. All were adult tertiary students. There were 127 participants, 23 men and 104 women, all aged 18 years or over. Their details are shown in Table 7.

Table 7

Age and Gender Distribution for Study 2

Age Groups In years	*n*	%	Men	Women
18 – 19	80	63	9	70
20 – 29	39	30	11	28
30 – 39	6	4	4	3
40 – 49	1	1	0	2
50 – above	1	1	0	1
Total	127	100	23	104

Forty eight participants (38%) completed the Anxiety Induction condition, 44 (35%) completed Depression Induction, and 35 (28%) completed Anger Induction.

Materials

State Trait Anger Scale. The State Trait Anger Scale (STAS) (Appendix F), was used to measure prior Anger (Spielberger et al., 1970). This scale, and details about its psychometrics, and the manner of scoring were described in Study 1.

Depression and Anxiety Stress Scale. The Depression, Anxiety, and Stress Scale (DASS) (Appendix G) was used to provide a measure of prior Anxiety and Depression Scores. Details of the DASS, its psychometrics and manner of scoring were described in Study 1.

Emotion Inducing Schemas. The selection of the YSQ schemas for emotion induction was based on an additional analysis of the results of Study 1. A discriminant analysis was undertaken to identify which particular YSQ schemas predicted high and low Anger, Depression and Anxiety. The discriminant analysis does not take into account the relationship between the emotions and the set of discriminating schemas that emerge are slightly different from those revealed by the partial correlation analysis. It was considered more important in this study to select the schemas that most effectively *distinguished* those high and low in each different emotion, than those schemas which were *uniquely linked* to each emotion. The schemas used for the induction of each emotion, anger, depression and anxiety, are described next.

Anger induction. The YSQ schemas which discriminated most clearly between high and low levels of Anger were: Mistrust/Abuse and Entitlement. So the 10 items making up these schemas were used for Anger Induction. Mistrust/Abuse items reflected themes of exploitation, and concerns and expectations that others would intentionally hurt, abuse, humiliate, cheat, lie, manipulate, or take advantage of one. Entitlement items reflected the view that a person was entitled to special treatment (Appendix I).

Depression induction. Those YSQ schemas which discriminated between high and low levels of Depression were: Mistrust/Abuse and Social Isolation. They were used for Depression Induction. Mistrust/Abuse reflected a picture of an nasty, hurtful, unkind world. Social Isolation reflected the view that the individual was alone and did not fit in (Appendix J).

Anxiety induction. Those YSQ schemas which discriminated between high and low levels of Anxiety were: Subjugation and Vulnerability. Subjugation reflected the view that one should submit to others; Vulnerability reflected the view that the world is a dangerous place (Appendix K).

Measure of 'Feeling' After Emotion Induction. A short measure was needed to assess participants' feelings or emotions after the emotion induction intervention. It was decided that participants would simply be asked to indicate their present level of feeling angry, anxious, or depressed For this reason a brief "Feelings" measure was constructed

to assess induced emotions. The measure was called the 'Feelings Indicator;' and was based on a similar measure devised by Muran, Gorman, Safran, Twining, and Winston (1995) to measure 'In-session change.' Their scale included items of the type: 'Right now I feel angry,' or 'Right now I feel depressed (or anxious),' with one question for each emotion. Although there were only three target emotions for Study 2, namely, Feeling Anxious, Feeling Depressed, Feeling Angry, they were embedded in a range of 7 other emotions. A copy of the 'Feelings Indicator' is included in Appendix L.

Participants were instructed to "indicate how you are feeling **now** by circling the number that fits your feeling/s at this moment." The responses to 'Feelings Indicator' were made on a five-point Likert scale: from 1 (*Strongly agree)*, through to 5 (*Strongly disagree)*. Scoring was recoded so that higher scores indicated higher levels of the emotion.

Procedure

Ethics permission was sought from the University of Ballarat's Ethics Committee. Once approval was granted, three versions of the questionnaire were prepared. One version was concerned with anger induction, one with depression induction, one with anxiety induction. These were shuffled to ensure that participants were randomly assigned to the three intervention groups.

A non-clinical, convenience sample was recruited in two ways: either participants were approached individually, or were involved as part of a group experience. Those who completed the 'Emotions Questionnaire' individually returned the questionnaire by mail in the self-addressed envelope provided to them by the researcher. Those who

volunteered in the group setting were asked to complete the questionnaire independently in the classroom and then to place their completed questionnaires in a collection box. All participants, as acknowledgement of their contribution to the study, were offered a $2 voucher for a bucket of chips or a hot dog.

All participants, regardless of the induction condition, were required to complete the demographics questions (Appendix D), the STAS (Appendix E), and the DASS (Appendix G), before undertaking their particular induction activity.

Induction procedure. Once participants had completed the YSQ items relevant for their induction group, they were given the following instructions, "Please read through the items again and think about each item that you have just rated, and write down an example of a time or an incident when this thought occurred to you. You may use the same episode for more than one statement. In fact it is possible that the one episode will do for all the items but think about each one anyway in case it gets you thinking about another time or incident." Then they were given the ten situations to apply to themselves. For example, the instruction for the Anxiety group was: "Think about a time when you felt that something bad was about to happen," then to write briefly about the incident. Other examples were: "Think about a time that you felt that a disaster (natural, criminal, financial, or medical) could strike at any moment;" "Think about a time when you were worried about being attacked." The same procedure was used for each induction group. The three induction activities are included in Appendix, M, N, and O.

Because there was no way to ensure that participants would experience only a

short-term feeling as a result of this activity, they were directed to the Wellbeing Statement (Appendix H) that included some self-calming approaches that they could employ, should they need them to overcome a longer lasting mood triggered by the exercise. Data were analyzed with SPSS.

Results

Descriptive Statistics for STAS and DASS

Descriptive statistics were calculated for the total scores for Anger, Anxiety, and Depression are shown in Table 8.

Table 8

Means and SDs for Trait Anger, Depression and Anxiety

Total Scores	Mean	SD.
Trait Anger (STAS)	24.48	6.61
Anxiety (DASS)	3.83	3.60
Depression (DASS)	4.55	6.61

N= 127

All measures appeared to be normally distributed with evidence of a slight positive skew.

Feelings Indicator

The descriptives for post-intervention Feelings Indicators are shown in Table 9. The possible range for each of the Feelings was 1 – 5.

Table 9

Means an SDs for Feelings Indicator for Whole Group

Post-induction Feeling	Mean	SD
Feeling Angry	1.54	.90
Feeling Depressed	2.13	1.25
Feeling Anxious	2.43	1.31

N= 127

Effects of Emotion induction

In order to explore the differences in group responses after the different emotion induction conditions, means and standard deviations were calculated for the three groups as shown in Table 10.

Table 10

Means, Standard Deviation (SDs) for Post-induction Feelings for the Anger, Depression and Anxiety Induction Groups.

Post-Induction Feeling	Induction Group		
	Anger Induction	*Depression Induction*	*Anxiety Induction*
	(n = 35)	(n = 44)	(n = 48)
	Mean (SD)	Mean (SD)	Mean (SD)
Feeling Angry	1.69 (1.40)	1.66 (0.99)	1.33 (0.63)
Feeling Depressed	2.40 (1.40)	2.14 (1.03)	1.92 (1.03)
Feeling Anxious	2.26 (.90)	2.43 (1.19)	2.54 (1.37)

The mean scores for Feeling Anxious, Feeling Depressed, and Feeling Angry were compared for participants in the different emotion-induction groups. The highest anger and depression scores were recorded in the Anger induction group. The highest anxiety scores were recorded for the Anxiety induction group.

Planned Comparisons for Post-induction Feelings

Three planned comparisons were undertaken, one for each measure. These compared the participants in the salient emotion induction condition with those in the other two conditions for the relevant feeling measure. Each emotion manipulation is reported versus the other two, namely, i) Feeling Angry versus Feeling Depressed and

Anxious, ii) Feeling Depressed versus Feeling Angry and Anxious, iii) Feeling Anxious versus Feeling Angry and Depressed.

After the Anger manipulation, the Anger group did not differ significantly from the other two: Feeling Angry – Angry Induction versus Anxious and Depressed Inductions, t (125) = .99, p = .33. After the manipulations the Depressed induction group felt slightly less depressed than participants in the Anger and Anxiety induction conditions: – Depressed Induction versus Anxious and Angry Inductions, t (125) = - .07, p = .95. Finally, participants in the Anxiety induction condition felt slightly but not significantly more anxious than those who had experienced the anger and depression inductions: – Anxious Induction versus Angry and Depressed Inductions, t (125) = 0.78, p = .44.

Prior Emotional Condition

To examine whether prior emotions interacted with the induction process, the highest and lowest scoring participants were selected, based on tercile splits of each of the three emotion measures, Anger (STAS), Depression and Anxiety (DASS), taken prior to the induction procedure. There were approximately 40 in the high groups, and 40 in the low groups. The precise size of the top and bottom tercile varied within each emotion depending on the distribution of the participants across the scoring range. Following division into the high and low groups, each feeling indicator (Angry, Depressed and Anxious) was subjected to a 2 x 2 ANOVA - Emotional Level (High versus Low) by Induction Condition (Salient versus Others). The means for the four groups, for each induction type, are shown in Table 11.

Table 11

Means and Standard Deviations for High and Low Emotional Level Groups for Salient and Other Emotion Induction Conditions

Prior Emotional Level	Induction Condition	*Feeling Angry*		*Feeling Depressed*		*Feeling Anxious*	
		Mean	(SD)	Mean	(SD)	Mean	(SD)
High	Salient Emotion	2.31	(1.25)	3.23	(.59)	3.85	(.90)
	Other Emotions	1.65	(.75)	3.11	(1.19)	2.92	(1.29)
Low	Salient Emotion	1.17	(.39)	1.80	(1.23)	2.07	(1.28)
	Other Emotions	1.36	(.87)	1.35	(.65)	1.79	(1.06)

These analyses revealed the following. In all cases there was a main effect of prior emotional level. While there was no main effect of anger induction on angry feelings, there was a significant interaction, $F(1,75) = 4.17$: $p = .05$. A post hoc analysis revealed that anger induction produced significantly higher levels of Feeling Angry than the other two conditions, but only for those who were initially high on Trait Anger (Critical Difference = .64: $p = .05$). The depression induction condition failed to produce any changes in depressed feelings, $F(1, 69) = .98, p = 33$. There was no interaction between induction and prior emotional level, $F(1,69) = .33, p = .57$. Finally, there was a

main effect of induction condition for feeling anxious, $F(1, 73) = 4.75, p = .03$. The Anxiety Induction produced significantly higher anxious feelings ($M = 2.96$) than the other two conditions ($M = 2.36$); however, there was no interaction between prior level of anxiety and induction condition, $F(1,73) = 1.40, p = .24$.

The main effect of induction on anxious feelings of those in the top and bottom terciles of initially anxious participants was unexpected given the failure of the induction to elicit more anxiety in the sample as a whole. A subsidiary analysis was performed on the those in the middle of the distribution. The analysis confirmed that initially moderately Anxious participants (the middle tercile) became *less* anxious after the Anxiety induction than similar participants exposed to the Anger and Depression inductions (2.05 vs. 2.33), $t(48) = .80$, *ns*.

To summarize, there was evidence that the anxiety induction produced significantly higher levels of Anxious Feelings among those high and low in initial anxiety, while the anger induction did have some impact but only on those who had higher Trait Anger scores prior to induction. The depression induction failed to elicit depressed feelings among any group.

Discussion

Study 2 built on the results of Study 1. In Study 1 it was noticed that Anxiety was mostly associated with cognitions concerning vulnerability, Depression was cognitively richer than Anxiety, being strongly and specifically associated with many more cognitions, and Anger, while specifically associated with a number of cognitions, was not as cognitively rich as Depression. Study 1 also showed that, regardless of the numbers of

cognitive schemas associated with each emotion, particular sets of schemas were associated with persons who were high or low on these emotions. On the basis of these findings two sets of discriminating schemas were used to induce angry, depressed and anxious feelings in Study 2.

Do Thoughts Induce Emotion?

The results of Study 2 showed that, while certain schemas had been reliably associated with high and low levels of Anger, Depression, and Anxiety in Study 1, they were not sufficient to trigger those emotions. Only the anxiety-related schemas operated across the majority of the sample, triggering small increases in anxious feelings amongst those who were initially high and low in anxiety. Anger related schemas elicited some increase in anger among those were initially angry but depressed schemas produced no reliable increases in depression at all. Study 2's results therefore suggested that if Beck's Primacy Hypothesis applies to any emotions it does so to Anxiety.

Teasdale thought that a person's emotional reaction to their cognitions was mediated by the mood the person was currently in. There is some evidence from Study 2 to support Teasdale's prior-mood-hypotheses but it is not consistent. Only in the Anger induction condition was it found that those who were high in Trait Anger before undertaking the induction responded maximally to the schemas. A similar effect was found in the Anxiety condition among those high in initial anxiety but the effect was complicated by a similar tendency among those low in initial anxiety and the reverse among those in the middle range. Exposure to cognitions associated with Depression did not induce depressed feelings, even for those high on prior depression.

Explaining the Effects of Study 2

It is not easy to offer an explanation of these effects given the apparent interaction between emotion, initial level and induction. One possible form of explanation may reflect the relative cognitive 'richness' of the three emotions. This cognitive richness explanation requires a mechanism that inverts the general relationships identified in Study 1. In that study, Depression was closely related to 15 schemas, ten of these relationships being the closest of the three emotions. Anger was less closely linked to 13 schemas, six of the associations being closer with Anger than the other two emotions. Finally anxiety was related to only five schemas and only one of these was higher than the other emotions. Perhaps Depression, being based on an elaborated cognitive state is relatively impervious to externally presented thoughts. Anxiety, on the other hand, might be regarded as a relatively non-elaborated state, and is consequently more open to manipulation by external cues. Thus, externally presented cognitions relating to Anxiety have a noticeable impact on eliciting Anxiety. Anger falls between the two and only those initially angry or predisposed towards anger react to the sets of schemas.

Unfortunately, the idea that Anxiety is more responsive to external cues does not accord with *internal* experiences such as stage-fright and performance anxiety which point to the presence of internal cognitive processes. Both conditions are interior experiences *par excellence*, being responses to the anticipation of disaster or humiliation, rather than responses to actual external danger cues (Hardy & Parfitt, 1991; Kendrick, Craig, Lawson, & Davidson, 1982; Steptoe & Fidler, 1987). These forms of anxiety do not appear to lack cognitive components.

The total failure to induce higher levels of Depression, the partial failure in Anger, and the incomplete success in Anxiety is also surprising given the success of other forms of mood induction. For instance, previous studies have shown that it was possible to induce depression in the majority of their participants, when using a self-referent procedure (Velten's mood induction), (Miranda, Gross, Persons, & Hahnm, 998; Richell & Anderson, 2004) or by using films (Gross & Levenson,1995); and that persons who had previously been treated for depression responded strongly to depression induction (Ingram & Ritter, 2000). These results beg the question of whether the particular technique was sufficiently powerful. It could be that asking participants to consider and recall situations in which the schemas were relevant is generally not enough to elicit more extreme feelings, even for those who are higher in that emotion initially.

However, if the technique was inadequate, why was there a definite suggestion of movement among higher anger and lower and higher anxiety participants? These inconsistencies also indicate that it was not the choice of schemas, especially as depression was the emotion most readily linked to most schemas and yet proved the least tractable. Again this raises the possibility that it is the relative cognitive complexity of an emotion that may render it less prone to change using small scale cognitive techniques.

Another partial explanation may be the relative acceptability of an emotion in society. Depression as a stigmatized emotion is not one participants readily subscribe to, while anger can be acceptable in the right context ("righteous anger") and anxiety is a commonly experienced and recognised emotion. This could also explain the relative shifts produced by the schema induction technique.

The results clearly raise questions about both Beck's and Teasdale's models with only limited support for both models, in that neither cognitions alone, nor prior mood were necessarily linked to subsequent emotions. Other than the factors discussed above, active influences could include the presence of early maladaptive schemas (Young,1990); or the operation of a cognitive mode, which is when a "primitive, egocentric cognitive system ... is activated and remains hyperactive" (Beck et al., 1985). Or, it may be that additional external stressors such as physical ones like heat, or social ones such as being bullied (Novaco, 1975), are required for emotions to become involved. Even temperament could play a part, so that a more sensitive person may be inclined to express anxiety; a person who is quicker to fire up may be more inclined to express anger; and a more timid person to withdraw into depression (LeDoux, 1996). It is possible that the presence of any of these influences is necessary as a catalyst for induced emotions to be engaged.

Limitations

There were a number of possible explanations for the relative failure of Study 2. These have already been touched on but require further consideration. First, it is possible that the results could reflect the fact that the participants were not in high states of emotion at the time they completed the questionnaires, and so the interventions did not elicit any strong response. The measures of emotional predisposition that were employed in Study 2 were based on the emotional tone that participants had experienced over the previous week, in the case of depression and anxiety, and more generally, in the case of trait anger. It could be argued that none of the measures was a good index of emotional state immediately prior to the mood induction. Thus, the results obtained in

the secondary analyses involving the tercile splits might be underestimates of the interaction between the mood manipulation and initial state. The clear implication is that measures of initial emotional state must be carefully selected.

Another problem with the design that has already been discussed briefly was the nature of the manipulation. In that a primary aim of the study was to examine whether a restricted set of cognitions alone could affect emotional state in a selective manner, this was not a major limitation, but clearly there is scope for future research to clarify what impact cognitions might have within a more powerful manipulation that could also involve music or extensive autobiographical recollections (Ingram & Ritter, 2000). It has to be acknowledged that the final, post manipulation, feeling ratings were very "middling", confirming that any effects cognitions had were slight. Again the scope for incorporating cognitions within a more potent manipulation seems large.

Implications

With Beck's Primacy Hypothesis being such a strong tenet of Cognitive Therapy, it was expected at the outset of Study 2 that there would be a marked effect from any and all of the different emotion-induction conditions. Leahy's confident assertion that cognition induces emotional states was also grounds for optimism, yet the results were at best inconsistent. This inconsistency suggests that it takes more than exposure to the cognitions associated with each emotion to induce an emotion at all, let alone at a clinical level.

Even though Beck assumed that all emotions would operate similarly, Study 2 indicates that it is not possible to generalize about emotions. There are subtle differences

between anger, depression, and anxiety. Understanding these differences could possibly enhance the development of particular therapeutic approaches for each type of emotion. For example, perhaps the treatment of anxiety should focus less on elaborate cognitive processes than should the treatment of depression.

Conclusions

A number of experimental factors could have contributed to the lack of strong effects of the emotion induction in Study 2. The means by which manipulation occurred could have contributed to the differential effects from anxiety, depression and anger induction. Even though such cognitive elaboration has previously been accepted as an adequate means of emotion induction (Brewer, Doughtie, & Lubin, 1980), simply recalling past incidents that were associated with emotional arousal may not have been sufficient to engage emotions.

Even though the mood inductions were linked to personal memories and so could have been expected to prime an emotion, this did not seem to have been as effective as the less individualized Velten technique has sometimes been found to be (Ingram & Ritter, 2000). However, because the focus of the study was Young's model, it seemed appropriate to use his schemas rather than the Velten material.

The participant group, selected because of its availability, may not have been typical. Selecting a non-clinical group meant that they were not clinically anxious, depressed or angry before induction. It is possible that with a clinical group the results could have been less equivocal, because, by definition, they would have had clinical levels of these emotions prior to induction.

With only one item to assess each post-induction feeling, the post-induction Feeling Measure may have been too bald. Had the measure comprised more items for each emotion, this might have given a stronger measure of any post-induction feeling. Alternatively, had the DASS and STAS items been completed again after the emotion induction activity, this might have provided a clearer picture of any change that occurred as a result of induction, but at the cost of a noticeably longer questionnaire, and the carry-over effects of practice.

While the schemas selected for mood induction were those that discriminated between participants who provided low and high Anger, Anxiety and Depression scores in Study 1, there was evidence that schemas often related to more than one emotion. The decision to use only two schemas in each induction condition might have contributed to the low induction effects, particularly, because the same schema, namely, Mistrust/Abuse, distinguished between those high or low on Trait Anger and high and low on Depression. It is possible that if four to five schemas had been used to induce each emotion, this would have produced a stronger effect. Because depression related to such a vast set of cognitions, it is possible that the particular items used in depression induction did not necessarily tap individuals' more upsetting schemas.

Future Studies

First, to eliminate the possibility that the lack of conclusive results was due to inadequate measures, it would be helpful if the study were to be repeated using different measures of emotional tendencies and feelings.

If the relationship between cognition and emotion is to be tested effectively, it seems that the other possible catalysts should also be studied. For example, one feature not tested in this study was whether a person's schema scores before induction played any part in whether they responded to induction or not. A study to assess whether or not participants had prior high schema scores on schemas associated with particular emotions could address this.

CHAPTER 5

STUDY 3: HOW PARENTING AFFECTS OFFSPRING MALADAPTIVE SCHEMAS AND EMOTIONS

Overview

Study 3 is based on Young's (1990) contention that DSM-IV-R Axis I and II disorders, such as depression or personality disorders, are the product of specific adverse types of parenting experienced during childhood. This chapter gives some background on studies that have investigated the relationships between early adverse parenting, early trauma, and later behavioural, emotional and cognitive disorders. Following that, the hypotheses for the study are outlined and the method and results are presented and discussed.

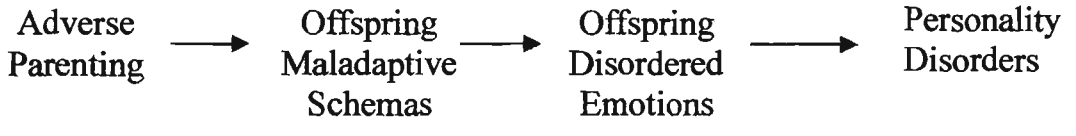
Background

In Chapter 1 a range of possible explanations were offered for problem anger in adults. Amongst them were suggestions that anger is a survival reflex, that it relates to temperament, that it is the product of socialization, or that it is the product of previous trauma. Added to that, Study 1 showed that some cognitive schemas, such as Insufficient Self-Control, Punitiveness and Entitlement, were specifically associated with Trait Anger.

While Beck et al., (1985) and Young (1990) agreed that personality and emotional disorders are linked to specific maladaptive cognitive schemas, Young and his colleagues believed that these maladaptive schemas arose from "toxic childhood experiences," and

"from an interaction of the child's innate temperament with dysfunctional developmental experiences with family members or caregivers" (Young, Weinburger, & Beck, 2001, p.270). Young and his colleagues claimed that, once acquired, such early maladaptive schemas (EMSs) gave rise to affective and personality disorders (Young, Weinburger, & Beck, 2001, p.269), so that there is a chain of circumstances.

Young's model comprises three elements: adverse parenting, offspring maladaptive cognitions, and lasting psychological effects (Young, 1990), with adverse parenting causally antecedent to offspring schemas. Young surmised that each type of EMS arose from a particular type of adverse parenting.



For example, it was suggested that children of critical parents became overly sensitive to failure; that children of rejecting parents became overly sensitive to abandonment; that children of perfectionistic parents developed unrelenting standards, and so on (Young, 1990). Young also claimed that early maladaptive schemas are related to depression and personality disorders, however, he did not elaborate on this. As a result, the nature of the inter-relationship between parenting, offspring schemas, and disorders is not clear. He seemed to imply that the relationship between parenting and offspring emotional disorders was mediated by offspring schemas.

Effects of Childhood

Young's model about the origins of offspring EMSs and anxiety and depression, was extrapolated from his clinical observations, rather than tested by research. While his observations may well be perspicacious, his model is more implied than formally elaborated. Fortunately, other researchers have explored some of these interactions; such as the relation between early stressful events and later mental disorders (Beck, 1983); how early adverse events impact in later life (Dix, 1991; Laidlaw & Davidson, 2001; Platts, Tyson, & Mason, 2002; Schore, 2003). Schore, a psychoneurobiologist, concluded that "early social environment, mediated by the primary caregiver, directly influences the final wiring of the circuits in the infant brain that are responsible for the future social and emotional coping capacities of the individual' (Schore, 2003, p. 271). Some of these physiological, social, and emotional effects of early adverse parenting are examined next.

Physiological effects of early stress. There is ample evidence that early stress produces immediate effects. For example, attachment studies showed that in the 'Strange Situation,' when infants were left with a stranger while their parents left the room, their cortisol levels increased after even a short exposure to a stranger (Hertsgaard, Gunnar, Erikson, & Nachmias, 1995). Infant stress levels also increased in the presence of 'frightening maternal behaviour,' even when the mother's behaviour was not overtly abusive (Schuengel, Bakermans-Kranenburg, & Van Uzendoorn, 1999).

Hyperarousal, such as that arising from exposure to abuse, has been found to leave a legacy of 'sensitized neurobiology' (Perry, Pollard, Blakely, Baker, & Vigilante, 1995) which contributes to the affected individual becoming more reactive to environmental

events. For example, abused toddlers with a history of insecure attachment exhibited higher levels of cortisol than did toddlers with other attachment classifications (Hertsgaard et al., 1995), so that early experiences may literally shape a child's developing brain.

Childhood stress also appears to have long-term physiological effects. For example, early traumatic environments have been associated with atypical patterns of neural activity, compromised attachment, empathy development, affect regulation (Graham, Heim, Goodman, Miller, & Nemeroff, 1999; Perry, Pollard, Blakely, Baker, & Vigilante, 1995), and psychosis (Mason & Beavan-Pearson, 2005). Early trauma can lead to 'severe parcellation,' or pruning of neurons, during which the subcortical circuits in the 'senior executive' area of the orbitofrontal cortex are permanently destroyed (Berntson, Cacioppo, & Quigley, 1991; Schore, 2001).

It has also been found that adverse parenting, even when not overly abusive, produced chronic stress and had long-term neurological and psychological effects in offspring (Elliot, 1997). It reduced an individual's ability to regulate negative states such as fear or aggression (Schore, 2003; van der Kolk & Fisler, 1994). In addition, offspring exposed to such parenting were vulnerable to developing post-traumatic stress disorder (Rauch et al., 1996). For example, children who witnessed domestic violence or experienced physical assault, manifested a higher incidence of post-traumatic stress, affective distress, anger and depression, than those who had not (Elliot, 1997; Moghaddam, Bolinao, Stein-Behrens, & Sapolsky, 1994). Adverse parenting was also associated with later anxiety, depression, and phobia in affected offspring (Heim & Nemeroff, 2001; LeDoux, 1995; Schore, 2001; van der Kolk, McFarlane, &

Weisaeth,1996). When relationships between parents and child were disrupted, offspring experienced more depression (Ingram, 2003; Perris, 1994; Schore, 1996, 1997).

Social effects of early stress and trauma. As well as having physiological effects, there were social effects from early stressful events and trauma. Early trauma, such as trauma through exposure to violence, not only affected a child's brain development, but changed how the child processed socioemotional information (Schore, 2003). For example, neglect and abuse in the first years of life critically disrupted social bonding and attachment (Kling & Steklis, 1976; Perry, Pollard, Blakely, Baker, & Vigilante, 1995; Platts, Mason, & Tyson, 2005). Early neglect also left a permanent deficit in a person's ability to read others' facial expressions (Camras, Grow, & Ribordy, 1983). Experiencing domestic violence or chronic abuse also disrupted social development (Barnett, Hill-Hunter, Butler, McCaskill, Kaplan-Estrin, & Pipp-Siegal, 1999; Schore,2003). For instance, congenitally healthy children living under chronically stressful conditions, such as when little comfort was offered to them, showed more aggression, thought to be due to neurological damage to the right-brain system that regulates aggressive affective states (Schore, 2003, p.295). It is argued that such damage switches off the prefrontal structures that regulate behaviour, and instead behaviour is regulated by more automatic subcortical structures, and, as a result, the behaviour of such children is often more socially unacceptable (Arnsten & Goldman-Rakic, 1998; Schoenbaum, Chiba, & Gallagher, 2000).

Effects of parenting. Parenting is important, not only for offspring survival, but also because the developing brain, mind, and body need particular types of experience to

facilitate optimal development. When these are missing, offspring are disadvantaged. The type of parenting a child receives has long term effects that continue into adulthood, and so adverse parenting appears to contribute to offspring depression and personality disorders.

Thirty years ago, Baumrind (1971) examined how parents related to their children and how children reacted to four different types of parenting: authoritarian, permissive, authoritative, and uninvolved. Authoritarian parents valued obedience and absolute standards; they forcefully curbed their children, valued order, hard work and respect for authority. The effect of authoritarian parenting on children was that children tended to be anxious, withdrawn, unfriendly, and unhappy. When frustrated, boys of authoritarian parents tended to become hostile, and girls to give up. More recently, authoritarian parenting has been associated with shame in young girls (Mills, 2003). As adolescents, the offspring of authoritarian parents showed lower pro-social behaviour, less ego development, and poorer results on cognitive tasks (Baumrind, 1991).

Permissive parents, in contrast, tended to make few demands on their children. They allowed their children to regulate their own activities, and did not encourage them to obey externally defined standards. Their children tended to be moody, dependent, have low social skills, poor self-control and emotion-regulation, and were rebellious and defiant when challenged. These children tended to show low persistence during challenging tasks and were often antisocial.

Authoritative parents directed their children's activities, but in a rational way. They encouraged verbal give and take and valued both autonomous self-will and disciplined conformity. Their children tended to be independent, friendly, self-confident,

were able to master tasks, and had well developed social skills.

Finally, uninvolved parents, also named rejecting/neglecting parents, demanded little of their children and responded minimally to them - to the point of neglect. Their children felt unloved and were emotionally detached (Baumrind, 1971, 1989). As adolescents, offspring of rejecting/neglecting parents were less mature, lacked self-regulation, showed more externalizing problems and abused drug and alcohol more (Baumrind, 1991). Other studies showed links between lax, erratic, and harsh parenting and children's antisocial behaviour (Patterson, Debaryshe, & Ramsey, 1989; Patterson, Reid, & Dishion, 1992) and between adverse parenting by fathers and increased offspring aggression, academic failure, and rejection by peers (Stover & Berkowitz, 2005). Adolescents of 'uninvolved fathers' displayed more 'neurotic tendencies' than adolescents whose fathers gave them more time and attention (Hirayama & Ochanomizu, 2001).

Other studies confirmed how important parenting was in promoting offspring emotional wellbeing (Cole, Michel, & O'Donnell Tetti, 1994). One study showed that the father was "critically involved in the development of the toddlers' regulation of aggression" (Schore, 2003, p. 276); another showed that attachment to the mother predicted less long term psychological distress, and attachment to father predicted better long term social adjustment (Hannum, 2004).

The effects of parenting on offspring extends beyond childhood and adolescence into adulthood. For example, in comparison to the offspring of other parenting types, the adult offspring of authoritative parents displayed more psychosocial maturity and achieved greater academic success (Steinberg, Elmen, & Mounts, 1989); they showed

better mental adjustment, were more independent and self-controlled, as well as being more empathic and caring for others (Gersho, 1999). As adults, offspring of authoritative parenting had better quality marital relationships. They showed less anger, aggression, possessiveness or jealousy towards their partners. They were also more nurturing of their partners than were the offspring of authoritarian or permissive parents, who showed poorer marital adjustment (Gersho, 1999).

Whilst some of the long term effects of parenting were physiological (Schore, 2003), or emotional (Hannum, 2004), Young claimed that these early experiences also have cognitive outcomes and give rise to maladaptive schemas. As yet, the role of these cognitive outcomes and their interaction with the other elements of Young's model of psychopathogenesis, namely, parenting and offspring emotions, have not been investigated together.

Interaction Effects between Parenting, Offspring Schemas and Emotions Studies have looked at the relationship between parenting and offspring emotions (Baumrind, 1971, 1989; Neuharth, 1998) or have demonstrated links between cognitions and depression (Beck, 1976; Cole, Jacquez, & Maschman, 2001; Gerlsma, Emmelkamp, & Arrindell, 1990; Golin, Sweeny, & Schaeffer, 1981; Ingram & Ritter, 2000; Mason & Hargreaves, 2001). Other studies have shown links between childhood experiences and adult depression or anxiety (Beck, 1976; Gerlsma et al., 1990; Ingram & Ritter, 2000; Persons & Rao, 1985) or have demonstrated links between childhood trauma and later depression (Novaco & Chemtob, 1998, 2002; Riggs et al, 1992; Koeningsberg, et al., 2000). Such studies focused on the schema-emotion link (Beck et al., 1985; Clark et al., 1994), on the

parenting-emotion link (Novaco & Chemtob, 1998, 2002; Riggs et al., 1992; Koeningsberg, et al., 2000; Schore, 1994); or the link between attachment and schemas (Platts, Tyson, & Mason, 2002). None explored the interrelationships between all three variables: parenting, offspring schemas, and offspring emotions.

A fuller picture of these interrelationships is needed if the effects of adverse early parenting on the development of offspring cognitive schemas (EMSs) are to be better understood; and if the relationships between parenting and offspring later depression, anxiety, and trait anger are to be explained. This was the task undertaken in Study 3.

Aims

Study 3 used Young's model about the interrelationships between the specific types of adverse early parenting, specific offspring EMSs, and later anger, depression or anxiety, and had four main aims. The first was to explore the psychometric properties of the untested Young Parenting Inventory in order to discover whether the fifteen factor types found in the YSQ would be found in the YPI, together with two additional types, as Young expected. The second aim was to discover whether what a person reports of how he or she was parented relates to maladaptive cognitive schemas in adult offspring, and whether, as Young claimed, specific types of parenting relate to particular offspring schemas. The third aim was to explore any relationships between specific parenting practices as remembered by offspring, and offspring anger, depression or anxiety. The final aim was to explore any interrelationship between remembered parenting practices, offspring schemas, and offspring anger, depression and anxiety. The hypotheses that flowed from these aims are presented next.

Hypotheses

Given that Young et al. (2003) claimed that there are 17 types of adverse parenting, it was expected:

> *Hypothesis 1:*
> That an exploratory principal components analysis would show 17 YPI Parenting Types, and these would accord with those designated by Young (1990) (such as Emotional Deprivation, Abandonment, Mistrust and Abuse, and so on) and two additional types.

Given that Young et al. (2003) expected that each type of adverse parenting would be linked to a specific type of offspring schema, it was expected:

> *Hypothesis 2.*
> That there would be significant, positive, correlations between scores for offspring YSQ Schema types and the equivalent YPI parenting types, and that these would be generally higher than the correlation between YPI parenting types and other schemas. For example, YPI Subjugation would correlate with YSQ Subjugation schema scores; YPI Failure with YSQ Failure, and so on.

Partial correlation analyses of Study 1 data showed that particular offspring YSQ schemas were closely associated with particular emotions, for instance, that YSQ Entitlement related to Anger, and that YSQ Subjugation related to Depression. Subsequent discriminant analyses identified a second set of schemas that could be combined as independent factors to distinguish between those high and low on each emotion. As the current study was aimed at generally establishing if there was any evidence that schemas could mediate the relationship between experiences of parenting and current emotion, it was thought better to rely on those schemas that in combination had proved capable of predicting emotional level. Consequently, it was decided to select those YPI factors that mirrored the schemas which had shown themselves, in combination,

able to predict high and low emotion from the discriminant analyses, rather than those that mirrored the schemas that had been demonstrated to be most highly correlated with each emotion. It was expected that, providing the YPI factors emerged from the YPI scale as Young et al. had predicted, those YPI factors that corresponded to the schemas identified in Study 1 could be combined to discriminate between high and low offspring emotions in the same manner as had the YSQ schemas. In detail it was expected

Hypothesis 3

> that the following YPI parenting factors - Mistrust / Abuse, Insufficient Self-Control, Entitlement, Subjugation and Failure – would, in combination, be good predictors of Trait Anger.
>
> Corresponding hypotheses were that YPI Social Isolation, Dependency / Incompetence, Subjugation, Mistrust & Abuse, and Abandonment would predict offspring Depression, and that YPI Entitlement, Vulnerability, Subjugation, Defectiveness / Shame and Self sacrifice would predict offspring Anxiety.

It should be recognised that using the YPI parenting factors based on the schemes found in Study 1 was a reasonably conservative test of the hypotheses as the best set of schemas to predict each emotion in the current study was unlikely to be exactly the same. The expected relationships between parenting and offspring emotions are shown in Figure 3.

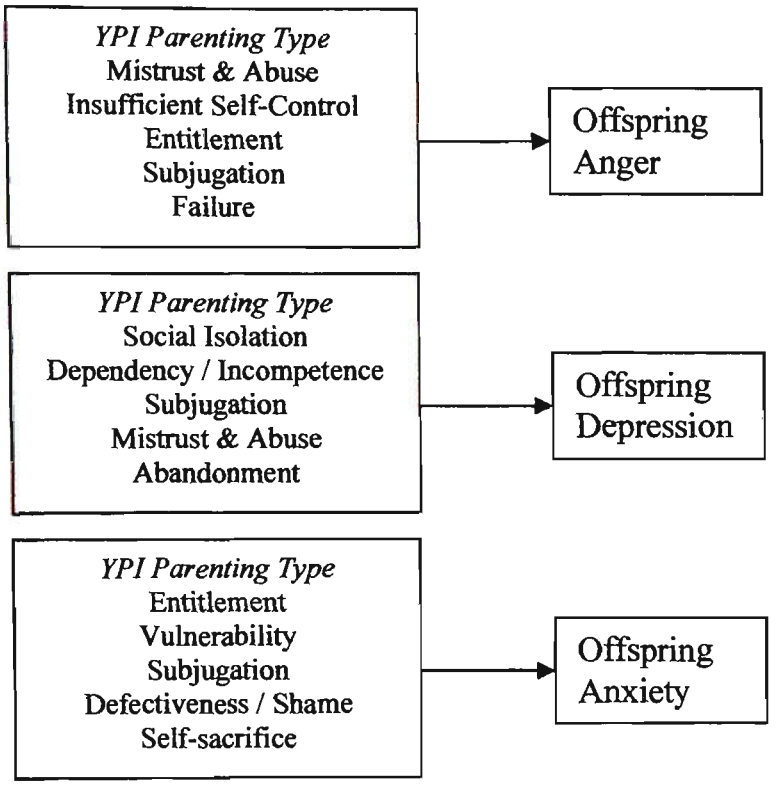


Figure 3. Expected Relationships between Parenting and Offspring Emotions.

Rationale for Hypothesis 4.

The final hypothesis combines Beck's cognitive specificity model with Young's model. Whereas Beck saw the connection between offspring schema and depression and anxiety, Young (1990) saw a connection between offspring schemas and earlier adverse parenting experiences. This seems to suggest that adverse parenting gives rise to offspring schemas, which in turn give rise to emotional disorders. In this way, the effect of adverse parenting on offspring emotions is mediated through offspring schemas.

Given that Study 1 revealed that particular sets of offspring maladaptive schemas could, in combination, predict offspring Trait Anger, Depression an Anxiety, and given

that Young et al. claim that particular types of parenting are specifically related to particular maladaptive schemas, the following hypothesis was developed.

> Hypothesis 4
> It was expected that offspring cognitive schemas (EMSs) would mediate the relationship between parenting type and offspring Anger, Depression and Anxiety.

Figure 4 shows the expected mediation of the parenting–offspring emotion relationship by offspring schemas.

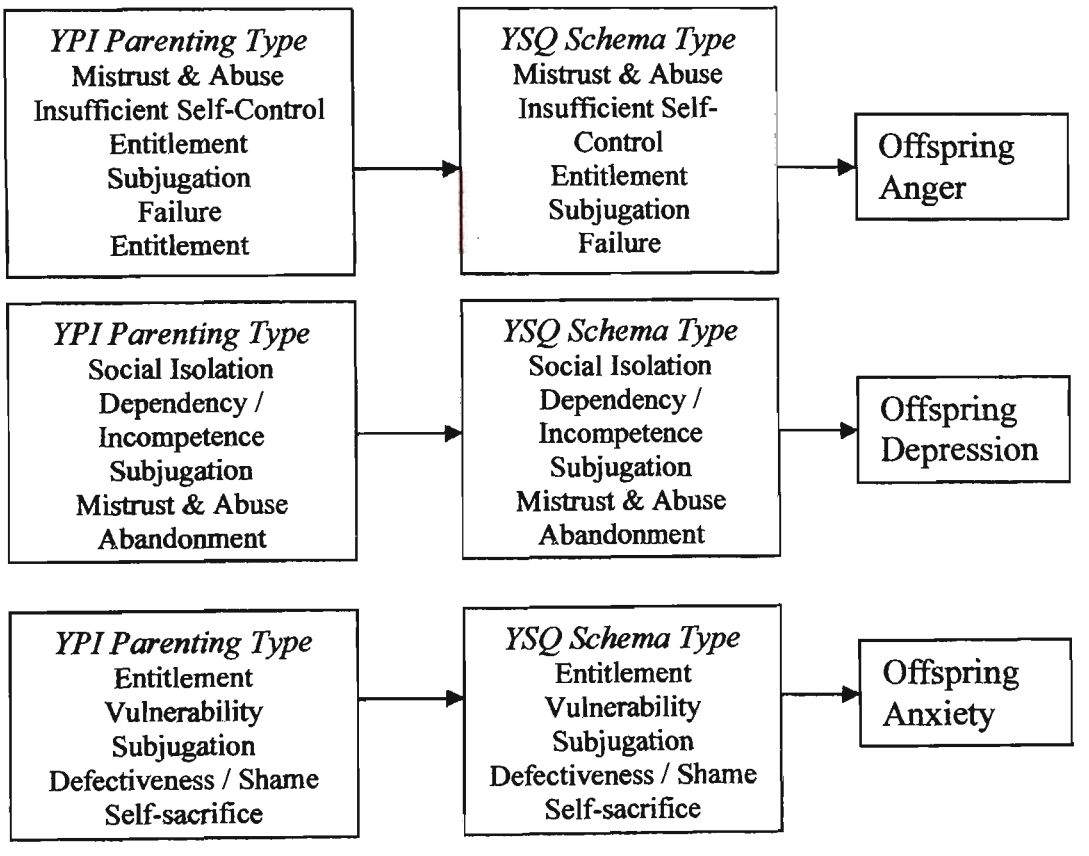


Figure 4. Expected relationships between parenting, offspring schemas and emotions.

Method

Participants

There were 146 non-clinical adult participants, 36 men (25%) and 110 women (75%). Participants were approached individually in public settings: shops, libraries, canteens, offices, workplaces, tertiary institutions, and in a soup kitchen. Their ages ranged from 18 – 50 and over, with a median age of 40 years. Details are provided in Table 12.

Table 12

Age and Gender Distribution

Age Groups	*n*	%	Men	Women
18 – 19	16	11%	5	11
20 – 29	24	17%	1	23
30 – 39	24	16%	7	17
40 – 49	35	24%	6	29
50 – above	47	32%	17	30
Total	148	100%	37	111

Measures of Emotions

State Trait Anger Scale (STAS). As described in Study 1, the STAS was used to assess level of Trait Anger. *Depression Anxiety Stress Scale (DASS),* as described in Study 1, was used to assess levels of Depression and Anxiety over the last seven days.

Measures of Cognitive Schemas

Young Schema Questionnaire (YSQ-S1). Cognitive schemas were assessed using the YSQ as described in Study 1.

Instrument to Tap Recalled Parenting

Young Parenting Inventory (YPI). The YPI is a 72 item scale (Appendix Q). Young (1990) identified 17 types of negative parenting. In the present study, these categories of adverse parenting are referred to as parenting types. Young gave each parenting type the same name as the YSQ schema to which it was thought to relate. For example, Young thought that if parents abandoned a child, either by not being available, or by leaving home, the child would be likely to develop an 'Abandonment Schema.' When Young formulated the YPI, he included two additional parenting types not found in the YSQ-S1: Negativity, and Approval Seeking. The YPI Parenting types are described in Table 13.

Participants were given the instructions: "Listed below are statements that you might use to describe your parents. Please read each statement and decide how well it describes your parents. Choose the highest rating from 1 to 6 that describes your mother, then your father, when you were a child, and write the number in the spaces beside each statement. If someone substituted as your mother or father, please rate the scale for that person. If you did not have a mother or father, leave the appropriate column blank."

Table 13

Young's Parenting Types, Descriptions and Exemplar Items

	YPI Type	*Description*	*Exemplar*
1	Emotional Deprivation	Parents treated child as someone special.	He/She listened to me, understood me, shared feelings with me.*(Reverse scored)
2	Abandonment	Parent was moody, unpredictable or an alcoholic.	S/he withdrew or left me alone for extended periods.
3	Mistrust /Abuse	Parent betrayed child's trust.	S/he lied to me, deceived me, or betrayed me.
4	Vulnerability / Harm	Parent overprotected the child.	S/he worried excessively that I would get hurt.
5	Dependence / Incompetence	Parent did not foster child's independence.	S/he made me feel I couldn't rely on my decisions or judgements.
6	Defectiveness / Shame	Parent was very critical.	S/he criticized me a lot
7	Failure	Parent indicated that s/he expected child to be a failure in life.	S/he treated me as if was stupid or untalented.
8	Subjugation	Parent did what s/he wanted regardless of the child's needs.	S/he controlled my life so that I had little freedom of choice.
9	Self-Sacrifice	Parent sacrificed him/herself for others and was unhappy.	S/he was unhappy a lot and relied on me for support and understanding.
10	Unrelenting Standards	Parent was a perfectionist in many areas.	S/he made me feel that almost nothing I did was quite good enough.
11	Entitlement	Parent spoiled and overindulged the child.	S/he didn't teach me that I had responsibilities to other people.
12	Insufficient Self-Control	Parent was undisciplined and gave child little structure.	Provided very little discipline or structure for me.
13	Enmeshment	Parent did not allow child to have a separate identity.	We were so close that we understood each other perfectly.
14	Emotional Inhibition	Parent was uncomfortable expressing affection or vulnerability.	S/he rarely expressed anger.
15.	Punitiveness	Parent was punitive.	S/he blamed people when things went wrong.
16	Negativity	Parent was negative.	S/he focused on the negative aspects of life or things going wrong.
17	Approval Seeking	Parent placed an emphasis on what others thought.	S/he was concerned with social status and appearance.

Each YPI item was answered for both parents. Items were responded to on a six – point Likert Scale Rating Scale, 1 = *Completely untrue*, through to 6 = *Describes him/her perfectly*. Scores range from 72 – 432. Higher scores indicate higher levels of negative parenting. Because the first five items were phrased in a positive manner e.g., "Loved me, treated me as someone special," they were reverse coded.

Where there were missing data on DASS or STAS, an individual's mean score for that subscale was substituted. With the YPI, if no scores were completed for mother or father (indicating parent was absent or had died), the missing scores were not replaced. One participant did not return scores for Mother, and four participants did not return scores for fathers, so they were excluded from any analysis involving behaviour of that parent.

The psychometric properties and factor structures of the YPI had not been examined previously, so the first task in Study 3 was to explore the factor structure of the YPI to ascertain whether any identified factors conformed to the parenting types expected by Young (1990).

Procedure

Ethics permission was sought from the University of Ballarat Ethics Committee. Once granted, participants were approached individually, and if they agreed to consider completing the questionnaire, they were handed a copy to complete in private and to return by post anonymously to the researcher in a stamped, pre-addressed envelope. Questionnaires were composed of the Demographics Survey, DASS, STAS; YSQ-S, and YPI. Two versions of the questionnaire were prepared. In the first version, the

demographics questions and the DASS and STAS were presented, then the YSQ-S1, followed by the YPI. In the second version the demographics question, DASS and STAS were presented as before, but the YPI preceded the YSQ-S1. The copies of two versions were shuffled before being distributed to participants, thereby ensuring a random distribution of questionnaires. All participants received a $2 'Scratchy' lottery ticket in recognition of the time they contributed to the study. Data were analyzed using SPSS 10.0 and AMOS-4 (Byrne, 1991).

Results

Descriptives of YPI

The mean and standard deviation of the YPI are given for Total Father and Total Mother scores. This is shown in Table 14. The possible range for each parent was 72 – 432.

Table 14

Descriptives for Total YPI Scores for Mothers and Fathers.

Total YPI Scores	*N*	Mean	SD
Total Father	142	151.54	55.08
Total Mother	145	148.61	31.51

Principal components analysis of YPI. Initially, a principal components analysis was made of all responses for both parents together, using Varimax rotation with Kaiser Normalization (Eigen values > 1). Rotation of YPI scores for both parents converged in 26 iterations, producing 15 factors. The spread of the 144 items across factors was

uneven, ranging from 40-41 items, for Factors 1 and 2, to only one item for Factors 10 and 14. Fifty percent of the variance was explained by the first six components. The other nine components explained only 20% of the variance. The scree test indicated that most items loaded on the first five factors. The first two major factors were composed either of all mother items or all father items.

When identifying components in a principal components analysis, it is advisable that the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy be at least 0.6 or higher (Coakes & Steed, 1999). The KMO for mothers' and fathers' YPI scores together, was 0.19, which was very low, and indicated that factors should not be sought.

Given that the first two factors contained only mother items or father items, and that mother and father parenting styles are often distinctive, it was decided to analyze mothers' and fathers' parenting styles separately. When these additional separate principal components factor analyses were run for each parent, again using Varimax rotation with Kaiser Normalization, mothers' and fathers' factors both converged in three iterations. The KMO sampling adequacy for mothers' scores alone was 0.87; and for fathers' scores alone 0.89, both considered 'meritorious' levels of sampling adequacy (Coakes & Steed, 1999). Both mothers' and fathers' parenting provided 15 factors. As before, most items loaded onto the first five factors, and numerous lower-order factors comprised just one item. While there were nests of items that reflected Young's expected parenting types, they did not emerge as distinctive factors, either for mothers or for fathers, as had occurred with YSQ items.

At this point a choice had to be made about how to proceed. The choices were either to examine the scree plot and cut off the number of factors at the elbow, or simply

to seek roughly equal factors which accounted for the most variability. Whilst the scree option provided five factors each for mothers' and five for fathers' parenting, in each case most items loaded onto the first two factors, with the lower level factors having only a small number of items on them. On balance, it was decided that, in this initial analysis, because the participant group was small, it would be better to retain only the two principal factors for each parent, even though some of the data on specificity would be lost (Harvey, personal communication, August, 2005).

Before undertaking a second PCA on the Mothers' and Fathers' responses, it was decided that all items with extraction scores of less than 0.40 would be removed to enhance factorability. The amended scales and the removed items are shown in Appendix R. Eighteen items were removed for mother's parenting; this gave a KMO of 0.92. Fifteen items were removed for fathers, the resulting KMO index being 0.93.

When the two new principal components analyses were undertaken, one each for mothers' and fathers' parenting, again using Varimax rotation, each analysis sought two factors. Table 15 provides a summary of the Mothers' and Fathers' Factors. It provides details of all items that loaded onto each component; a description of each factor, and examples of the types of items associated with each factor. Full details of the content of all items that loaded onto the two father factors and two mother factors are shown in Appendix Q.

The two mothers' factors were labelled Rejecting Mother, and Controlling Mother. Similarly, the father factors were Rejecting Father, and Controlling Father. Although items included in the mothers' and fathers' factors were not identical, there was sufficient overlap not to make it worthwhile selecting different names for the factors. For

example, all of the 24 items of Rejecting Mothers were also found among the 33 Rejecting Father items; and 16 of the 24 Controlling Mother items were found among the 21 Controlling Father items. For this reason, the shared themes are acknowledged in the names of factors. There are subtle differences, however. Rejecting Mothers tend to see their offspring as defective, whereas Rejecting Fathers were unloving. Controlling Mothers seemed more negative, while Controlling Fathers were more anxious and judgmental. These common elements and differences are shown in Appendix Q.

Table 15

Summary of Parenting Factors, Description of Factor and Exemplar Items

Parenting Type	Description	Exemplars
Mother Factors		
1. *Rejecting Mother* (24 items: M22, M24, M1, M23, M28, M11, M67, M2, M27, M9, M3, M13, M4, M29, M30, M21, M11, M12, M25, M5, M8. M68, M52, M7)	Mother was rejecting and abusive.	22. Made me feel unloved or rejected. 24. Made me ashamed of myself in important details. 1. Loved me, treated me as someone special. (Reverse scored) 23. Treated me as if there was something wrong with me 28. Expected me to be a failure in life. 11. Abused me physically, emotionally, or sexually.
2. *Controlling Mother* (24 items: M60, M43, M39, M54, M42, M71, M46, M20, M41, M53, M18, M17, M57, M19, M31, M32, M40, M65, M59, M62, M70, M58, M69, M16)	Mother was demanding and controlling.	60. Had to have everything under control. 43. Placed more importance on doing things well than on having fun or relaxing. 39. Was a perfectionist in many areas; things had to be 'just so.' 54. I felt that I didn't have my own sense of direction while I was growing up.
Father Factors		
1. *Rejecting Father* (33 Items: F22, F1, F3, F30, F4, F2, F29, F28, F67, F25, F9, F26, F23, F21, F48, F24, F5, F7, F47, F27, F11, F68, F57, F10, F49, F52, F40, F51, F13, F8, F12, F59, F38, F54).,,	Father did not show love to child or rejected his child.	22. Made me feel unloved or rejected. 1. Loved me, treated me as someone special. (Reverse scored) 3. Gave me helpful guidance and direction. (Reverse scored) 30. Did what he/she wanted, regardless of my needs. 4. Listened to me, understood me, shared feelings with me. (Reverse scored) 2. Spent time with me and paid attention to me. (Reverse scored)
2 *Controlling Father* (21 Items: F41, F60, F43, F39, F31, F42, F18, F17, F65, F32. F20, F46, F71, F70, F15, F66, F69, F19, F14, F72, F53)	Father was strict and controlling and impatient and task oriented.	41. Had strict, rigid rules of right and wrong. 60. Had to have everything under control. 43. Placed more importance on doing things well than on having fun or relaxing. 39. Was a perfectionist in many areas; things had to be 'just so.'

Introduction to Final Stage of Analysis

The relationships between parenting factors, offspring schemas and offspring emotions were explored with path analyses, using AMOS-4. It was recognised that the sample size was comparatively small for the models tested but the main aims were to obtain some insight into the extent to which parenting types and schemas, in combination, could predict emotion, and whether the schemas mediated any effect of parenting on emotion.

Three path analyses were performed using three recursive models, one for each emotion, Anxiety, Depression, and Trait Anger. Each model had four exogenous variables, comprising the two mother and father factors that were identified in the principal components analysis of the YPI. These replaced the seventeen parenting types that were anticipated in the original hypotheses. Only four linkages were possible between the four exogenous variables, because the two mother factors were orthogonal to each other, as were the two father factors, so these relationships were excluded from the analyses.

For each analysis, the five schemas identified in Study 1 as being the best set able to discriminate between those high and low on the emotion were selected as potentially endogenous / mediating variables. The three predicted models are shown in Figures 5, 6, and 7.

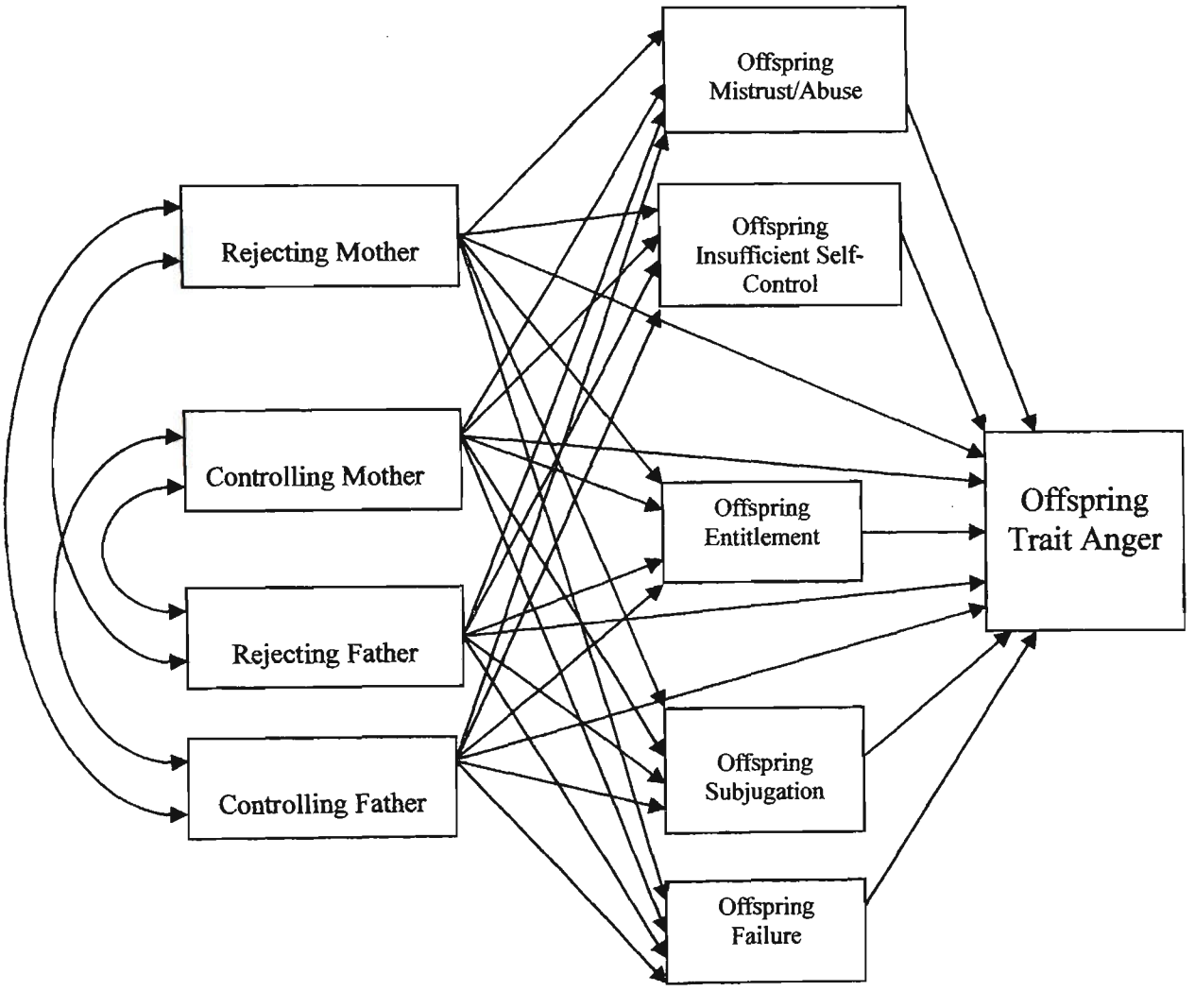


Figure 5. Path model of the predicted relationship between parenting, offspring schemas, and anger.

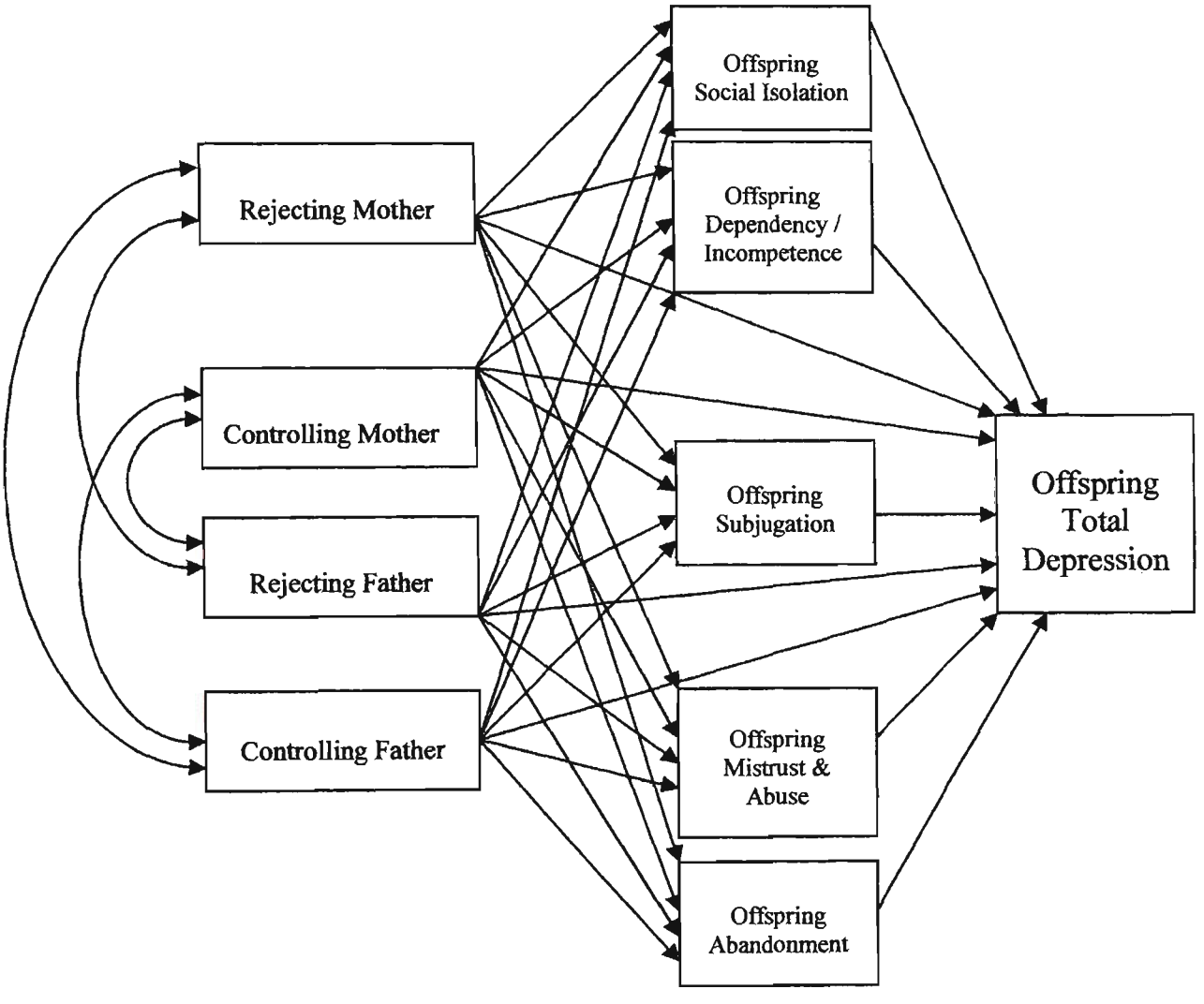


Figure 6. Path model of the predicted relationship between parenting, offspring schemas, and depression.

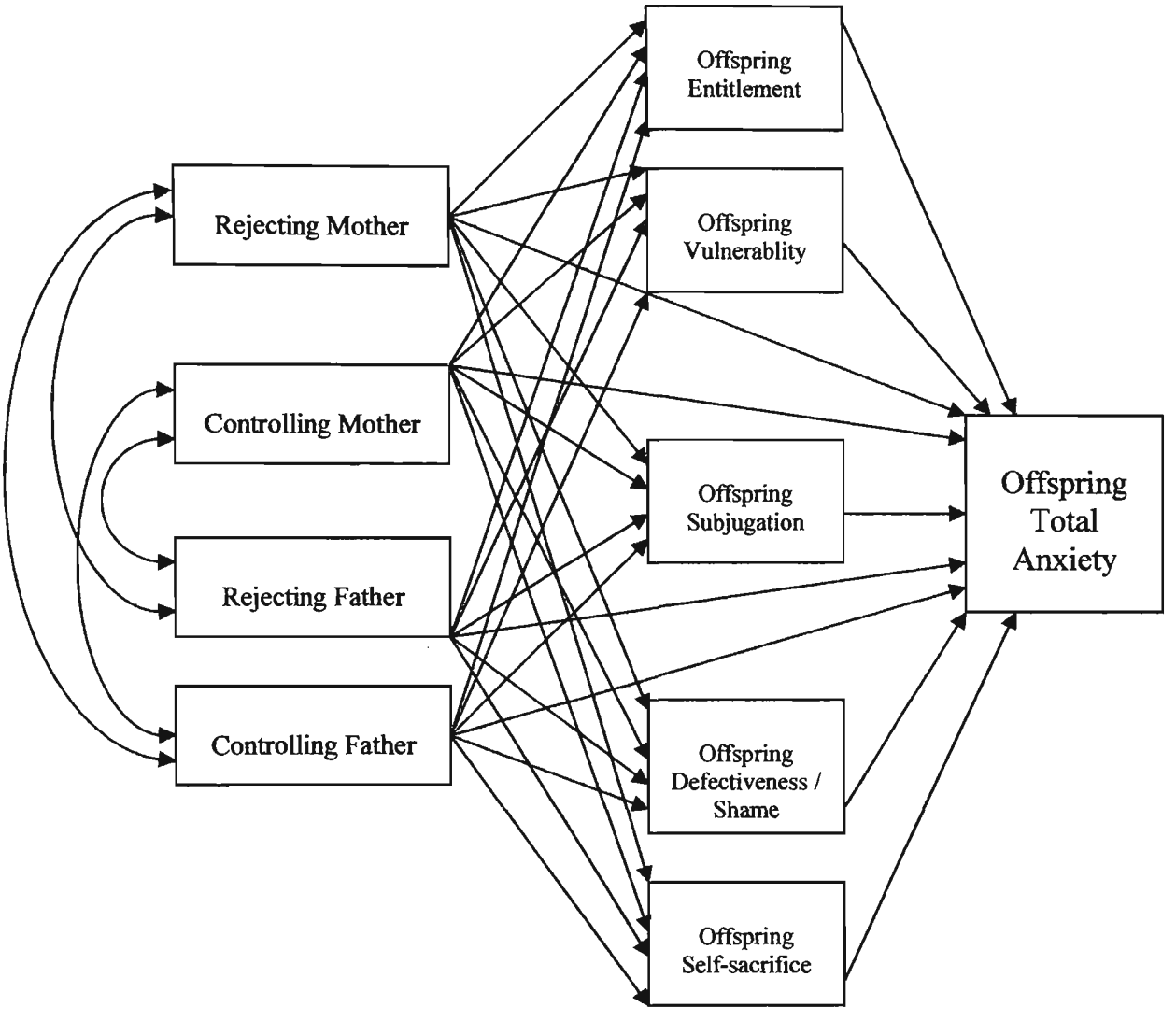


Figure 7. Path model of the predicted relationship between parenting, offspring schemas, and anxiety.

Descriptive statistics

Descriptives for scores for Total Anger, Anxiety, and Depression are shown in Table 16. The possible range for Total Anger was 15 – 60, while the possible range for Total Anxiety and Total Depression was 0 – 21.

Table 16

Mean and SDs for Total Anger, Total Depression, and Total Anxiety

Total Scores	Mean	SD
Total Trait Anger	23.38	5.78
Total Depression	3.22	3.42
Total Anxiety	2.08	2.43

N = 144

Whilst Controlling and Rejecting Father were orthogonal factors, as were Controlling and Rejecting Mothers, there was a significant correlation between Controlling Fathers factors scores and Controlling Mothers factor scores (r = .44), and between Rejecting Fathers and Rejecting Mothers (r = .67).

The three path analyses (AMOS-4) undertaken to explore the models proposed are shown in Figures 5, 6, and 7. Predictor variables were Mothers' Parenting and Fathers' Parenting types, and offspring maladaptive schemas, and the criterion variables in each model were Offspring Trait Anger, Depression, and Anxiety. Standardized parenting factor scores were used in all path analyses. As originally planned, the schemas used in each path analysis were those found in Study 1 to discriminate between those high and low on each emotion. The discriminant function coefficients were used to identify the

five schemas which loaded most highly on the discriminant function which successfully distinguished between those high and low on each emotion based on a median split.

Effects of Adverse Parenting

The path analyses of the various parenting/offspring-schema/offspring-emotion models are now considered. The total effect of parenting on offspring emotions is the sum of direct effects of parenting plus any indirect effects mediated by the five schemas included in the model. The total effects of parenting and schemas together accounted for 22% of the variance of Trait Anger; 26% of the variance of Depression; and 39% of the variance of Anxiety. The following sections describe the effects of the parenting types on both schemas and emotions, the impact of the schemas on emotions and the relative contributions of both parenting and schemas to the scores on the three emotions scales.

Effects of Parenting on Schemas

The direct effects of parenting on offspring schemas, as determined by the path analysis, are shown in Table 17. It should be noted that several schemas featured in more than one model. The effects of parenting on these schemas in Table 17 is therefore repeated in a number of instances. All parenting types directly affected at least some of the schemas associated with each offspring emotion. The strongest direct effects were: Rejecting Mothers on offspring Mistrust and Abuse, Subjugation, and Abandonment. Controlling Mothers contributed significantly to offspring Subjugation, Social Isolation, Self-sacrifice and Vulnerability. Rejecting Fathers contributed significantly to five offspring schemas, Social Isolation, Vulnerability, Defectiveness and Shame, Failure,

and Mistrust and Abuse, while Controlling Father contributed to offspring Entitlement and Mistrust and Abuse. Given that the variables were measured on different scales, standardized coefficients are reported in order to make units comparable (Klem, 1995), however, the tests of significance are performed on the unstandardized regression weights.

Table 17

Direct Effects of Parenting on Offspring Schemas: Standardized Regression Weights

YSQ Schemas Related to:	Rejecting Mother	Controlling Mother	Rejecting Father	Controlling Father
Offspring Trait Anger				
Mistrust and Abuse	.28**	.06	.22*	.16*
Insufficient Self-Control	.17	.08	.15	.02
Entitlement	.14	.06	.06	.20*
Subjugation	.26**	.30***	.15	.02
Failure	.15	.10	.28**	.02
Offspring Depression				
Social Isolation	.06	.22**	.41***	.00
Dependency / Incompetence	.09	.06	.17	.00
Subjugation	.26**	.30***	.15	.02
Mistrust and Abuse	.28**	.06	.22*	.16*
Abandonment	.24*	.10	.18	.09
Offspring Anxiety				
Entitlement	.14	.06	.06	.20*
Vulnerability	.03	.19*	.42***	-.06
Subjugation	.26**	.30***	.15	.02
Defectiveness / Shame	.18	.14	.27**	.11
Self-sacrifice	.11	.24**	.16	.16

N = 142; * $p < .05$, ** $p < .01$, *** $p < .001$

How Parenting related to Specific Offspring Emotions

The next issue was to examine whether parenting related in any way to specific offspring emotions. Analysis using AMOS-4 allows the identification of indirect and direct relationships between variables. The direct relationships between the two mothers' and two fathers' adverse parenting types and offspring emotions (Anger, Depression, and Anxiety) are summarised in Table 18.

Only two types of parenting were directly linked to specific offspring emotions. Rejecting Fathers predicted offspring Anger ($\beta = .23$) and Controlling Mothers predicted both offspring Depression ($\beta = .17$) and Anxiety. ($\beta = .25$).

Table 18

Direct Effects of Mothers' and Fathers' Parenting on Offspring Trait Anger, Depression, and Anxiety

Mother and Father YPI Factors	*B*	*SE B*	β
	Offspring Trait Anger		
Rejecting Mother	-.88	.60	-.14
Controlling Mother	-.17	.49	-.03
Rejecting Father	1.29	.59	.23*
Controlling Father	.12	.47	.02
	Offspring Depression		
Rejecting Mother	-.34	.33	-.11
Controlling Mother	.53	.27	.17*
Rejecting Father	.32	.34	.11
Controlling Father	-.36	.26	-.12
	Offspring Anxiety		
Rejecting Mother	.18	.22	.08
Controlling Mother	.60	.19	.25**
Rejecting Father	-.10	.23	-.04
Controlling Father	-.32	.18	-.14

N = 146; $*p < .05$, $**p < .01$, $***p < .001$

Effects of Schemas on Offspring Emotions

The schemas had been chosen because each set, in combination, had been shown capable of discriminating between those high and low in each emotion in Study 1. The results of a path analysis pertaining to the effects of offspring schemas on offspring emotions are presented in Table 19.

The schemas that significantly predicted Trait Anger were Entitlement and Insufficient Self Control, while Social Isolation and Dependency predicted Depression, and Vulnerability predicted Anxiety. Given that these schemas had been selected on the basis that each set could predict high and low levels of each emotion these were weak results. To establish the extent to which their contribution had been reduced by the inclusion of the parenting types it is necessary to look at the direct and indirect effects of the latter variables on the three emotions.

Table 19

Effect of Offspring Schemas on Offspring Anger, Depression and Anxiety: Standardized Regression Weights

YSQ Schema	Trait Anger	Depression	Anxiety
Mistrust and Abuse	.15	*.00*	
Insufficient Self-Control	.17*		
Entitlement	.23**		*-.04*
Subjugation	-.03	*.11*	*.00*
Failure	.13		
Social Isolation		.26**	
Dependency / Incompetence		.23**	
Subjugation	*-.03*	.11	*.00*
Mistrust and Abuse	*.15*	.00	
Abandonment		.14	
Entitlement	*.23***		-.04
Vulnerability			.44***
Subjugation	*-.03*	*.11*	.00
Defectiveness / Shame			.14*
Self-sacrifice			.12

N = 142; * $p < .05$, ** $p < .01$, *** $p < .001$

Effects of Parenting, on Offspring Emotions

The various associations between parenting types and offspring Total Trait Anger, Total Depression, and Total Anxiety are shown in Table 20. The direct, indirect or mediated effects, and total effects of parenting on offspring Trait Anger, Total Depression and Total Anxiety are all displayed.

Table 20

Direct, Indirect and Total Effects of Parenting on Offspring Emotions

Exogenous Variables	Trait Anger			Depression			Anxiety		
	Total	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect
Rejecting Mother	-.03	-.14	.12	-.01	-.11	.10	.12	.08	.05
Controlling Mother	.01	-.03	.04	.28**	.17*	.12	.39**	.25**	.13
Rejecting Father	.34**	.23*	.10	.29**	.10	.19*	.20	-.04	.24**
Controlling Father	.09	.02	.07	-.10	-.12	.02	-.14	-.14	.00

N = 142; $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

To ascertain whether schemas had a mediating effect, as Young implied they would, the total effect of both parenting and schemas was compared to the direct effect of parenting. Baron and Kenny (1986) suggested that when the total effect is significant and the direct effect is also significant, this indicates limited mediation. Where the direct effect is reduced to zero, or close to zero, this is evidence of mediation (Baron & Kenny,

1986). Where the direct effect is reduced but not eliminated there is a suggestion of partial mediation.

From the above table it can be seen that the effect of a Rejecting Father on Anger was largely direct, with little evidence of mediation by the schemas employed in the analysis. In contrast, the effect of Rejecting Father on Depression and Anxiety was largely mediated by the schemas. Controlling Mother had a significant direct and unmediated impact on Depression and Anxiety.

Given the small sample size and the complexity of the models any conclusions must be carefully drawn. Overall it appears that there was evidence of direct and mediated effects of parenting ratings. Of the 12 possible paths between parenting and emotions (four types and three emotions) only five showed evidence of significant effects. Of these, three were largely direct and two were mediated. Furthermore, there was evidence of parenting influencing schemas that were not strongly linked to any emotions (e.g., mistrust and abuse, self-sacrifice), as well as schemas that were associated with emotions that were not predicted by parenting (e.g., dependency & incompetence). It is clear that the linkages between parenting, schemas and emotion are more complex than Young envisaged.

Discussion

The results of Study 3 are discussed in two parts. First, there is some discussion about the qualities of the YPI scale, next the types of parenting discerned by the YPI are examined. Then, there is some discussion about how parenting appears to relate to offspring schemas; how parenting affects offspring emotions; and what the inter-

relationships between parenting, offspring emotions and offspring cognitions are. Finally, there is some discussion of Young's overall model.

Young's Parenting Inventory

As a whole, the YPI was reliable. While Young (1990) assumed that it was composed of 17 parenting types, each matching one of his YSQ schema types and the two additional ones, no such neat YPI groupings were found. The clearest finding was that participants distinguished between mothers' parenting and fathers' parenting, which did not fit Young's model.

When Young's expected parenting types did not emerge, two main components were obtained for each of mothers' and fathers' parenting. These emerged as Rejecting Mother, Rejecting Father, Controlling Mother, and Controlling Father. The themes found for fathers' and mothers' parenting were essentially similar, with some subtle, but important, differences. On the basis of items associated with each factor, the characteristics of each parenting types are summarized in Table 21. First, the specific features of each parenting type, then the rejecting or controlling themes, then themes common to all groups are shown are listed. To aid the reader, common cognitive themes are presented in red; cognitive themes associated with rejecting parents are presented in blue; cognitive themes associated with controlling parents in pink. Those themes associated uniquely with one parenting type are presented in orange, turquoise, green and olive green.

Table 21

Characteristics of Rejecting and Controlling Parents

REJECTING PARENTS CHARACTERISTICS		*CONTROLLING PARENTS CHARACTERISTICS*	
Mother	Father	Mother	Father
ExclusiveThemes	*ExclusiveThemes*	*Exclusive Themes*	*Exclusive Themes*
Cold	Unsupportive	Conservative	Conditional Love
Hurtful	Undisciplined	Pessimistic	Enmeshed
Self-absorbed	Remote		Angry
Neglectful	Exploitative		Punitive
Rejecting Themes Common to Both Parents		*Controlling Themes Common to Both Parents*	
Rejecting		Demanding	
Abusive		Controlling	
Cruel		Overprotective	
Judgmental		Status Seeking	
Unhelpful		Impatient	
Lax		Fearful	
Blaming		Undermining	
Untruthful		Competitive	
Unloving		Rigid	
Moody		Perfectionist	
Unaffectionate		Patronizing / Overprotective	
Dismissive			
Unpredictable			
Themes Common to All Parenting Types			
Critical			
Selfish			
Themes Common to Controlling Mothers and Rejecting Fathers			
Negative			
Overpowering			

Characteristics of Rejecting and Controlling Parenting Types

A general feature of all the adverse YPI parenting types was that these parents were seen by their offspring as critical, selfish, and perfectionist. The particular characteristics of the two main parenting types, Rejecting and Controlling parents, are discussed next.

Rejecting Parents. Rejecting parents, both mothers and fathers, as well as being rejecting, tended to be viewed by their offspring as being abusive, cruel, blaming, and judgmental towards their offspring. They were unhelpful, lax, dismissive, and unloving. They tended not to be interested in their offspring, and did not want to spend time with them. They were moody and unpredictable towards their offspring, and did not provide structure and boundaries for them. From this, it appears that Rejecting parents were less concerned about their offspring's wellbeing, and more caught up in their own emotions. In addition, Rejecting Mothers and Rejecting Fathers each had particular characteristics. Rejecting Fathers were unsupportive, remote, exploitative, and undisciplined. Rejecting Mothers were hurtful, self-absorbed, neglectful, and cold.

Because Rejecting parents were low on warmth, responsiveness, and control, they appear to be similar to Baumrind's category of uninvolved or 'Neglecting/Rejecting' parents. Both groups tended to leave their children to their own devices, did not structure, supervise, organize, discipline, or attend to their children, and may have even actively rejected their children (Baumrind,1989).

Controlling parents. The specific features of Controlling parents, both fathers and mothers, were that they were demanding, controlling, and impatient towards their offspring. As well, they were undermining, fearful, competitive, and status-seeking. In addition to these generally controlling features, Controlling Fathers and Controlling Mothers each displayed some specific characteristics. Controlling Fathers were angry, impatient, punitive, and enmeshed. Controlling Mothers were overpowering, pessimistic, and conservative. Both types shared some of the characteristics of Baumrind's Authoritarian parents.

When examining the items that loaded onto the two Controlling parents factors, it was clear that these parents were also somewhat anxious and fearful. This characteristic may, in part, explain their strong need for control. For instance, Controlling Fathers were overprotective of their offspring, perhaps because they feared that their offspring could not manage alone, or might get hurt. Controlling Fathers were also afraid that their offspring might reflect badly on them. Both Controlling Mothers and Controlling Fathers were concerned about being good enough. These features suggest that their need for control arose out of anxiety, particularly anxiety in relation to their relationships with others.

Such anxious behaviour appears to be similar to that found in some categories of Neuharth's controlling parents. He found that many of the controlling parents he studied had experienced early trauma (Neuharth, 1998). For example, he showed that when compared with the wider community, four times as many of the controlling parents, as children, had had a parent die, three times as many of them had grown up in households with a parent who was an alcoholic or suffered from mental illness, and three times as

many of them had been sexually abused as children (Neuharth, 1998). This could explain Neuharth's (1998) observation that controlling families are run to please or protect one or both parents, rather than to foster optimal development in their offspring.

Each of the four parenting factors produced in Study 3 subsumed several smaller factors. As a result, each overall factor reflected many different themes. A number of these sub-factors were reminiscent of types identified by Baumrind and Neuharth. Similarities between the different parenting types are shown in Table 22.

While there were a few shared characteristics between Rejecting and Controlling parents, Rejecting Fathers and Controlling Mothers were both characteristically negative and overpowering, and, as is shown later, this combination appears to have a powerful effect on offspring.

Table 22

Parenting Types with Similar Characteristics

YPI Parenting Types identified in Study 3	Baumrind's Parenting Types	Neuharth's Controlling Parenting Types
Rejecting Mother Rejecting Abusive Cold	Rejecting / Neglecting	Depriving Parents Using Parents
Rejecting Fathers Unsupportive Exploitative	Rejecting / Neglecting	Depriving Parents Using Parents
Controlling Mothers Demanding Rigid Conservative	Authoritarian Permissive	Abusing Parents Perfectionistic Parents Cultlike Parents Using Parents
Controlling Fathers Enmeshed Angry	Authoritarian Permissive	Abusing Parents Smothering Parents Chaotic parents

The Relationships between YPI Parenting Types and Offspring Characteristics

Having examined the results of the different parenting types, the next step was to consider the links between these YPI parenting types and their offspring characteristics. These are determined in three stages: first, the link between adverse parenting and offspring cognitive development; second, the link between adverse parenting and offspring emotions; and third, the interrelationship between parenting, offspring cognitions and offspring emotions.

Associations of parenting with offspring cognitions. The links between parenting and offspring depended not only on the type of parenting experienced, but also on whether it was the mother or father who rejected or controlled the offspring. There were few common associations involving Rejecting Mothers and Rejecting Fathers other than the association with Mistrust and Abuse, while Controlling Mothers and Controlling Fathers were not linked to any common schemas. Subjugation seemed to be a schema elicited by adverse mothering, while social isolation and vulnerability was associated with Controlling Mothers and Rejecting Fathers. Several schemas were linked to only one parenting type (e.g., Entitlement and a Controlling Father; Self-sacrifice and a Controlling Mother), and two schemas were not associated with any type of parenting: Insufficient self-control and Dependency and Incompetence. Again it is not easy to account for such complex patterns, but the study has confirmed that parenting types, albeit not those nominated by Young, are related to offspring cognitions.

Associations of parenting with offspring emotions. Young's implied model was examined along the lines suggested by Baron and Kenny (1986). They proposed ways of looking at mediation in which the independent variable predicts the mediator, which, in turn, predicts the dependent variable. Young's model implied that parenting influences offspring schemas, and in turn, these influence emotion. A path analysis showed that there were both direct and mediated effects of parenting on offspring emotions. Three of the significant associations of parenting with offspring emotions were direct and not mediated by cognitions while the association between Rejecting Father and offspring

Depression and Anxiety was mediated by cognitions, most probably by the schemas of Social Isolation and Vulnerability, respectively.

Figure 8 shows the relationships found in Study 3 between parenting, offspring schemas, and offspring trait anger, depression and anxiety. Offspring schemas are shown in shaded boxes, direct effects of parenting are indicated with black lines, mediated effects are indicated with red lines.

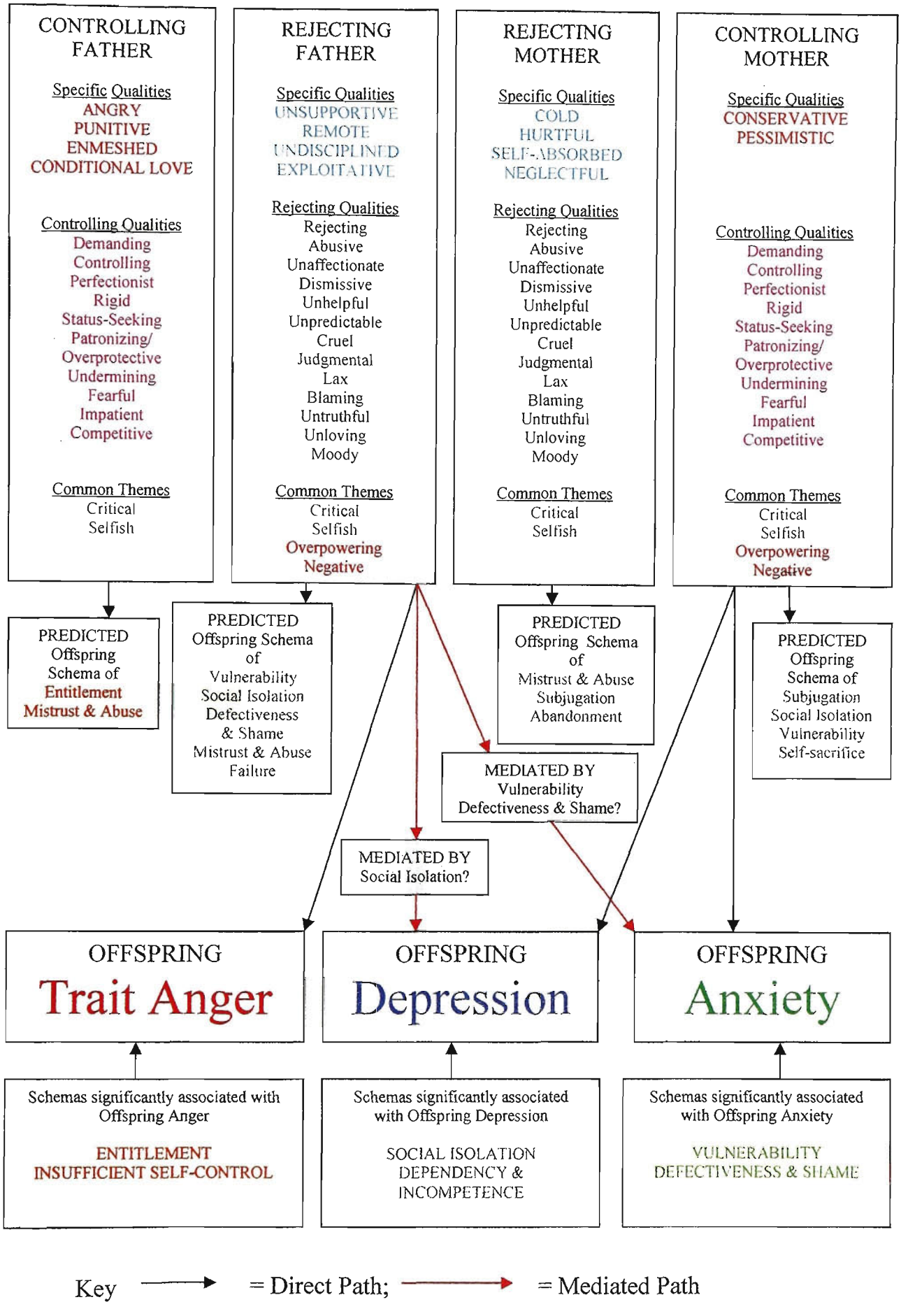


Figure 8. Relationship between Parenting, Offspring Schemas, and Emotion.

Inter-relationships between parenting, offspring schemas and emotions. Young, after noting the role of schemas in depression and personality disorders, deduced the part played by parenting in the development of these cognitive schemas, yet he did not investigate the minutiae of these relationships. Study 3 has uncovered four general trends: 1) that parenting can relate directly to offspring schemas; 2) that schemas can relate directly to offspring emotions; 3) that the relationship between parenting and offspring emotions can be direct and unmediated; and 4) that the relationship between parenting and offspring emotions can be mediated by offspring cognitions.

The specific effects of controlling parents seems to depend on whether the parent is a mother or father. It is surprising to find that these effects were different because most of the characteristics of Controlling Mothers were shared by Controlling Fathers. These differences suggest that it is specifically the fact that mother was controlling, and not the father, that contributes to offspring anxiety. When a mother was controlling, her children wanted more independence and distance from their mother. Having a conservative, pessimistic, anxious, controlling mother was directly linked to offspring Anxiety and Depression. This finding is consistent with a previous study that showed that anxious mothers were associated with behavioural inhibition and anxiety in their children (Manassis, Bradley, Goldberg, Hood, & Swinson, 1995).

Similarly, the impact of Rejecting parents appears to depend on whether it is the father or mother who rejects the child. While it would be expected that rejection by a mother would have a stronger effect on offspring than rejection by a father, this was not demonstrated in Study 3. Certainly, being rejected by a mother is directly related to offspring being mistrustful of others, having a sense of abandonment, and subjugation,

but rejection by a father has more wide-ranging cognitive and emotional effects. It, too, is associated with offspring mistrust, but it is also related to offspring feeling vulnerable, socially isolated, and defective. It also is linked directly to offspring Trait Anger, and indirectly to offspring Depression and Anxiety. It is difficult to explain why the relationships between fathers' rejection and offspring schemas is so much stronger than the relationships with mothers' rejection.

Study 3 also illustrated that particular elements of parenting may contribute specific effects. For example, as Figure 8 shows, offspring Depression is not only linked directly to a number of different cognitive schemas, but also to Controlling Mothers, and Rejecting Fathers. The characteristics that are shared by these two types of parents are that both are critical, overpowering and negative. This seems to suggest that it is precisely these elements of parental behaviour that may be related to offspring Depression. This finding is consistent with a study by Frye and Garber (2005) which showed that depression was linked to having critical parents. Perhaps it is the overpowering nature of these parents, coupled with the powerlessness of the offspring, that contributes to offspring Depression. This would be consistent with research that showed that parental 'psychological control' was linked to offspring depression (Soenens, Elliot, Goossens, Vansteenkiste, Luyten, & Duriez, 2005), and with Seligman's (1975) study that linked learned helplessness, in the presence of unavoidable adverse stimuli, to depression (Seligman, 1975).

Also, Controlling Mothers and Rejecting Fathers were both associated with offspring Anxiety. However, while the relationship between Rejecting Father and offspring Anxiety was mediated by cognitions, the relationship between Controlling

Mothers and offspring Anxiety was direct and unmediated. From this it seems that some elements of Rejecting Fathers makes a child feel vulnerable or defective and this makes the child anxious. After studying the specific characteristics of Rejecting Fathers, namely, that they are unsupportive and undisciplined and exploitative, it seems likely that these might well contribute to offspring feeling vulnerable.

Offspring Trait Anger was directly predicted by having had a Rejecting Father. Additionally, the schema associated with Controlling Fathers, namely, Entitlement, was also related to offspring Trait Anger, as was Insufficient Self-control. The latter was not associated with any parenting type. Previous studies have shown a link between controlling parents and anger. For example, a study by Tronick, Ricks and Cohn (1982) showed that mothers who were overly controlling of their infants and persistently engaged with them, produced stressed offspring who showed 'insecure-resistant' attachment patterns, and, in separation situations, were angry and rejecting of their mothers.

Explaining the Links with Parenting

Young's original model suggested that particular types of parenting are related to to specific offspring maladaptive schemas, and that, in turn, these are related to specific emotional and psychological disorders. While the details of Young's model could not be tested in Study 3 because the types of parenting that Young expected did not emerge, modified models were examined. While these models followed the intent of Young's model, they only explored the associations with four parenting factors, so none of the three proposed overall models represented a full description of the relationship between

parenting, offspring schemas, and offspring Trait Anger, Depression or Anxiety. Nonetheless, they did account for reasonable proportions of the total variance in Trait Anger, Depression, and Anxiety. This seems to indicate that Young's model has some merit. It confirms that both parenting and offspring schemas may contribute to offspring Anger, Depression and Anxiety. Because there are so many other variables not included, such as the effect of temperament, or the influence of attachment, to name but two possible influences, it would be unlikely that his model could be the final word on the causes of depression, anxiety or anger. Yet, even with a restricted number of variables, Young's model, in the amended form, can be seen to have been supported to some extent.

When running a path analysis, it is possible, to reveal patterns, such as that parenting has both direct and indirect effects on offspring emotions. However, these patterns do not explain how these relationships might come about. Thus, even though Study 3 offers support for Young's view that some of the variability in offspring emotion can be accounted for by cognitions, and that there are links between parenting and offspring emotions, some mediated through offspring cognitions, it does not explain how these different effects might come about.

The next section seeks possible explanations for these direct and indirect parental influences.

Indirect effect of parenting. The indirect effect of parenting on offspring emotions, that is, the effects mediated through cognitive schemas, as was found between Rejecting father and offspring Anxiety, can be acceptably accounted for by classical conditioning. Because emotional reactions are highly conditionable, any cognitions that

occur concurrently with emotional responses, can become Conditioned Stimuli (CS). In this way, when a parent treats offspring in ways that induce high emotions, this potentially provides ideal conditions for classical conditioning to take place. Any cognitions paired with such adverse parenting, can become a Conditioned Stimuli (CS) capable of inducing emotions. For example, a child, who is threatened by an parent, generally feels fear. If, whilst the parent is shouting, the child thinks, "I'm in danger," then the thought, "I'm in danger" can become a CS, on its own capable of eliciting fear. This mechanism does not satisfactorily explain the direct effects of parenting however.

Direct Effects of Parenting. Study 3 clearly indicated that parenting can be directly related to offspring emotion. A direct link occurred between Rejecting Fathers and offspring Trait Anger, and between Controlling Mothers and offspring Depression and Anxiety. When parenting relates directly to an offspring emotion, there is no obvious cognitive component mediating the relation between parenting and offspring emotions, and hence no CS to elicit the emotion. Explaining this direct link is more difficult.

The direct link between Rejecting Fathers and Controlling Mothers and offspring Depression could simply be an indication that schemas other than those examined in Study 3 are operating. However, given the comprehensive nature of the YSQ, it seems unlikely there are critical schemas omitted from the YSQ that would mediate the relationship between parenting and emotion. Alternatively, it is possible that the direct links with parenting could be the result of preverbal conditioning, as was argued by Young and his colleagues (Young et al., 2003), particularly so, because one of the features shared by these parents that could have contributed to preverbal conditioning,

was that they were both overpowering. This could have meant that, in the presence of an overpowering father or mother (UCS), a preverbal child might feel helpless (UCR) in response to the powerful non-verbal elements of the parent's behaviour, such as the parent's tone or volume of voice, facial expressions, or other body language. These non-verbal stimuli could become CSs, so that, in the mere presence of an overpowering parent, this stimulus elicits the conditioned response. In this way, helplessness, as a CR, becomes directly associated with stimuli like a parent's tone of voice or body language. This means that when the offspring subsequently encounters stimuli of these kinds, these, too, trigger helplessness in the offspring.

Specific Effects of Mothers and Fathers

When Young discussed the effects of parenting, he did not seem to have been aware that there would be different effects of mothers' and fathers' adverse parenting. Some explanation as to why offspring respond differently to similar adverse treatment by mothers and fathers is needed. The next section discusses some of the possible factors that might contribute to these different responses.

Offspring expectancies. A possible explanation of the different responses by offspring to similar behaviour by fathers and mothers could be that the behaviour manifested by the parent runs counter to what the offspring expects of them. By the age of seven most children are aware of social roles, such as the 'mother role' and the 'father role,' either through stories, play, the media, or experience of other families. These different expectations probably arise as the result of socialization (Goldman & Goldman,

1985; Weinraub, Clemens, Sachloff, Ethridge, Gracely, & Myers, 1984). Through these experiences, children develop expectations about mothers and fathers. That is, they are acculturated to expect mothers to provide nurturance, and fathers to provide control. In fact, even as early as four years of age, children have some understanding of these roles (Weinraub et al., 1984). These expectations could explain why offspring respond differently to similar behaviour in fathers and mothers.

In Study 3, the cognitive schemas associated with each type of parenting could be used to demonstrate these specific expectancies about parents. For instance, Rejecting Mothers were associated with offspring Abandonment. This suggests that offspring have an expectation that mothers should be close to offspring, and should nurture their offspring. An absence of nurturance from a father seems to be less important than an absence from a mother. Likewise, Rejecting Fathers were associated with offspring Defectiveness and Failure. This suggests that offspring expect fathers to accept their offspring. Offspring rejected by their fathers feel defective, but not being accepted by a mother does not have the same effect. It seems that being accepted by a mother is less important than not being accepted by a father.

Offspring rejected by the father, seemed to think this was because they, the offspring, were not good enough. Consequently, they blamed themselves for causing the rejection. Feeling defective was associated with offspring depression. When offspring were rejected by the mother, they simply felt abandoned, not defective.

When mothers were overly controlling, their offspring generally felt vulnerable, and believed that they must submit to powerful people. Some offspring appeared to believe that this treatment was unfair, and as a result, they wanted to punish others. But,

when fathers were overly controlling, probably because they were also enmeshed with their offspring and so indulged their offspring as well as controlling them, their offspring appeared to deduce that they were entitled to special treatment and indulgence from others as well. So, when other people did not indulge them, these offspring felt that their rights were being trampled, and strongly sought to defend and extend their rights.

That there should be these distinctive effects from mothers' and fathers' parenting is not surprising, because mothers have been shown to exert specific influences on their 6-year old offspring's cognitive behaviour and school performance (Coates & Lewis, 1984); and likewise, fathers to have specific effects on emotional and cognitive behaviour of offspring (Hannum, 2004).

Retrospective hindsight and state-dependent memory. As with any retrospective study, there is a possibility that some of the relationships identified are the result of hindsight, or perhaps a product of state dependent memory. It is quite possible that how a person was feeling at the time, or the mood the person was in at the time they completed a questionnaire, could play some part in directing their attention to remember certain events, but not others. Or in the case of state-dependent memory, a participant's current emotional state can influence what memories a person accesses at a particular time (Weston, 1999). In this way, present mood can link a person to earlier depressing or anxious memories. Likewise, current adult expectations about fathers' and mothers' roles, could restrict what memories a person accesses while responding to a questionnaire. For example, "Because I am depressed now, this is evidence that my father did not love me as he should have." In sum, when persons are acculturated to

expect mothers to be nurturing, or fathers to be controlling, they will measure their parents against these expectations, and by how they presently feel (Carlson, 1984). In addition, memories are also reinterpreted in the light of new information. This means that our memories are seldom accurate representations of the past, but are strongly influenced by current expectations.

In the light of these considerations efforts have been made in the discussion to reduce the stress on causal links between parenting types, schemas and emotions, though, as is apparent, the temptation is not always avoided. As with all models exploring the impact of parenting, the tacit assumption is that parental practices give rise to cognitions and prevailing emotional states in offspring. This assumption underlies much of the above discussion but as this brief consideration of memory and recall is intended to make clear, the evidence presented in this chapter cannot confirm this particular causal relationship. Only large scale longitudinal studies could achieve that aim.

Enduring Effects of Parenting

Laying aside the issue of the lack of clear cut evidence in the current study for the tacit assumption that parenting practices cause enduring offspring characteristics, it is interesting to speculate as to how such enduring behaviour might come about. That is, given that, in a lifetime, most adults have many relationships, it is interesting to ask why early parenting might have such lasting effects. Perhaps it is because at this stage of development the physiological structure of the developing brain is likely to be heavily influenced by experiences during this period of development (Schore, 2003; Schuengel et al., 1999). Perhaps it arises because, as previously outlined, high stress levels can result

in long-term effects with clear changes in structure which are not subsequently modified; changes such as parcellation, when particular neurons in a child's brain are destroyed by stressful experiences (LeDoux, 1996). In this way, stress from rejecting and controlling parents could have long-term adverse effects on offspring, and angry, cruel, impatient, blaming, or hurtful parental behaviour, if encountered frequently by a child, could contribute to parcellation and so have permanent effects on a child. As mentioned previously, frightening parental behaviour has been shown to raise stress levels in offspring (Maine & Hesse, 1990). Perhaps it is because classical conditioning readily takes place under highly emotional conditions.

Conclusions

Study 3 set out to explore the psychometric qualities of the YPI, and to find out more about the relationships between parenting, offspring cognitions and offspring emotions among a normal population. When none of the specific types of parenting, as nominated by Young (1990), appeared as factors, the specific associations that he predicted between particular types of maladaptive offspring cognitive schemas and particular types of adverse parenting, could not be tested. Instead, two main parenting factors for mothers, and two for fathers, were substituted for Young's types.

Even with such a restricted number of parenting types, some specific potential influences of adverse parenting on offspring were identified. Adverse parenting did directly predict offspring maladaptive schemas. In two cases, the relationships between adverse parenting and offspring Anger, Depression, and Anxiety were mediated by offspring maladaptive cognitions, but in other cases, the influence of parenting on offspring emotions was direct and unmediated. So the picture of how parenting, offspring schemas, and offspring emotions interrelate is more complex than envisaged by Young. Broadly, Study 3 confirms Young's view that adverse parenting may have lasting negative cognitive and emotional effects on offspring.

As a post-script to the study, it is acknowledged that being a parent is a challenging experience for most people, and that most parents do try to provide for their offspring, and meet their needs. It is well to remember that many parents, themselves, had less than ideal parenting (Belunsky & Vundra, 1989), so it is not surprising that parenting is not always optimal.

Limitations

The study was limited by its scale. A larger population would have allowed a fuller testing of the YPI. In any stringent test-construction, there is usually a requirement for 10 times as many participants as items (Kline, 1986), so, ideally, with 72 items, a stringent examination of the YPI would have required a sample of 720 persons. A study of this scale was well beyond the scope of Study 3, so, only an initial testing was undertaken with 146 participants.

Because of its small scale, Study 3 did not allow the YPI to be compared with other parenting measures, so the concurrent and other forms of validity of Young's measure were not tested. Had it been possible, it would have been desirable to compare the YPI formally with other parenting measures such as those of Baumrind and Neuharth.

One of the methodological issues faced in Study 3 was how to assess parenting retrospectively. This is a perennial problem because there can be differences in what parents report and offspring report, particularly on the issue of whether or not parents used physical aggression towards their children (Jouriles, Mehta, McDonald, & Francis, 1997). However, as in most time limited studies, where a longitudinal design is impractical, the main means available for exploring the legacy of parenting on offspring, is to rely on retrospective methods.

Young's model assumes that parenting is the predictor, that schemas are predicted by parenting, and that emotions are predicted by schemas. Yet, it is possible that the relation may also work in the opposite direction. In other words, Depression, Anger and Anxiety, through some process such as state-dependent memory, trigger particular

schemas and, in turn, these schemas link selectively to memories of particular adverse types of parenting. Such a possibility does not seem to have been considered by Young.

Future Studies

First, because the YPI appears to include some redundant items, it needs further development. If is intended that the YPI should reflect and provide the 17 categories that match the YSQ Schemas, then the scale will need to be refined. Whilst the present form of the YPI is no doubt valuable in a clinical setting, a future study of its concurrent validity, and more vigorous investigation of its validity and reliability, would increase its value as a research tool.

Because the participant group in Study 3 was small and non-clinical, it permitted only a tentative look at relationships between adverse parenting, and offspring schemas and emotions. A confirmatory study with a larger group and perhaps including clinical participants as well, would offer a clearer view of these relationships.

Because Young's model is a directional model, it implies that only the parent plays any active part in the relationship with offspring, and fails to acknowledge that offspring may also impact on parents. For example, previous studies have shown that easy temperament toddlers positively affect their mother, and difficult temperament toddlers negatively affect their mothers (Lee & Bates, 1985); or, that the type of discipline a mother uses is influenced by her infant's temperament (Kochanska, 1993). A future study could explore the relationship between temperament and schemas to see whether having a particular temperament inclines an individual to developing a particular set of schemas.

The issues of attachment and temperament are not addressed in Study 3, yet both of these appear to be active factors which can reflect and impact on the parenting-offspring relationship. These features could be addressed in any more extensive study of this relationship.

CHAPTER 6

INTEGRATION OF FINDINGS

Overview

This final chapter is organized into four parts. The first part looks at the implications of the three current studies for the Cognitive Therapy (CT) model. The second part assesses what new information the three studies have revealed about anger and, in the light of this, it proposes a new model of anger. Next, the issue of the anger-depression relationship is addressed. The final section suggests applications of these findings and draws conclusions about what has been learnt, generally and specifically, from all three studies.

Background

In recent years, there has been a strong trend in clinical psychology to adopt a cognitive model, such as Beck's Cognitive Therapy (CT) model, when explaining psychological disorders, particularly, affective disorders. Beck's model rests on a series of assumptions. These are: that specific emotions are associated with particular cognitions, as articulated in Beck's Content-Specificity Hypothesis (Beck et al., 1979;, 1985;); that cognitions give rise to emotions (Beck's Primacy Hypothesis); and third, that specific cognitions are associated with particular emotions. Young's model, which is an elaboration of Beck's, holds that underlying each personality and affective disorder is a specific maladaptive cognition, and that each of these maladaptive cognitions arises as a result of exposure to a particular type of adverse parenting. Study 1 and Study 2 set out

to test Beck's assumptions about the relationships between cognition and anger, depression and anxiety. Study 3 tested Young's psychopathology model by exploring possible links between parenting, offspring schemas, and offspring emotions.

Testing the Assumptions of Cognitive Therapy

Beck assumed that there were specific associations between particular cognitions and particular emotions. Despite holding this view, he did not clearly indicate what constituted specificity. There are really two positions that can be taken on the matter of specificity, a strong position, and a weak position. A strong position on specificity would hold that specificity occurs only where there is a unique and exclusive association between a specific schema and a particular emotion; it would hold that each emotion is linked to one schema, and, conversely, that each schema is associated with only one emotion; and that there are no links between that schema and any another emotion. This strong position is illustrated in Figure 9.

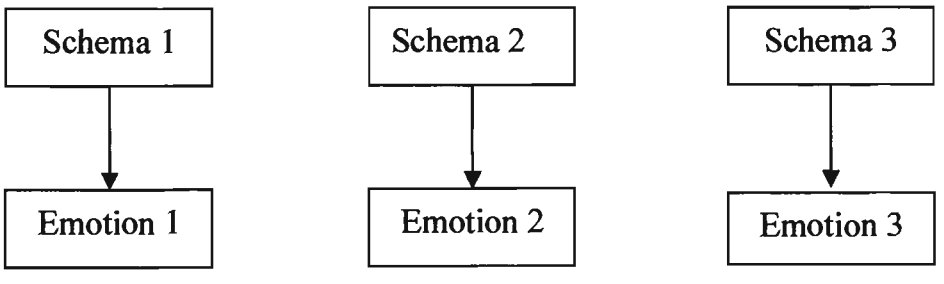


Figure 9. An illustration of the strong position on specificity.

Given that Study 1 showed there was often a strong degree of correlation between schemas, it is unlikely that a strong position on specificity could be defended. By contrast, a weak position on specificity would hold that specificity can be inferred where

a specific schema tends to be more strongly associated with a particular emotion than with other emotions; and that each emotion can be linked to a unique *set* of schemas.

Whilst logically, it would be more consistent to favour the strong position, the case for specificity is not really lost if the weaker position is taken. The weaker position on specificity is demonstrated in Figure 10.

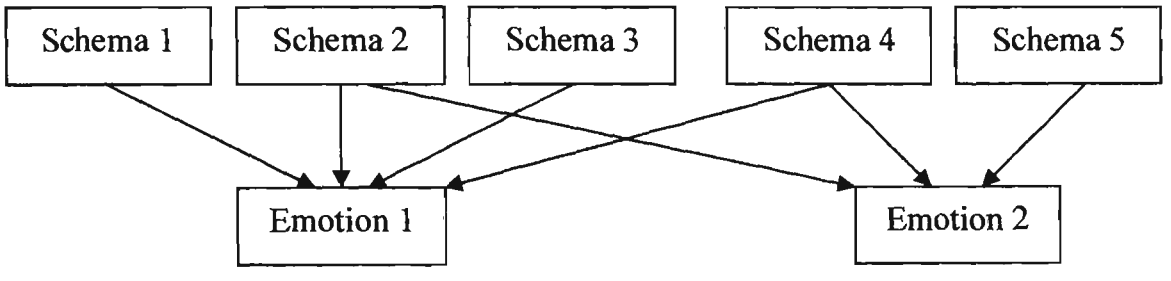


Figure 10. An illustration of the weaker position on specificity

Study 1 revealed that there were several levels of association between cognitions and emotions. Some emotions related to many schemas, some to only a few. Thus, depression was related to many schemas; anger was related to fewer schemas than depression, and anxiety was related to only a few schemas. Study 1 also showed that some schemas are related to all three emotions, for instance, Mistrust and Abuse was related to Trait Anger, Depression and Anxiety; that some cognitions are related to two emotions, such as Social Isolation to Depression and Anxiety. In these cases, no strong claim could be made for specificity. Study 1 also showed that two or more schemas could be uniquely and exclusively related to one emotion, such as happened with Punitiveness, Entitlement and Anger, or that in a few cases, cognitions can be related to just one emotion, such as Unrelenting Standards to Anxiety. In these cases, the claim for

specificity was strengthened.

An argument has been put that the whole concept of specificity is passé (Gomez, 2002). This view would seem to be supported by the fact that a strong claim for specificity can only able to be made for 20% of schemas, (as with Insufficient Self-Control and Anger; Self-Sacrifice and Depression). Yet, if one takes the weaker position on specificity, the fact that 20% of the schemas met the criteria for the stronger position, and another 60% of schemas met the weaker criteria, this could be taken as more than adequate evidence in support of Beck's specificity hypothesis. It seems clear from this that anger and depression, at least, are related to certain cognitions, but not others.

Rather than rejecting the concept of cognitive specificity on the grounds that it is passé, it seems that these studies have added to the understanding of the relationship between cognition and emotion, so is still worth exploring. Even the weaker case for content specificity is still able to indicate that there is certainly a link between cognition and emotion, and this link can be quite specific. Even where there are a number of schemas associated with an emotion, this can still add to our understanding of the phenomenology of trait anger, depression and anxiety.

Testing the Assumptions that Thoughts Cause Emotions

The second assumption of CT, Beck's Primacy Hypothesis, is that cognitions **lead to** emotions. This assumption was tested in Study 2, when participants were exposed to the cognitions found in Study 1 to be associated with Anger, Depression, and Anxiety. Even though the Primacy Hypothesis is really the foundation of CT, the results of Study 2 are modest at best. Study 2 showed that some thoughts could trigger particular emotions.

For instance Anxiety was induced by cognitions associated with Anxiety and Anger was induced by cognitions associated with Anger, but only in already angry persons, however, there was no evidence that Depression was induced by cognitions associated with Depression.

Given that one of the strong tenets of Cognitive Theory is that thought induces emotion, it was surprising that the effects of cognitions on anger, depression and anxiety induction were not stronger. However, weak as the results were, they still offer some support for Beck's Primacy Hypothesis. It seems that even in a contrived situation such as emotion induction 'anxious thoughts' can significantly increase anxiety, and, in those who are already high on Trait Anger, 'angry thoughts' about past situations in which one's rights have been infringed can increase angry feelings.

Depression was different. Even when a person was required to think about previous abuse and social isolation they had experienced, they did not become more depressed, even when the person was disposed towards depression. Teasdale's assumption that prior emotional state increases the effect of cognitions on emotion was not supported in the case of depression. This is perplexing because, as was found in Study 1, other studies have shown strong links between pessimistic cognitions and depression (Abrahamson, Garber, Edwards, & Seligman, 1978; Beck et al., 1985; Clark et al., 1994; Seligman, 1975). It seems that even though depression was linked to a number of schemas, something more than exposure to these cognitions was needed to trigger depressed feelings.

These results offered some slight support for the primacy hypothesis, but also suggested that cognitions may only give rise to emotions under certain necessary

conditions. Because Study 2 did not examine contingencies such as emotional mode, commitment to task, stress levels, or temperament, the search for factors mediating the link between cognition and emotion must continue.

Specific Origins of Specific Cognitions and Disorders

The next challenge to CT was taken up in Study 3. This addressed a question that Beck's model does not raise directly: how a particular emotion comes to be associated with specific cognitive material. While Beck acknowledged that a person's history contributed to schema development, Young claimed that particular types of negative parenting give rise to specific types of offspring cognitive schemas; these, in turn, give rise to specific affective or personality disorders.

Study 3 showed four types of relationships between parenting, offspring cognitions and emotions. First, it confirmed that some schemas were consistently associated with particular emotions. Second, it showed that some schemas were associated with a number of types of adverse parenting, both mothers' and fathers.' Third, it showed that some offspring schemas were associated with specific types of parenting, regardless of whether the parent was a mother or father. Third, even though this was not predicted by Young, Study 3 revealed that adverse parenting could have direct effects on offspring emotions. Finally, the results showed that some effects of parenting on emotion were mediated by schemas.

Even though the parenting types that emerged in Study 3 were different from Young's, the study broadly confirmed Young's claim that the effects of one's parents treatment of one when young, continue into adulthood. From this, it was clear that

parenting influences how a child learns to see the world, and it contributes to what becomes the child's reality. It becomes the child's measure of him or herself and shapes the child's expectations about the future. These findings confirm previous studies that showed that the effect of parenting, whether adverse or benign, is enduring (Elliot, 1997; Heim & Nemeroff, 2001; Schore, 2003; van der Kolk, McFarlane, & Weiseath, 1996). It is as if, through the development of schemas, one carries one's parent in one's head forever. This means that the offspring of Rejecting Fathers do not just feel hurt by their father's rejection, they come to *know* that they are not good enough, that they are alone; and it is this knowledge that leads on to depression. Likewise, the offspring of Rejecting Mothers not only feel unloved and abandoned, they *know* that if their mother is to accept them, they must subjugate themselves to others, remain mistrustful, and live with a constant sense of abandonment. In the same way, the offspring of Controlling Mothers *know* that the world is dangerous, that they are powerless, and that there is nothing they can do to improve this. This knowledge may lead to anxiety and depression. Offspring of Controlling Fathers know two things, that they are special, and they can do whatever they want. When they do not get what they want, or when their expectations are dashed, they become angry.

Through such experiences, cognitive and emotional characteristics become engrained as traits and can they become permanent features of a person's personality. In this way, a person unwittingly maintains and continues the effects of the adverse parenting throughout their life (Heim & Nemeroff, 2001; Perry et al., 1995).

Conclusions

None of these findings quite fits the current cognitive model. Instead of a single

cognition like "I'll never be happy again" (Leahy, 2003) eliciting a particular emotion, it is clear that a cluster of cognitions can be associated with a specific emotion. It is clear that the same cognitions can be associated with a number of emotions, some strongly, some less strongly. It is also clear that some types of adverse parenting can affect offspring differently depending on whether parenting was experienced at the hands of a mother or father and that parenting can also have a direct effect on offspring emotions.

All this raises questions about the current cognitive model. It seems that there is a need for an extended model, one which accounts for why similar treatment by mothers and fathers affects offspring differently, and why it is that a particular thought can be associated with anger, depression and anxiety. The current CT model cannot explain how it is that schemas like Defectiveness or Vulnerability can be associated with Anxiety and Depression and Anger. It cannot explain how it is that different types of adverse parenting can be associated with the same offspring cognitions. Nor can it account for the non-cognitive effects of parenting practices where parenting is directly linked to offspring emotions.

Perhaps it is not just what the parent does to the child that determines the effect, perhaps it is also what the child brings to the relationship that contributes to these effects. Young and his colleagues (2003) acknowledged that temperament is a crucial element, and they suggested that some types of temperament can protect a child from developing maladaptive schemas. Some people appear to be more psychologically resilient and do not develop maladaptive schemas, even under conditions of considerable adversity, whereas other people seem more psychologically vulnerable and develop maladaptive schemas with relatively mild levels of mistreatment (Young et al., 2003, p. 68).

To account for such findings, the CT model also needs to include features like resilience and to account for why some individuals do not get overly upset when experiencing adversity, but are able to regain balance.

Any complete model has to accommodate the fact that parenting can have both indirect effects, mediated by offspring cognitions; and direct effects - unmediated by cognitions. Cognition is not always the bridge between parenting and offspring emotion, because parenting also has a direct effect on offspring emotion. Nor are cognitions necessarily implicated in emotion arousal, as Study 3 shows that there are two routes to anxiety; a cognitive route, and a non-cognitive route which may relate to temperament.

PART 2

WHAT MORE IS KNOWN ABOUT ANGER?

Overview

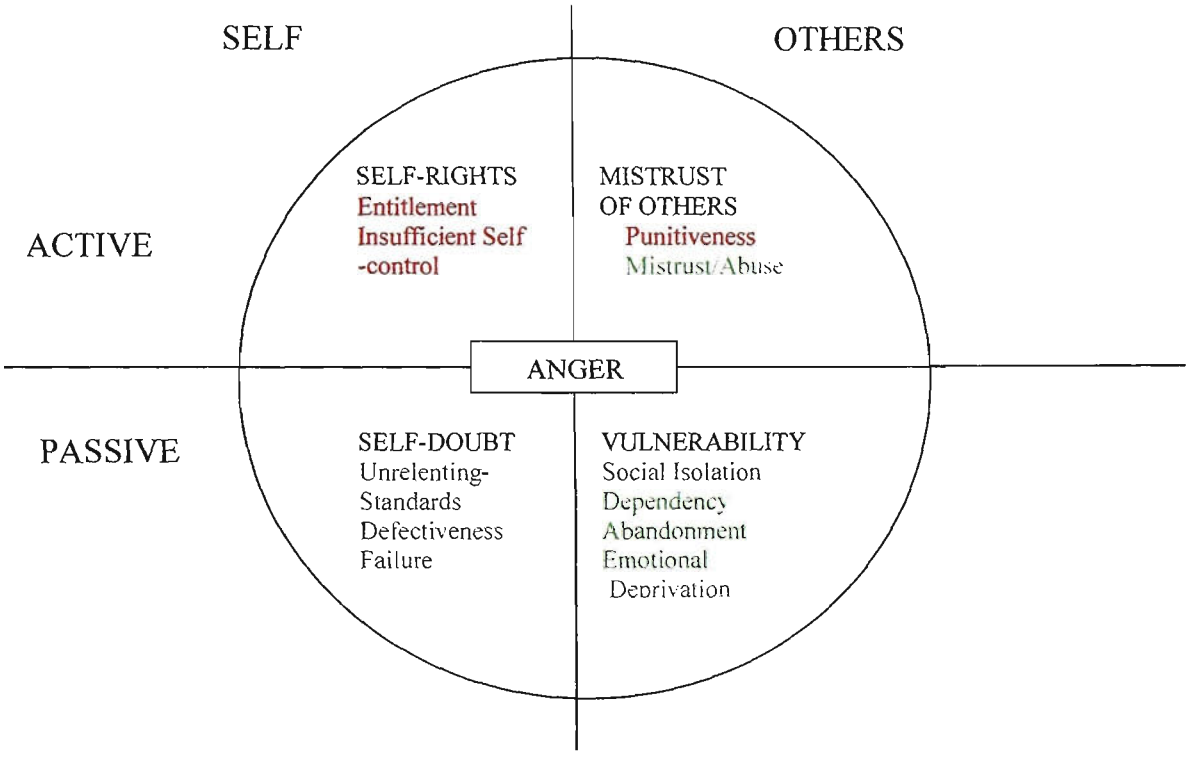
The next section examines what more we know about Anger as the result of these three studies. The issues explored are whether there are specific cognitions associated with anger, how anger relates to depression, whether particular thoughts trigger anger, and whether particular early experiences are associated with later Trait Anger.

Cognitive Components of Trait Anger

Probably because it can be a serious problem, both for the angry person, and for any person who is the target of anger, anger has been examined from many angles. Chapter 1 outlined previous studies of anger, and showed that, despite this interest, there had been few formal studies of any cognitions associated with anger. Whilst numerous

earlier studies explored the cognitions associated with depression and anxiety (Beck, et al., 1979, 1985, 1990), the cognitive bases of anger were not explored as fully. So, in an attempt to fill this gap, this thesis took up this issue, and examined the links between cognition and anger.

From Study 1 and Study 2 it became clear that Trait Anger was related to a number of characteristic cognitions. Some of the findings were not repeated in Study 3 but it should also be kept in mind that the limited set of schemas and the form of analysis was not capable of revealing the extensive array of associations that were found in the earlier studies. Trait Anger, like depression and anxiety, was strongly associated with mistrust, vulnerability, abandonment, and concerns about adequacy and being good enough. In addition, there were several cognitive elements which related exclusively to Trait Anger, such as a strong sense of entitlement, and a lack of self-control. When the schemas associated with Trait Anger were examined further, it became clear that there were two categories of schemas. One category related to themes involving Self; and a second concerned relationships with others. Added to these, there appeared to be two response approaches, such that an individual responds either actively or passively. These novel elements of Trait Anger are illustrated in the Figure 11.



Red = *Schemas significantly and exclusively associated with Trait Anger*
Blue = *Schemas significantly associated with Trait Anger and Depression*
Green = *Schemas significantly Associated with Trait Anger, Depression and Anxiety*

Figure 11. Elements of Trait Anger.

Trait Anger and Cognitions that Relate to Self-Rights.

The schemas that related to self-rights indicated that a person who displayed Trait Anger had a sense of Entitlement and had trouble accepting 'no' for an answer when they wanted something. They hated being constrained and kept from doing what they wanted to do. They felt they were special so should not have to accept the restrictions placed on other people. They did not feel they should have to follow rules and conventions like other people. They thought that what they had to offer was of greater value than the contributions of others.

This link between Anger and Entitlement seems to support Beck's (1976) prediction that anger would relate to beliefs that one's rights have been infringed, or that one has not been accorded privileges to which one is entitled. The Entitlement schema is clearly about rights. Because "angry" people's bids for special rights are often seen as unrealistic, they are not accorded the special treatment they think they deserve. As a result, they feel angry. A patient of Young's demonstrated this, saying, "I have a temper ... if I don't get what I want, I just have, like a fit (of temper)." (Young et al., 2003, p. 283).

The other schema that specifically related to self-rights was Insufficient Self-Control. The link being the thought that I don't have to do anything I don't want to do. Angry people seem to grant themselves the right not to do routine or boring tasks. They give themselves the right to give up when they became frustrated, and the right not to have to persist if they cannot reach a goal easily. They allow themselves the right to sacrifice long-term goals in favour of immediate gratifications, so do not force themselves to do things they do not enjoy doing, even when this is for their own good. They are rarely able to stick to their resolutions. A patient of Young's demonstrated this behaviour: while he was an able student, Henry procrastinated when doing school work, so performed well below his ability level (Young et al., 2003).

These two self-right schemas, Entitlement and Insufficient Self-control share, certain elements: angry persons not only demand more rights from others, they allow themselves more rights. Interestingly, these are two of the three schemas that are exclusively associated with Trait Anger (Study 3).

Anger and Self-doubts

Another set of cognitions associated with Anger and Self, concerned self-doubt. These cognitions were concerned with failure, defectiveness and shame. This seems to confirm Beck's (1976) prediction that anger is also related to poor self-esteem. It seems that angry persons do not feel adequate. Perhaps this is because generally their parents were critical and perfectionistic. Angry people were perfectionistic and had unrelenting standards. There is something paradoxical about persons who are happy to sacrifice long term goals for purposes of instant gratification, also being perfectionists who are afraid of failure. Perhaps this contradiction can be explained as the tension between wanting to be the best, but not wanting to follow through, just in case one is shown to be a failure. While previously both perfectionism and procrastination have been associated with depression (Saddler & Sacks, 1993), the association between perfectionism and Trait Anger has not previously been noticed.

Trait Anger relating to others. Beck and his colleagues found that anger was associated with a person perceiving that he or she was the object of deliberate physical attack, criticism, coercion, thwarting, rejection, deprivation or opposition (Beck et al, 1979). The current studies showed that Trait Anger was strongly linked to the perception that others could not be trusted, and that they deliberately hurt, attack, or take advantage of one, so that one can never let one's guard down. This finding seems to be consistent with earlier findings that anger was linked to the perceptions of injustice (Skarlicki & Folger, 1995), and that anger was associated with an exaggerated sense of violation and being wronged (Deffenbacher, 1999).

Another specific characteristic found in the current studies was that angry persons were punitive towards others. No doubt this punitiveness was, in part, in retaliation for being hurt, controlled, or criticized by others. Persons high in Trait Anger believed that people who did not 'pull their own weight' should be punished. They did not accept the excuses other people gave, because they believed others were irresponsible and so should be made to face the consequences. Angry persons got upset when they thought someone had been 'let off the hook' too easily. They got angry when people made excuses or blamed others. This view echoes Clore et al.'s (1993) views that anger springs from the perception that another is to blame for an aversive act. High Trait Anger persons held grudges, even after someone had apologized, and they found it hard to forgive and forget and let go previous hurts.

Anger and Vulnerability

The next cognitive theme associated with Trait Anger related to feeling vulnerable about being abandoned and left alone. Like anxious and depressed persons, angry persons worried about being abandoned and losing the people they liked and felt close to. They clung to people because they were afraid they would leave. They felt vulnerable, and worried about future disasters, and felt powerless. They felt they did not fit in or belong, and felt alienated from other people.

From this, it is not clear whether Anger is simply a reaction to how others have treated one; whether it is the result of mistrustful expectations; or is the result of an inability to let go of previous hurts. Perhaps, it is the result of all of the above.

Active and Passive Anger

From these studies, the picture that emerged of what angry individuals are like is that they are people who fight for survival in an untrustworthy, critical, and unsafe world. Their fight is actively manifested through their punitiveness, and through their demanding more rights for themselves. They operate in one of two modes, either they operate in an active attack-mode, when they demand rights, punish others, or are on the lookout for betrayal; or they operate in a passive or retreat-mode, when they doubt themselves, fear the world, and feel abandoned.

Many of the Trait Anger attributes are shared by Depression. The link between anger and depression has been noticed previously (Fava, 1998; Fava, Anderson & Rosenbaum, 1990; Rosenbaum, Fava, & Pava, 1993) and the next section looks more closely at the relationship between anger and depression, in an effort to take this issue a step forward.

Relationship between Anger and Depression

There have been indications in the literature that Anger and Depression are in some way linked. In DSM-IV-R there is a suggestion that anger is a symptom of depression. To explore this relationship between anger and depression Study 1 examined the relationship between the cognitions that related to trait anger and depression, and found that there were many schemas common to both depression and anger. Both depression and anger related to mistrust, abandonment, vulnerability, feeling isolated, defective, and emotionally deprived.

These common elements are demonstrated in Figure 12. The ones most strongly

associated with Anger are printed in red, and incline to action and attack. The ones most strongly associated with Depression were shown in blue and reflected a tendency to passivity and retreat.

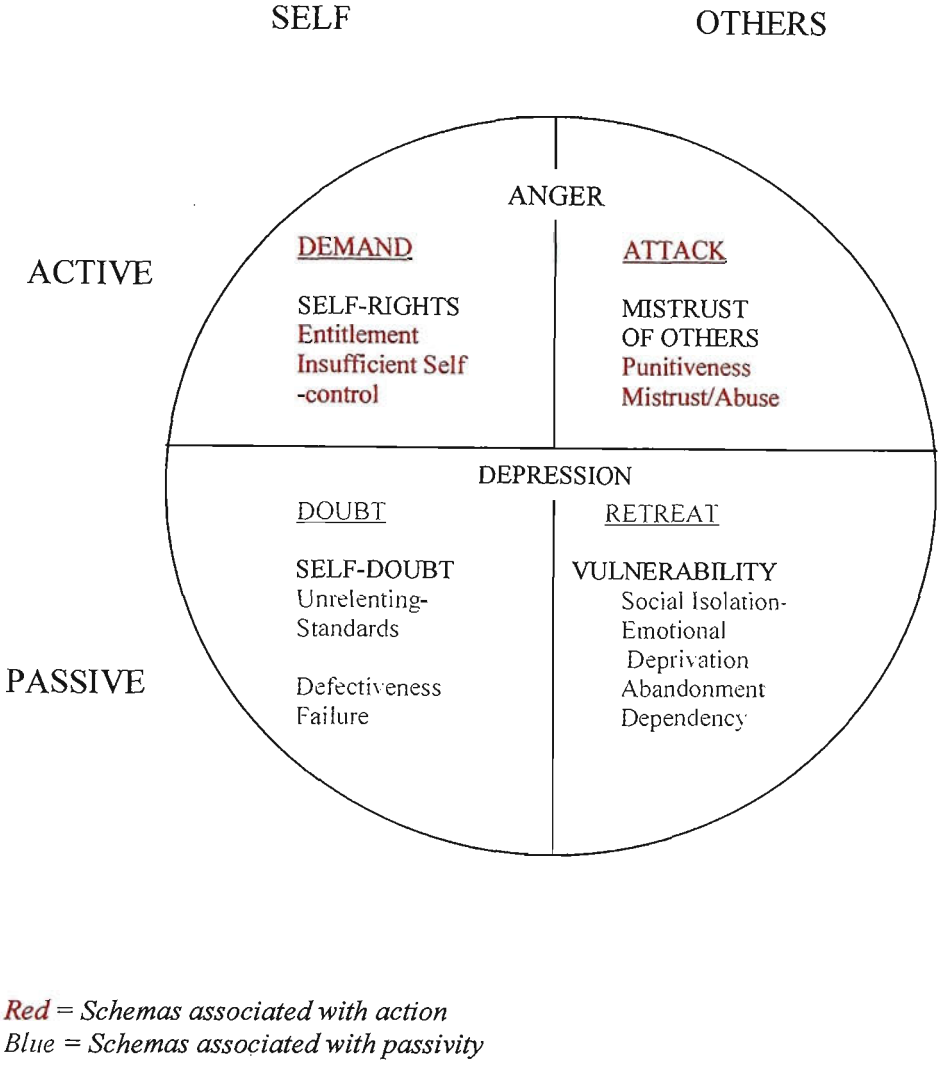


Figure 12. Schemas common to Trait Anger and Depression.

The cognitive schemas associated with both Trait Anger and Depression present a bleak picture of the world as an untrustworthy, dangerous, judgmental place. In response to this, angry people actively look out for their own best interests and retaliate against

others, but depressed persons passively despair and become immobile.

Because both anger and depression are related to many of the same cognitive schemas, the reason why a person manifests as either angry or depressed must arise from other sources. Perhaps the reason that persons with similar schemas became depressed not angry relates to a feature like temperament. Schore (2003) defined temperament as individual differences in tendencies to express primary emotions. Differences in anger and irritability levels have been found to relate to temperament (Magai & McFadden, 1995). This being so, in equivalent situations, those inclined to fight become more angry; and those inclined to withdraw become more depressed (Ledoux, 1996). It is possible that temperamental tendencies are just points of a continuum. If so, this would help to explain why anger and depression are sometimes linked, and why anxiety and depression occur together. Simply, it would be because a person's temperament falls between temperamental types. A representation of how temperament and emotional tendency might be linked is suggested in Figure 13.

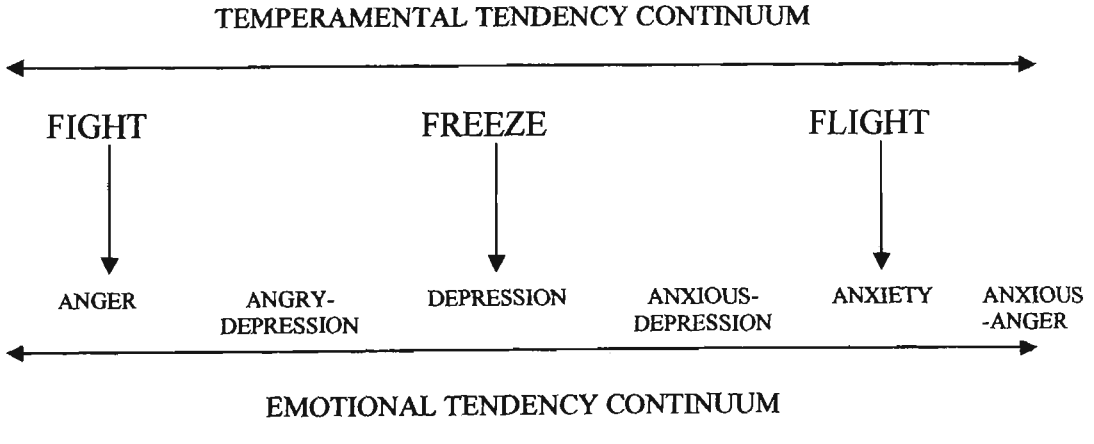


Figure 13. Suggested temperamental and emotional tendency continua.

If such links exist, this would help to explain why it is that in threat situations depressed persons withdraw and shut down. It would be because it is their temperament to freeze. It would explain why anxious persons flee when threatened and why angry persons fight for their rights and survival.

At the point where fight and freeze tendencies abut, an individual would be likely to feel both anger and depression. With this model, it becomes a little easier to explain the links that have previously been noticed between Depression and Anger, reflecting the fact that, rather than being discrete, emotions merge at certain points. Alternatively, some people sharing particular schemas and temperament oscillate between anger and depression frequently.

Even if temperament is included in the equation, being born with a certain temperament does not mean that the person is inevitably determined by this because there is a dynamic interaction between individual and environment. Parcellation causes some physiological and neurological 'emotional circuits' to be more readily activated than others, which can affect an offspring's maturing sympathetic and parasympathetic nervous systems. By these means a child's basic temperamental tendencies can be enhanced or reduced by caregiving and an individual's 'biologically based affective core' can become biased toward certain emotional responses' (Schore, 2003, p. 25). For example, Field, McCabe, and Scheiderman (1985) found that when infants experienced stress from emotional deprivation, this biased them towards a parasympathetic dominant state, so that they habitually showed decelerated heart-rate and low levels of activity. Infants experiencing a controlling, over-stimulating mother suffered hyperarousal. With this type of overload infants developed heightened emotionality and dependence (Tronick

et al., 1982). Experiences such as these, literally pruned an infant's lateral tegmental catecholaminegic system, thereby biasing the infant towards developing a sympathetic dominant state, so that the infant showed heightened arousal states, especially anger, and lost the ability to regulate anger (Schore, 2003). As Schore succinctly puts it "This dynamic psychoneurobiological mechanism ontogenetically sculpts the enduring temperamental features of the child's emerging personality" (p. 25).

This temperament / environment model is able to suggest why trait anger and depression, while both related to many of the same cognitive schemas, might be manifested differently. When schemas develop in an individual biased towards fight, the person feels angry, or, when schemas develop in an individual biased towards passivity and shutting down, this is associated with depression.

Whilst adding temperament to the model might seem to undermine the importance of schemas, it could also be argued that it serves as a reminder that, underlying schemas, there is the person's temperament. Thus, at the root of depression, anxiety, and trait anger, there is an interplay between offspring temperament, parenting history, and offspring schemas. There are also other possible influences that could affect an individual's emotions. For instance, there are other cognitions associated with depression and anger such as self-efficacy beliefs (Bandura, Ross, & Ross, 1963), locus of control beliefs (Lester, 1989; Young, 1991), or hopelessness (Joiner, Steer, Abramson, Alloy, Metalsky & Schmidt, 2001). However, because these features were not tested in the present studies, they can only be matters of speculation.

Parenting and Offspring Anger

Earlier studies suggested that the relationship between parenting and offspring plays an important part in anger socialization (Debaryshe & Fryxell, 1995; Renk et al., 1999). Others suggested that anger is the result of earlier 'traumatization' (Magai et al., 2000), that it is associated with a critical family climate (Magai and McFadden, 1995), from punishment (Magai et al., 2000), or from being abandoned (Bowlby, 1969). Some of these relationships between parenting and offspring anger are explored next.

Bowlby thought that childhood anger related to children having their attachment needs blocked by carers (Bowlby, 1969; Cassidy, 1994). Weiss (1975) found the same effect in adults whose attachment needs were threatened or blocked. In these situations they also became angry. When, in Study 1, Young's Abandonment Schema was used as an indicator measure of participants' abandonment, a strong link was found between adult Trait Anger and Abandonment, however, an even stronger link was found between Abandonment and Depression. While Bowlby thought that anger in early abandonment situations can be functional because it brings parents' attention back to the child, it is less easy to see the functionality of having trait anger as a fixed feature in an adult's affective repertoire. It could be that anger is more functional than depression, because it demands a response from another person. Usually a person's anger affects others, even when anger is only expressed as fuming or sulking. This involvement of others offers some chance of resolution, in a way that being depressed does not. In depression, the depressed individual withdraws, so only she or he feels the effects of his or her depressed mood. In this respect, adult anger can be seen to be more functional than depression. Yet, anger is also dysfunctional. It has disruptive social effects, it often prompts others to

counterattack, withdraw, or reject the angry person, all of which can serve to increase the angry person's feelings of social isolation, vulnerability and abandonment (Deffenbacher, Oetting, Lynch, & Morris, 1996). In addition to the social and legal consequences of anger, there are negative health consequences associated with the individual who experiences chronic anger (Suarez & Williams, 1988), consequences which can hardly be construed as functional.

Previous studies have pointed to a relationship between punishment and Trait Anger, particularly where punishment was severe (McFadden, Loehlin, Breedlove, Lippa, & Manning, 1995). Harsh discipline was associated with maladaptive social information processing in offspring. Even mild punishment, like withdrawal of parental love, was associated with preoccupied attachment, angry feelings, and depressed affect (Magai et al., 2000). Whilst the YPI has a Punitiveness category, the items did not allow a deep exploration of the issue of punishment. In fact, only one item directly explored the issue of parental punishment, and there was none that examined the intensity or frequency of punishment. In this respect, the is not an entirely satisfactory measure of punishment. Nonetheless, responses to this item did give some indication that when fathers' punishment was significantly related to offspring Trait Anger, mothers' punishment related to offspring Anxiety.

Offspring anger has previously been associated with a critical family climate (Magai & McFadden, 1995). Anger can be socialized directly through contact with an angry model, after exposure, children express anger, either through imitation, through identification with the angry model, or through social imitation (Renk et al., 1999). Perhaps this explains why, in Study 3, offspring of cruel and judgmental Rejecting

Fathers were also angry.

Conclusions

Trait Anger is not a unitary concept, but rather, incorporates a number of themes, and relates to different types of parenting. Trait Anger has clear cognitive components: entitlement, punitive to others, vulnerability, feeling alone, unloved, and defective. It also relates to adverse parenting, particularly to Rejecting Fathers. It is associated with the cognitive schemas that are related to Controlling Mothers and Controlling Fathers. It appears that anger as a personality trait can develop along different routes, an indirect cognitive route and a direct, or temperamental, one.

Future Studies

There are three main directions that would be valuable to explore in future studies of anger. Ones that explore the other features of anger, such as how a person usually handles situations that annoy him or her, those that distinguish between different types of anger, such as differences in anger that relates to ones own rights, as opposed to anger associated with seeing others having their rights abused, and those that explore the roots of anger.

Another future study that would be valuable would be one that examined the larger picture of the parenting/offspring relationship and seeks to discover whether there are intergenerational patterns. A two or three generation study which repeated the questions asked in Study 3 about of the relationships between parenting, cognitions and emotions (and perhaps, also included brief measures of temperament and attachment)

would show whether there are cross-generational patterns for emotions. For example, are there patterns relating to parental Depression, Anxiety and Trait Anger and the emotions in the next generation? That is, do offspring repeat behaviour modelled by parents, or do they react to parent's patterns, or is similar temperament the key?

While Study 3 showed parenting directly predicted offspring schema development, that parenting directly predicted some offspring emotions, the mediating role of offspring schemas was clear only between Rejecting Fathers and anxious and depressed offspring. Nonetheless, there were indications that parenting predicted offspring schemas, which in turn, predicted offspring emotions. There were hints that the schemas mediated the effects of controlling parents. This parenting / offspring schemas / offspring emotion nexus of Young's model requires further rigorous testing.

Study 3 showed that mothers are directly linked to offspring Anxiety and Depression, and fathers to offspring Anger. It would be fruitful to make a deeper examination of the different roles of mothers or fathers in relation to offspring mental health. From this, more could be learnt about the specific effects of mothering and fathering, and how these affect the mental health of offspring.

Because the current Study 3 only focused on adverse parenting, it could not indicate whether there are also protective features of parenting as Baumrind found from having Authoritative Parents. It would be valuable if a future study could explore the positive effects of responsive, respectful parenting, particularly on how this impacts on an offspring's self-schemas. It would also be valuable if a future study were to explore what parenting elements enhance children's resilience. Such a study would add to previous studies that showed that some children cope despite experiencing adverse experiences,

such as their parents' divorce (Strohschein, 2005), or living with a critical, or angry parent. What are the elements that protect these children?

How these Findings Could Be Applied

The findings of the three current studies could be applied in a range of possible settings. For instance, they have applications in clinical and research settings, in theory development, and in applied welfare practice.

In a clinical setting it could be useful to understand how a client's specific schemas relate to particular emotions, and how specific types of parenting relate to offspring schemas and emotions. Such information could offer some pointers of what to look for when trying to understand a patient's anger, or depression. It could also suggest directions when planning a treatment programme. For example, the cognitive schemas that mediate between parenting and emotions could be used as the basis for Eye Movement Desensitization Reprocessing (Shapiro, 1995) to see whether this active link between past and present can be removed.

In relation to theory development, the model of emotions proposed earlier (Table 21) could be a base from which to develop Cognitive Therapy further. At present the CT model is two dimensional, including only thoughts/cognitions and emotions. The current studies suggest that this model is restricted and oversimplified. There are additional features that touch on this cognition/emotion relationship, which need to be included in the model. For example, some other active ingredients are parenting history, temperament, and attachment history.

There are also applications in welfare. These studies have clearly shown that adverse parenting has direct and indirect effects on offspring emotions. It seems clear that parents who use such adverse parenting approaches are likely to have unfortunate effects on their offspring. From this, it seems self-evident that when welfare agencies come in contact with such parents, they should encourage these parents to develop more effective parenting approaches. For example, if such parents were encouraged to undertake programmes such as the Triple P programme – the Positive Parenting Programme (Sanders, 1994), which helps increase parent skills, understanding, and competence, these parents could be helped to become more involved in their children's lives, to be more encouraging, and to be less angry, critical, and punitive. This, in turn, would promote the development and growth and mental health of their offspring (Sanders, 1994). In all likelihood, such interventions would probably also prevent the development of offspring maladaptive schemas, and reduce the destructive cognitive and emotional legacies that adverse parenting has on children.

There could be a further application of these present studies. It seems clear that wider community education about parenting would be beneficial to parents and children and society. Instead of focusing only on preparing for birth, ante-natal programmes could include an introduction to Triple P programmes for expectant parents, to help them become more aware of the effects of adverse parenting, and the type of skills they can use to avoid such effects on their baby. This might introduce parents to the fact that these programmes are not only for troubled parents, but that all parents can benefit by using effective approaches.

Concluding Statement

This series of studies has attempted to explore some of the assumptions on which Cognitive Therapy is based. Study 1, in an attempt to fill a gap in what is known about how cognitions relate to emotions, explored the question of cognitive content specificity in relation to Anger, that is whether there are specific thoughts that relate to Anger and distinguish it from Depression and Anxiety. Study 1 found, as Beck predicted, that Trait Anger is specifically related to certain schemas concerned with rights, abuse and punitiveness. The second study, investigated Beck's Primacy hypothesis that thoughts 'cause' emotions, by investigating whether thoughts alone elicit emotions. It found only modest support for this, which suggested that there are other active elements in emotion induction. The third study, which tested Young's model of psychopathology, sought to discover whether particular types of adverse parenting are implicated in the development of offspring maladaptive schema and whether these maladaptive cognitions mediate the effect of parenting on offspring anger, depression and anxiety. Study three confirmed, as Young predicted, that parenting has a strong influence on offspring schema development but failed to demonstrate the importance of schemas as mediating constructs.

As a result of these studies, there is now a fuller picture of these relationships. As well, there is a clearer picture about the cognitive complexities of anger, and some understanding of possible roots of anger, depression and emotion.

REFERENCES

Abe, J. A., & Izard, C. E. (1999). The development functions of emotions: An analysis in terms of differential emotions theory. *Cognition and Emotion, 13*(95), 523-239.

Abrahamson, L. Y., Garber, J., Edwards, N. B., & Seligman, M. E. (1978). Expectancy changes in depression and schizophrenia. *Journal of Abnormal Psychology, 87*(1), 102-109.

Ainsworth, M. S. D. (1972). Attachment and Dependency: A comparison. In J. L. Gerwitz (Ed.). *Attachment and Dependency.* New York: John Wiley.

Akiskal, H. S. (1996). Temperamental foundations of affective disorders. In C. Mundt, M. J. Goldstein, K. Hahlweg, P. Fiedler, & H. Freemen (Eds.), *Interpersonal factors in the origin and course of affective disorders.* .Dorchester, UK: Gaskell.

Amen, D. (1998). *Change your brain, change your life.* New York: Three Rivers Press.

Anderson, K. B., Anderson, C. A., Dill, K. E., & Deuser, W. E. (2003). The interactive relationship between trait hostility, pain and aggressive thoughts. *Aggressive Behaviour, 24*(3), 161-171.

Archer, J. (1988). *The behavioural biology of aggression.* Cambridge, UK: Cambridge University Press.

Arnsten, A. F. T., & Goldman-Rakic, P. S. (1998). Noise stress impairs prefrontal cortical cognitive function in monkeys: Evidence for a hyperdopaminergic mechanism. *Archives of General Psychiatry, 53*, 448-455.

Averill, J. R. (1982). *Anger and aggression: An essay on emotion.* New York: Springer-Verlag.

Averill, J. R. (1983). Studies on anger and aggression: Implications for theories of emotion. *American Psychologist, 38*, 1145-1160.

Baldwin, M. W. (1992). Relational schemas and the processing of social information. *Psychological Bulletin, 112*, 461-484.

Bandura, A., Ross, D., & Ross, S. A. (1963). Vicarious reinforcement and imitative learning. *Journal of Abnormal and Social Psychology, 67*, 601-607.

Barlow, D. H. (Ed.) (2001). *Clinical Handbook of psychological disorders: A step-by-step treatment manual* (3rd ed.). New York: Guilford.

Barnett, D., Hill Hunt, K., Butler, C. M., McCaskill, J. W., Kaplan-Estrin, M., & Pipp-Siegel, S. (1999). Indices of attachment disorganization with neurological and non- neurological problems. In J. Solomon & C. George (Eds.), *Attachment disorganization.* New York: Guilford Press.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1117-1182.

Baumeister, R., Smart, L., & Boden, J. (1996). Relation of threatened egotism to violence and aggression: The dark side of high self-esteem. *Psychological Review, 103*, 5-33.

Baumrind, D. (1971). Current patterns of parental authority. *Developmental Psychology Monographs, 4* (1, pt. 2), 1-103.

Baumrind, D (1989). Rearing competent children. In W. Eamon (Ed.), *Child development today and tomorrow* (pp. 439-378). San Francisco: Jossey-Bass.

Baumrind, D. (1991). The influence of parenting style on adolescent competence and substance use. *Journal of Early Adolescence, 11*(1), 56-95.

Beck, A. T. (1967). *Depression: Causes and treatment.* Philadelphia, PA: University of Pennsylvania Press.

Beck, A. T. (1970). The core problem in depression: The cognitive triad. In J. Masserman (Ed.), *Depression: Theories and therapies* (pp. 47-55). New York: Grune & Stratton.

Beck, A. T. (1972). Cognition, anxiety, and psychophysiological disorders. In C. Spielberger (Ed.), *Anxiety: Current trends in theory and research,* (pp. 343-354). New York: Academic Press.

Beck, A. T. (1976). *Cognitive therapy and the emotional disorders.* Reading, UK: Penguin.

Beck, A. T. (1979). *Cognitive therapy and the emotional disorders.* New Jersey: New American Library.

Beck, A. T. (1983). Cognitive therapy of depression: New perspectives. In P. J. Clayton, & J. E. Barrett (Eds.), *Treatment of depression: Old controversies and new approaches* (pp. 265-282). New York: Raven Press.

Beck, A. T. (1985). *Anxiety disorders and phobias: A cognitive perspective.* New York: Basic Books.

Beck, A. T. (1987). Cognitive therapy. In J. K. Zeig (Ed.), *The evolution of psychotherapy.* New York: Brunner/Mazel.

Beck, A. T. (1996). Beyond belief. In P. Salkovskis (Ed.), *Frontiers of Cognitive Therapy* (pp. 1 – 25). New York: Guilford.

Beck, A. T. (1990). *Cognitive therapy of personality disorders.* New York: Guilford.

Beck, A. T., Brown, G., Steer, R. A., Eidelson, J. I., & Riskind, J. H. (1987). Differentiating anxiety and depression: A test of the cognitive content-specificity hypothesis. *Journal of Abnormal Psychology, 96* (3), 179-183.

Beck, A. T., Butler, A. C., Brown, G. K., Dahlsgaard, K. K., Newman, C. F., & Beck, J. (2001). Dysfunctional beliefs discriminate personality disorders. *Behavioural Research and Therapy, 39*, 1213-1225.

Beck, A. T., Emery, G. & Greenberg, R. (1985). *Anxiety disorders and phobias: A cognitive perspective.* New York, USA: Guilford.

Beck, A. T., & Fernandez, E. (1998). Cognitive behavioural therapy in treatment of anger: A meta-analysis. *Cognitive Therapy and Research, 22*(1), 63 – 74.

Beck, A. T., Freeman A., & Associates. (1990). *Cognitive therapy for personality disorders.* New York: Guilford.

Beck, A.T., Laude, R., & Bonnert, M. (1974). Ideational components of anxiety neurosis. *Archives of General Psychiatry, 31,* 319-325.

Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, G. (1979). *Cognitive therapy of depression.* New York Guilford.

Beck, A. T., Steer, R. A., & Epstein, N. (1992). Self-concept dimensions of clinical depression and anxious outpatients. *Journal of Clinical Psychology, 48,* 423 - 432.

Belsky, J., & Vondra, J. (1989). Lessons from child abuse: The determinants of parenting. In D. Cicchetti & V. Carlson (Eds.), *Child maltreatment: Theory and research on the causes and consequences of child abuse and neglect* (pp. 153-202). Cambridge, England: Cambridge University Press.

Berkowitz, L. (1993). Towards a general theory of anger and emotional aggression: Implications of the cognitive neo-associationistic perspective for the analysis of anger and other emotions. In R. S. Wyer, Jr. & T.S. Srull (Eds.), *Perspectives on anger and emotion: Advances in social cognition:* Vol. VI. Hillsdale: NJ: Erlbaum.

Berntson, G. G., Cacioppo, J. T., & Quigley, K. S. (1991). Respiratory sinus arrhythmia: Autonomic origins, physiological mechanisms, and psychophysiological implications. *Psychophysiology, 30,* 183-196.

Bowlby, J. (1969). *Attachment and loss: Vol 1. Attachment.* New York: Basic Books.

Bowlby, J. (1973). *Attachment and loss: Vol 2. Separation, anxiety and anger.* New York: Basic Books.

Bowlby, J. (1980). *Attachment and loss: Vol. 3. Loss, sadness and depression.* New York: Basic Books.

Bowlby, J., (1988). *A secure base: Parent-child attachment, health and human development.* New York: Basic Books.

Brazelton, T. B., & Cramer, B. G. (1990). *The earliest relationship.* Reading, MA: Addison-Wesley.

Brewer, D., Doughtie, E. B., & Lubin, B. (1980). Induction of mood–mood shift. *Journal of Clinical Psychology, 36*, 215 – 226.

Brown, T. A., & Barlow, D. H. (1992). Comorbidity among anxiety disorders: Implications for treatment and DSM-IV. *Journal of Consulting and Clinical Psychology, 60*(6), 835-844.

Burgess, E., & Haaga, D. A. F. (1994). The Positive Automatic Thoughts Questionnaire – Revised: Equivalent measures of positive thinking. *Cognitive Therapy and Research, 18*, 15-24.

Burns, D., & Eidelson, R. S. (1998). Why are depression and anxiety correlated? A test of the tripartite model. *Journal of Consulting and Clinical Psychology, 66*(3), 461-473.

Butler, L. D. (1993). *I feel therefore I think: The role of anger in the development of paranoid symptomatology (affect disorders).* (Ph.D. Stanford University). Retrieval from (http://80-newfirstsearch.ocle.org.).

Butterfield, M., Formeris, C. A., Feldman, M. E., & Beckam, J. C., (2000). Hostility and functional health status in women veterans with and without post traumatic stress disorder: A preliminary study. *Journal of Traumatic Stress, 13*(4), 734-741.

Byrne, B. M. (1991). *Structural equation modelling with AMOS: Basic concepts, application and programming.* Mahwah, NJ: Lawrence Erlbaum Associates.

Cadoret, R. J., Leve, L. D., & Devor, E. (1997). Genetics of aggressive and violent behavior. *The Psychiatric Clinics of North America, 29*, 301-319.

Campos, J. J., Caplovitz, K. B., Lamb, M. E., Goldsmith, H. H., & Stenberg, C. (1983). Socioemotional development. In M. M. Haith & J. J. Campos (Eds.), *Handbook of child psychology: Vol. 1. Infancy and developmental psychobiology.* (4th ed.) (pp 783 – 915). New York: Wiley.

Camras, L. A., Grow, G., & Ribordy, S. C. (1983). Recognition of emotional expressions by abused children. *Journal of Clinical and Child Psychology, 12*, 325-328.

Carlson, B. E. (1984). The father's contribution to child care: Effects on children's perception of parental roles. *American Journal of Orthopsychiatry, 45*(1), 123 – 136.

Carmody, T. P., Brumer, R. L., & St. Jeor, S. T. (1999). Hostility, dieting and nutrition attitudes to overweight and weight cycling in men and women. *International Journal of Eating Disorders, 26*(1), 37 – 42.

Carter, R. (1998). *Mapping the mind.* London: Phoenix.

Casey, R., & Schlosser, S. (1994). Emotional responses to peer praise in children with and without diagnosed externalizing disorder. *Merrill-Palmer Quarterly,* 60-81.

Caspi, A., Elder, G. H. Jr, & Bem, D. J. (1987). Moving against the world: life-course patterns of explosive children. *Developmental Psychology, 222,* 303-308.

Caspi, A., Elder, G. H. Jr, & Bem, D. J. (1988). Moving away from the world: Life-course patterns of shy children. *Developmental Psychology, 24*(6), 824-831.

Cassidy, J. (1994). Emotional regulation: Influences of attachment relationships. In N. A. Fox (Ed.), *The development of emotional regulation: Monographs of society and research development,* 59 (2-3, Serial NO. 240) (pp. 228-249).

Chemtob, C. M., Hamada, R. S. Roitblat, H. L., & Muroake, M. Y. (1994). Anger, impulsivity, and anger control in combat-related posttraumatic stress disorder. *Journal of Consulting and Clinical Psychology, 62*(4), 827-832.

Chemtob, C. M., Novaco, R. W., Hamada, R. S., & Gross, D. M. (1997). Cognitive-behavioral treatment for severe anger in posttraumatic stress disorder. *Journal of Consulting and Clinical Psychology, 65*(1), 184-189.

Chesney, M. A. (1985). Anger and hostility: Future implications for behavioral medicine. In M. A. Chensey & R. H. Rosenman (Eds.), *Anger and hostility in cardiovascular and behavioral disorders* (pp. 5 – 30). Washington; DC: Hemisphere.

Chesney, M. A., & Rosenthal, R. H. (1985). *Anger and hostility in cardiovascular and behavioral disorders.* Washington; DC: Hemisphere.

Chess, S., & Thomas, A. (1996). *Temperament: Theory and practice.* New York: Brunner/Mazel.

Clark, D. A. (1986). Factors influencing the retrieval and control of negative cognitions. *Behaviour Research and Theory, 24*, 151-159.

Clark, D.A, (1988). The validity of measures of cognition: A review of the literature. *Cognitive Therapy and Research, 12*(10), 1-20.

Clark, D. A., Beck, A.T., & Brown, G. (1989). Cognitive mediation in general psychiatric outpatients: A test of the content specificity hypothesis. *Journal of Personality and Social Psychology, 56*, 958-964.

Clark, D. A., Beck, A.T., & Beck, J. S. (1994). Symptom differences in major depression, dysthymia, panic disorders and generalized anxiety disorders. *American Journal of Psychiatry, 151*, 205-209.

Clark, D. A., Beck, A. T., & Alford, B. A. (1999). *Scientific foundations of cognitive theory and therapy of depression.* New York: Wiley.

Clark, D. A. & Steer, R. A. (1996). Empirical status of the cognitive model of anxiety and depression. In P. M. Salkovskis (Ed.), *Frontiers of cognitive therapy* (pp. 75-96). New York: Guilford Press.....

Clark, D. A., Steer, R. A., & Beck, A.T. (1994). Common and specific dimensions of self reported anxiety and depression: Implications for the cognitive tripartite models. *Journal of Abnormal Psychology, 103*, 645-654.

Clark, D. M., & Fairburn, C. G. (Eds.). (1997). *Science and practice of cognitive behaviour therapy.* Oxford, UK: Oxford University Press.

Clore, G. l., Ortony, A., Dienes, B., & Frijda, F. (1993). Where does anger dwell? In R. S. Wyer, Jr. & T.S. Srull (Eds.), *Perspectives on anger and emotion: Advances in social cognition* Vol. VI. (pp. 502-592). Hillsdale, NJ: Erlbaum.

Coakes, S. T., & Steed, L. G. (1999). *SPSS: analysis without anguish: Version 7.0, 7.5, 8.0 for Windows.* Brisbane: John Wiley.

Coates, T., & Lewis, M. (1984). Early mother-infant interaction and infant cognitive status as predictors or school performance and cognitive behaviour in six-year-olds. *Child Development, 55*, 1219-1230.

Cole, D. A., Jacquez, F. M., & Maschman, T. L. (2001). Social origins of depressive cognitions: A longitudinal study of self-perceived competence in children. *Cognitive Therapy and Research, 25,* 377-396.

Cole, P. M., Michel, K., & O'Donnell Tetti, L. (1994). The development of emotion regulation and disregulation: A clinical perspective. *Monograph of the Society for Research in Child Development, 59* (240), 73-103.

Corcoran, K., & Fischer, D. (2000). *Measures for clinical practice: A sourcebook Vol.2* (3rd ed.). New York: Free Press.

Crawford, J. R., & Henry, J. D. (2003). The Depression Anxiety Stress Scale (DASS): Normative data and latent structure in a large non-clinical sample. *British Journal of Clinical Psychology, 42,* 111-131.

Crick, N. R., & Dodge, K. A. (1994). A review and reformulation of social information processing mechanisms in children's social adjustment. *Child Development, 67,* 993-1002.

Crockenberg, S. (1981). Infant irritability: Mother responsiveness and social support influences the security of infant-mother attachment. *Child Development,* 52, 857-865.

Damazio, A. (1994). *Descarte's Error: Emotion, reason, and the human brain.* New York: Grosset / Putnam.

Damazio, A. (1999). *The feeling of what happens: Body and emotion in the making of consciousness.* London: Heinemann.

Darwin, C. (1872). *The expression of the emotions in man and animals.* Chicago: University of Chicago Press, 1965.

Debaryshe, B. D., & Fryxell, D. (1998). A developmental perspective on anger: Family and peer contexts. *Psychology in the Schools, 3*(3). *205-216.*

Debaryshe, B. D., & Ramsey, F. (1989). A developmental perspective on antisocial behaviour. *American Psychologist, 44*, 329-335.

Deffenbacher, J.L. (1992). Trait anger: Theory, findings, and implications. In C. D. Spielberger & J. N. Butcher (Eds.), *Advances in personality assessment:* (Vol. 9) (pp. 151-172). Hillsdale, NJ: Erlbaum.

Deffenbacher, J. L. (1995). Ideal treatment package for adults with anger disorders. In H. Kassinove (Ed.), *Anger Disorders: Definition, diagnosis, and treatment* (pp. 151-172). Washington, DC: Taylor and Francis.

Deffenbacher, J. L. (1999). Cognitive-behavioral conceptualization and treatment of anger. *JCLP/In session: Psychotherapy in Practice, 55*(3), 295-309.

Deffenbacher, J. L., Lynch, R. S., Oetting, E. R., & Kemper, C. C. (1996). Anger reduction in early adolescents. *Journal of Counseling, 43*(2), 149-157.

Deffenbacher, J. L., & McKay, M. (2000). *Overcoming situational and general anger*. Oakland, CA: Best Practices for Therapy.

Deffenbacher, J. L., Oetting, E. R., Lynch, R. S., & Morris, C. D. (1996). The expression of anger and its consequences. *Behavior Research and Therapy, 34*(7), 575-590.

Deffenbacher, J. L., Oetting, E. R., Thwaites, G. A., Lynch, R.. S., Baker, D. A., Stark, R. S., et al. (1996). State-Trait Anger Theory and the utility of the Trait Anger Scale. *Journal of Counselling Psychology, 48*(2), *131-148.*

Deffenbacher, J. L., Thwaites, G. A., Wallace, T. L., & Oetting, E. R. (1992). Social skills and cognitive relaxation approaches to general anger reduction. *Journal of Counseling Psychology, 41*(3), 386-396.

DiGiuseppe, R. (1995). Developing the therapeutic alliance with angry clients. In H. Kassinove (Ed.), *Anger disorders: Definition, diagnosis and treatment* (pp. 131-150). Washington, DC: Taylor & Francis.

DiGiuseppe, R., & Froh, J. J. (2002). What cognitions predict state anger? *Journal of Rational-Emotive and Cognitive-Behavioural Therapy, 20*(2), 133-150.

Diguiseppe, R., & Tafrate, R. C. (2003). Adult treatment for adults: A meta-analytic review. *Clinical Psychology of Scientific Practice, 10,* 70-84.

DiGiuseppe, R., Tafrate, R., & Eckhart, C. (1994). Critical issues in the treatment of anger. *Cognitive and Behavioural Practice, 1*(1), 111-132.

Dix, T. (1991). The affective organization of parenting: Adaptive and maladaptive processes. *Psychological Bulletin, 110*, 3-25.

Dodge, K.A., & Frame, C. L. (1982). Social cognitive biases and deficits in aggressive boys. *Child Development, 53,* 620-635.

Dodge, K.A., Pettit, G. S., McClaskey, C. L., & Brown, D. (1986). Social competence in children. *Monographs of the Society for Research in Child Development 512* (2, Serial No. 213).

Dodge, K. A., & Somberg, D. R. (1987). Hostile attributional biases amongst aggressive boys are exacerbated under conditions of threat to the self. *Child Development, 58,* 213-224.

Doing, S. M., & Bishop, G. D. (1999). Anger expression, coping style and well-being. *Journal of Health Psychology, 4*(1), 81-97.

Eckhart, C. I., & Deffenbacher, J. L. (1995). Diagnosis of anger disorders. In H. K. Kassinove (Ed.), *Anger disorders: Definition, diagnosis, and treatment.* Hillsdale, NJ: Erlbaum.

Ekman, P. (1992). An argument for basic emotions. *Cognition and Emotion, 6,* 169-200.

Ekman, P., & Friesen, W. V. (1978). *Facial action coding system: A technique for the measurement of facial movement.* Palo Alto, CA: Consulting Psychologists Press.

Elliot, D. M. (1997). Traumatic events: Prevalence and delayed recall in the general population. *Journal of Consulting and Clinical Psychology, 65*(5), 811-820.

Ellis, A. (1962). *Reason and emotion in psychotherapy.* New York: Lyle Stuart.

Ellis, A. (1977). *Anger: How to live with and without it.* New York: Citadel Press.

Ellis, A., & Tarfrate, R. (1997). *How to control your anger before it controls you.* Secaucus, NJ: Birch Lane Press.

El-Sheikh, M., & Cheskes, J. (1995). Background verbal and physical anger: A comparison of children's responses to adult-adult and adult-child arguments. *Child Development, 66,* 446-458.

Enright, R. D., & Fitzgibbons, R. P. (2000). *Helping clients forgive: An empirical guide for resolving anger and restoring hope.* Washington, DC: American Psychological Association.

Epps, J., & Kendall, P. C. (1995). Hostile attributional bias in adults. *Cognitive Therapy and Research, 19,* 159-178.

Eron, L. D., Heusmann, L. R., & Zelli, A. (1991). The role of parental variables in the learning of aggression. In D. J. Pepler & K. H. Rubin (Eds.), *The development and treatment of childhood aggression.* Hillsdale, NJ: Erlbaum.

Famularo, R., Kinscherff, R., & Fenton, T. (1991). Posttraumatic Stress Disorder among children clinically diagnosed as borderline personality disorder. *Journal of Nervous and Mental Disease, 179*(7), 428-431.

Faulkner, K., Stoltenberg, C. D., Cogen, R., Nolder, M., & Shooter, E. (1992). Cognitive-behavioral group treatment for male spouse abusers. *Journal of Family Violence, 7*(1), 37-55.

Fava, M. (1998). Depression with anger attacks. *Journal of Clinical Psychiatry, 59,* (Suppl.18), 18-22.

Fava, M., Anderson, K., & Rosenbaum, J. F. (1990). "Anger attacks": Possible variants of panic and major depressive disorders. *American Journal of Psychiatry, 147*(7), 867-870.

Feindler, E. L. (1995). Ideal treatment package for children and adolescents with anger disorders. In H. Kassinove (Ed.), *Anger Disorders: Definition, diagnosis, and treatment* (pp. 173-196). Washington, DC: Taylor and Francis.

Feindler, E. L., Ecton, R. B., Kingsley, D., & Dubey, D. R. (1986). Group anger-training for institutionalized psychiatric male adolescents. *Behaviour Therapy, 17,* 109-123.

Field, P., McCabe, P., & Scheiderman, N. (Eds.). (1985). *Stress and coping in across Development.* Hillsdale, NJ: Lawrence Erlbaum Associates.

First, M. B., Frances, A., & Pincus, H. A. (2002). *DSM-IV-TR Handbook of differential diagnosis.* Washington, DC: American Psychiatric Publishing.

Follette, V. M., Ruzek, J. I., & Abueg, F. R. (Eds.). (1998). *Cognitive behavioural therapies for trauma.* New York: Guilford.

Fransson, N., Biel, A., & Dahlstrand, U. (1997). Affective reactions to real-life immoral events. *Goteborg Psychological Reports, 27*(2), 1-18,

Frasure-Smith, N., Lesperance, F., & Talajic, T. (1995). The impact of negative emotions on prognosis following myocardial infarction: Is it more than depression? *Health Psychology, 14,* 388-398.

Freud, S. (1920). *A general introduction to psychoanalysis.* (G. S. Hall, Trans). New York: Boni & Liveright.

Friedman, M., & Rosenman, R. H. (1959). Association of specific overt behaviour pattern with blood and cardiac findings. *Journal of American Medical Association, 169,* 1286-1296. In M. A. Chensey & R. H. Rosenman (Eds.), *Anger and hostility in cardiovascular and behavioral disorders.* Washington, DC: Hemisphere.

Frye, A. A., & Garber, J. (2003). The relations among maternal depression, maternal criticism, and adolescents' externalizing and internalizing symptoms. *Journal of Abnormal Child Psychology, 33,* 1-11.

Garber, J., & Hollon, SD (1991). What can specificity designs say about causality in psychopathology. research? *Psychological Bulletin, 110*(1), 129-136.

Garrison, S. R., & Stolberg, A. L. (1983). Modification of anger in children by affective imagery training. *Journal of Abnormal Child Psychology, 11*(1), 115-130.

Gerlsma, C., Emmelkamp, P .M. G., & Arrindell, W. A. (1990). Anxiety, depression, and perception of early parenting: A meta-analysis. *Clinical Psychology Review, 10,* 251-277.

Gersho, B. F. (1999). Recalled parental authority and marital quality. *Dissertation Abstracts International: Section B: The Physical Sciences and Engineering*, *60*(5-B) 2408.

Goldman, J. D. G., & Goldman, R. J. (1983). Children's perceptions of parents and their roles: A cross-national study in Australia, England, North America, and Sweden. *Sex Roles, 9* (7), 791-812.

Golin, S., Sweeny, P. D., & Schaeffer, D. E. (1981). The causality of causal attributions in depression: A cross-lagged panel correlation analysis. *Journal of Abnormal Psychology, 90,* 14-22.

Graham, J. E., Heim, C., Goodman, S. H., Miller, A. H., & Nemeroff, C. D.(1999). The effects of neonatal stress on brain development: Implications for psychopathology. *Development and Psychopathology, 11*, 545-565.

Graham, P. J., & Rutter. (1973). Psychiatric disorders in the young adolescent: A follow-up study. *Proceedings of the Royal Society of Medicine, 66*, 1220-1224.

Gray, J. A. (1982). *The neuropsychology of anxiety.* New York: Oxford University Press.

Gray, J. A., & McNaughton, N. (2000). *The neuropsychology of anxiety.* Oxford, UK: Oxford University Press.

Greenberg, R. P., & Beck, A. T.(1989). Depression versus anxiety: A test of the content specificity hypothesis. *Journal of Abnormal Psychology, 98*, 9-13.

Gross, J. J., & Levenson, R. W. (1995). Emotion elicitation using films. *Cognition and Emotion, 9*, 87 – 108.

Hamburger, K., & Lohr, J. M. (1980). Rational restructuring for anger control: A quasi-experimental. case study. *Cognitive Therapy and Research, 4*, 99-102.

Hannum, J. W. (2004). Effects of family conflict, divorce, and attachment patterns on the psychological distress and social adjustment of college freshmen. *Journal of College Student Development, 45*(1), 27-42.

Hariri, A. R., Bookheimer, S. Y., & Mazziotta, J. C. (2000). Modulating emotional responses: Effects of a neocortical network on the limbic system. *Neuroreport, 11,* 43-48.

Harkness, S., & Super, C. M. (1985). Child-environment interaction in the socialization of affect. In M. Lewis & S. Saarni (Eds.), *The socialization of emotions.* New York: Plenum Press.

Harre, R. (1986). *The social construction of emotions.* Oxford, UK: Blackwell.

Hardy, L., & Parfitt, G. (1991). A catastrophe model of anxiety and performance anxiety. *British Journal of Psychology, 82,* 163-178.

Heim, C., & Nemeroff, C. B. (2001). The role of childhood trauma in the neurobiology of mood and anxiety disorders: Preclinical and clinical studies. *Biological Psychiatry, 49,* 1023 – 1039.

Hertsgaard, I., Gunnar, M., Erikson, M. F., & Nachmias, M. (1995). Adrenocortical responses in the Strange Situation in infants with disorganized/disoriented attachment relationships. *Child Development, 66,* 1100-1106.

Heusmann, L.R., Lefkowitz, M. M., & Eron, L. D. (1984). Stability of aggression over time and generations. *Developmental Psychology, 20*(6), 1120 – 1134.

Hirayama, S., & Ochanomizu, U. (2001). Adolescent mental health and fathers' involvement in families: The incongruent rating of fathers and mothers. *Japanese Journal of Developmental Psychology, 12*(2), 99-109.

Hollon, S. D., Kendall, P. C., & Lumry, A. (1986). Specificity of depressogenic cognitions in clinical depression. *Journal of Abnormal Psychology, 95,* 52-59.

Ingram, R. (2003). Origins of cognitive vulnerability to depression and disrupted relationships between parents and depression. *Cognitive Therapy and Research, 17*(1), 77-89.

Ingram, R. E., Kendall, P. C., Smith, T. W., Donnel, C., & Ronan, K. (1987). Cognitive specificity in emotional disorders. *Journal of Personality and Social Psychology, 53*, 734-742.

Ingram, R. E., & Ritter, J. (2000). Vulnerability to depression: Cognitive reactivity and parental bonding in high-risk individuals. *Journal of Abnormal Psychology, 109*, 588-596.

Ingram, R. E., Miranda, J., & Segal, Z. V. (1988). *Cognitive vulnerability to depression*. New York: Guilford Press.

Izard, C. E. (1977). *Human emotions*. New York: Plenum.

Izard, C. E. (1992). Basic emotions, relations among emotions, and emotion-cognition relations. *Psychological Review, 99,* 561-565.

Izard, C. E. (1979). *The maximally discriminative facial movement coding system (MAX)*. Newark, DE: University of Delaware.

Izard, C. E., Hembree, E. A., & Huebner, R. R. (1987). Infants' emotion expressions to acute pain: Developmental change and stability of individual differences. *Developmental Psychology, 23,* 105-113.

Jacobs, G. (2003). *The ancestral mind.* New York: Viking.

Jenkins, J. M., Oatley, K., & Stein, N. L. (1998). *Human emotion: A reader.* Oxford, UK: Blackwell.

Joiner, T. E. Jr., Steer, R. A., Abramson, L Y., Alloy, L. B., Metalsky, G.I., & Schmidt, N. B. (2001). Hopelessness depression as a distinct dimension of depressive symptoms among clinical and non-clinical samples. *Behaviour Research and Therapy, 39*(5), 523-536.

Joiner, T. E., Vohs, K. D., Rudd, M. D., Schmidt, N. B., & Pettit, J. W. (2003). Problem-Solving and Cognitive Scars in Mood and Anxiety Disorders: The sting of mania. *Journal of Social and Clinical Psychology, 22*(2), 192-212.

Jolly, J. B. (1993). A multi-method test of the cognitive content-specificity hypothesis in young adolescents. *Journal of Anxiety Disorders, 7,* 223-232.

Jouriles, E. N., Meta, P., McDonald, R., & Francis, D. J. (1997). Psychometric properties of family members' reports of parental physical aggression toward clinic-referred children. *Journal of Clinical and Consulting Psychology, 65*(2), 309-318.

Kagan, J. (1982). *Psychological research on the human infant: An evaluative summary.* New York: W. D. Grant Foundation.

Kassinove, H. K. (Ed.). (1995). *Anger disorders: Definition, diagnosis, and treatment.* Hillsdale; NJ: Erlbaum.

Kassinove, H. K., & Sudholsky, D. G. (1995). *Anger disorders: Definition, diagnosis, and treatment.* Washington; DC: Taylor and Francis.

Keltner, D., Elsworth, P.C., & Edwards, K.(1993). Beyond simple pessimism: Effects of sadness and anger on social perception. *Journal of Personality and Social Research. 64*(5), *740-752.*

Kendall, P. C., & Watson, D. (Eds.). (1989). *Anxiety and depression: Distinctive and overlapping features.* San Diego, CA: Academic Press.

Kendrick, M. J., Craig, K.D., Lawson, D. M., & Davidson, P. O. (1982). Cognitive and behavioural therapy for musical-performance anxiety. *Journal of Consulting and Clinical Psychology, 50*(3) 353-362.

Kessler, R. C., (1997). The effects of stressful life events on depression. *Annual Review of Psychology, 48*, 191-214.

Kihlstrom, J. F. (1999). The psychological unconscious. In L. A. Pervin & O. Johns (Eds.), *Handbook of personality: Theory and research* (2nd. Ed) *(pp.* 424-442). New York: Guilford.

Klem, L. (1995). Path Analysis. In L. G. Grimm & P. R. Yarnold (Eds.), *Reading and understanding multivariate statistics.* Washington, DC: American Psychological Association.

Kline, P. (1986). *A handbook of test construction: Introduction to psychometric design.* London, UK: Methuen.

Kling, A., & Steklis, H. D. (1976). A neural substrate for affiliative behaviour in nonhuman primates. *Brain, Behaviour and Evolution, 13*, 216-238.

Koeningsberg, H. W., Kernberg, O. F., Stone, M. H., Appelbaum, A. H., Yeomans, P. E., & Diamond, D. (2000). *Borderline patients: Extending the limits of treatability.* New York: Basic Books.

Kochanska, G. (1993). Towards a synthesis of parental socialization and child temperament in early development of conscience. *Child Development, 64*, 325–347.

Labott, S. M., Sanjabi, P. B., Jenkins, N., & Iannuzzi, M. C. (2001). Chronic obstructive pulmonary disease and anger. *Psychological Health and Medicine, 6*(4), 481-487.

Laidlaw, K., & Davidson, K, M. (2001). The personal nature of depression: Assessing the operation of self-schema in depression. *Clinical Psychology and Psychotherapy, 8,* 97–108.

Lasko, N., Gurvits, T. V., Kuhne, A. A., Orr, S. P., & Pitman, P. K. (1994). Aggression and its correlates in Vietnam veterans with and without Post-Traumatic Stress Disorder. *Comprehensive Psychiatry, 35*, 373-381.

Laurent, J., & Stark, K. D. (1993). Testing the cognitive content-specificity hypothesis with anxious and depressed youngsters. *Journal of Abnormal Psychology, 102*, 226-237.

Leahy, R. L. (2003). *Cognitive Therapy: Basic principles and applications.* Northvale, NJ: Aronson..

LeDoux, J. E. (1995). Emotion: Clues from the brain. *Annual Review of Psychology, 46,* 209-235.

LeDoux, J.E. (1996). *The emotional brain.* New York: Touchstone.

LeDoux, J. E. (2000). The amygdala and emotion: A view through fear. In J. P.Aggleton (Ed.), *The amygdala: Neurobiological aspects of emotion, memory and mental dysfunction* (pp.289-310). New York: Oxford University Press.

Lee, C. L., & Bates, J. E. (1985). Mother-child interaction at age two years and perceived difficult temperament. *Child Development, 56*, 1314-1325.

Lee, C. W., Taylor, G., & Dunn, J. (2000). *Factor structure of Schema Questionnaire in a large clinical sample.* Workshop handout, Melbourne, Australia.

Lemerise, E. A., & Dodge, K. A. (2000). The development of anger and hostile interactions. In M. Lewis & J. M. Haviland-Jones (Eds.), *Handbook of emotions* (pp. 594-606). New York: Guilford Press.

Lester, D. (1989). Relationship between Locus of Control and depression mediated by anger towards others. *Journal of Social Psychology, 129*(3), 413-415.

Lewis, M., Allesandri, S. M., & Sullivan, M. W. (1990). Violation of expectance, loss of control and anger expression in young infants. *Developmental Psychology, 26*(5), 68-78.

Lewis, M., & Saarni, S. (Eds.). (1985). *The socialization of emotions.* New York: Plenum Press

Lewis, M., & Saarni, C. (1985). Culture and emotions. In M. Lewis & C. Saarni (Eds.), *The socialization of emotions* (pp. 1-17). New York: Plenum Press.

Lovibond, P. E., & Lovibond, S. H. (1995). The structure of negative emotional states: Comparison of Depression, Anxiety and Stress Scales with the Beck Depression and Anxiety Inventories. *Behavior Research and Therapy, 33,* 335-342.

Lyons-Ruth, K., Alpern, I., & Repacholi, B. (1993). Disorganized infant attachment classification and maternal psychosocial problems as predictors of hostile aggressive behaviour in the preschool classroom. *Child Development, 64,* 572-585.

McDermut, J. F., & Haaga, D. A. (1994). Cognitive balance and specificity in anxiety and depression. *Cognitive Therapy and Research, 18,* 333-352.

McDermott, M. R., Ramsay, J. M., & Bray, C. (2001). Components of anger-hostility complex as risk factors for coronary artery disease severity: A multistream study. *Journal of Health Psychology, 6*(3), 310-320.

McFadden, D., Loehlin, J. C., Breedlove, S. M., Lippa, R. A., & Manning, J. T. (1995). Physical punishment and two parent families. *Clinical Child Psychiatry and Psychology, 2*(2), 271-281.

McKay, M., & Rogers, P. (2000). *The anger control workbook.* Oakland, CA: New Harbinger.

McLennan, W. (1996). *Women's safety survey.* Canberra, ACT: Australian Bureau of Statistics.

MacLeod, A. K., & Byrne, A. (1996). Anxiety, depression and the anticipation of future positive and negative experience. *Journal of Abnormal Psychology, 105,* 286-289.

MacLeod, C., Mathews, A., & Tata, P. (1986). Attentional bias in emotional disorders. *Journal of Abnormal Psychology, 95*(1), 15-20.

MacLeod, C., & Mathews, A. (1988). *Cognitive psychology and emotional disorders.* Chichester, UK: Wiley.

McNemar, Q. (1962). *Psychological statistics* (3rd ed.). New York: John Wiley & Sons.

Magai, C. (1999). Affect, imagery, and attachment: Working models of interpersonal affect and the socialization of emotion. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research and clinical applications* (pp.787-802). New York: Guilford.

Magai, C., Distel, N., & Liker, R. (1995). Emotion socialization, attachment, and patterns of adult emotional traits. *Cognition and Emotion, 9*(5), 461-481.

Magai, C., Hunzinker, J., Mesias, W., & Clayton Culver, L. (2000). Adult attachment types and emotion biases. *International Journal of Behavioural Development, 24* (3), 301-309.

Magai, C., & McFadden, S. H. (1995). *The role of emotions in social an personality development: History, theory, and research.* New York: Plenum Press.

Main, M., & Hesse, E. (1990). Parents' unresolved traumatic experiences are related to infants' disorganized attachment status: Is frightened and/or frightening parental behaviour the linking mechanism? In M. Greenberg, D. Ciccheti & E. Cummings (Eds.), *Attachment in the pre-school years: Theory, research and intervention* (pp. 48-71). Chicago: University of Chicago Press.

Mahon, N. E., Yarcheski, A., & Yarcheski, T. J. (2000). Positive and negative outcomes of anger in early adolescents. *Research in Nursing and Health, 23*, 17-24.

Malatesta, C. Z., Grigoryev, P., Lamb, C., Albin, M., & Culver, C. (1986). Emotion socialization and expressive development in preterm and full term infants. *Child Development, 53,* 991-1003.

Manassis, K., Bradley, S., Goldberg, S., Hood, J, & Swinson, R. P. (1995). Behavioural inhibition, attachment and anxiety in children of mothers with anxiety disorders. *Canadian Journal of Psychiatry, 40*(2), 87-92.

Mascolo, M. F., & Griffin, S.(1998). Alternative trajectories in the development of anger-related appraisals. In M. F. Mascolo & S. Griffin (Eds.), *What develops in emotional development?* New York: Plenum Press.

Mason, O. J., & Beavan-Pearson, J. (2005). Understanding the genesis of psychotic disorder: Issues in the prediction and prophylaxis of those at ultra-high risk. *British Journal of Clinical Psychology, 44*(3), 383-404.

Mason, O., & Hargreaves, I. (2001). A qualitative study of mindfulness-based cognitive therapy for depression. *British Journal of Medical Psychology, 74,* 197-212.

Mayne, T. J., & Ambrose, T. K. (1999). Research review on anger in psychotherapy. *Journal of Clinical Psychology, 55,* 353-363.

Mazza, D., Dennerstein, L., & Ryan, V. (1996). Physical, sexual and emotional violence against women: A general practice based prevalence study. *Medical Journal of Australia, 164,* 14-17.

Mikulhincer, M. (1998). Adult attachment style and individual differences in functional versus dysfunctional experiences of anger. *Journal of Personality and Social Psychology, 74*(2), 305-321.

Miller, D. T. (2001). Disrespect and the experience of injustice. *Annual Review of Psychology, 52,* 527-553.

Miller, P., & Sperry, L. (1987). The socialization of anger and aggression. *Merrill-Palmer Quarterly, 33*(1), 1-31.

Mills, R. S. L. (2003). Possible antecedents and developmental implications of shame in girls. *Infant and Child Development, 12,* 329-349.

Miranda, J., Gross, J. J., Persons, J. B., & Hahnm, J. (1998). Mood matters: Negative mood induction activates dysfunctional attitudes in women vulnerable to depression. *Cognitive Therapy and Research, 22,* 363-376.

Moghaddam, B., Bolinao, M. L., Stein-Behrens, B., & Sapolsky, R. (1994). Glucocorticoids mediate the stress-induced extracellular accumulation of glutamate. *Brain Research, 655,* 251-254.

Moon, J. R., & Eilser, R. M. (1983). Anger control: An experimental comparison of three behavioral treatments. *Behavior Therapy, 14,* 493-505.

Morgan, M., & Nickson, D. (2001). Uncivil aviation: A review of the air rage phenomenon. *International Journal of Tourism Research, 3*(6), 443-457.

Muran, J. C., Gorman, B. S., Safran, J. D., Twining, L. W., & Winston, A. (1995). Linking in-session change to overall outcome in short-term cognitive therapy. *Journal of Consulting and Clinical Psychology, 7,* 651-657.

Nelson, J., & Aboud, F. (1985). The resolution of social conflict among friends. *Child Development, 56,* 205-220.

Neihoff, D. (Ed.). (1999). *The biology of violence.* New York: The Free Press.

Neto, F., & Mullet, E. (2004). Personality, self-esteem and self-construal as correlates of forgivingness. *European Journal of Personality, 18,* 15-30.

Neuharth, D. (1998). *If you had controlling parents: How to make peace with your past and take your place in the world.* New York: Harper Collins.

Novaco, R.W. (1975). *Anger control: The development and evaluation of an experimental treatment.* Lexington, MA: Lexington Books.

Novaco, R. W. (1976). The functions and regulation of the arousal of anger. *American Journal of Psychiatry, 133*(10), 1124-1128.

Novaco, R. W. (1977). Stress inoculation: A cognitive therapy for anger and its application to a case of depression. *Journal of Consulting and Clinical Psychology, 45,* 600-608.

Novaco, R. W. (1979). The cognitive regulation of anger and stress. In P. C. Kendall & S. D. Hollon (Eds.), *Cognitive-behavioral interventions: Theory, research and procedures.* New York: Academic Press.

Novaco, R. W. (1996a). The functions and regulation of the arousal of anger. *American Journal of Psychiatry, 133*(10), 1124-1128.

Novaco, R. W. (1996b). Anger treatment and its special challenges. *National Centre for Post-traumatic Stress Disorder, Clinical Quarterly, 6(3).*

Novaco, R. W. (1999). *Anger, stress, and coping with provocation: A client instruction manual.* (Unpublished manuscript). University of California, Irvine.

Novaco, R. W., & Chemtob, C. M. (1998). Anger and trauma: Conceptualization, assessment, and treatment. In V. M. Follette, J. I. Ruzek, & F. R. Abueg (Eds.), *Cognitive -behavioral therapies for trauma* (pp. 162-190). New York: Guilford.

Novaco, R. W., & Chemtob, C. M. (2002). Anger and combat-related posttraumatic stress disorder. *Journal of Traumatic Stress, 15*(2), 123-152.

Oatley, J. M., & Jenkins, K. (1996). *Understanding emotions.* Oxford, UK: Blackwell.

Ollendick, T. H., & King, N, J. (2000). Empirically supported treatments for children and adolescents. In P. C. Kendall (Ed.), *Child and adolescent therapy: Cognitive-behavioural procedures* (pp. 386-426). New York: Guilford.

Paivio, S. C., & Greenberg, L. S. (1998). Emotionally focused treatment of interpersonal trauma. *NC-PTSD Clinical Quarterly, 9*, 22-29.

Patterson, G. R. (1982). *Coercive family process.* Eugene, OR: Castalia.

Patterson, G. R. (1985). A microsocial analysis of anger and irritable behaviour. In M. A. Chesney & R. H. Rosenman (Eds.), *Anger and hostility in cardiovascular and behavioural disorders.* Washington, DC: Hemisphere Publishing Corporation.

Patterson, G. R., Capaldi, D., & Bank, L.(1991). An early starter model for predicting delinquency. In D. J. Pepler & K. H. Rubin (Eds.), *The development and treatment of childhood aggression* (pp.139-168). Hillsdale, N.J.: Erlbaum.

Patterson, G. R., Debaryshe, B. D., & Ramsey, E. (1989). A developmental perspective on antisocial behaviour. *American Psychologist, 44*, 329-333.

Patterson, G. R., Reid, J., Dishion, T. J. (1992). *Antisocial boys.* Eugene, OR: Castalia.

Perris, C. (1994). Linking the experience of dysfunctional parental rearing with manifest psychopathology: A theoretical framework. In C. Perris, W. A. Arrindell, & M. Eiseman (Eds.), *Parenting and psychopathology* . New York: Wiley.

Perry, B. D, Pollard, R, Blakely, T, Baker, W, & Vigilante, D. (1995). Childhood trauma, the neurobiology of adaptation and 'use-dependent' development of the brain: How "states" become "traits"'. *Infant Mental Health Journal, 16*(4), 271-291.

Persons, J. B., & Rao, P. A. (1985). Longitudinal study of cognitions, life events, and depression in psychiatric patients. *Journal of Abnormal Psychology, 94,* 51-63.

Platts, H., Tyson, M., & Mason, O. (2002). Adult attachment style and core beliefs: Are they linked? *Clinical Psychology and Psychotherapy, 9*(5), 332-348.

Platts, H., Mason, O., & Tyson, M., (2005). Early maladaptive schemas and adult attachment in a UK clinical population. *Psychology and Psychotherapy: Theory, Research and Practice*, *78*(4), 549-564.

Plomin, R. (1990). The role of inheritance in behavior. *Science*, *249*, 183-188.

Plomin, R., Chipuer, H. M., & Loehin, J. C. (1991). Behaviour genetics and personality. In L. A. Pervin (Ed.), *Handbook of personality theory and research* (pp. 225 – 243). New York: Guilford Press.

Potter-Efron, R. (1994). *Angry all the time: An emergency guide to anger control.* Oakland, CA: New Harbinger.

Radke-Yarrow, M., Richters, J., & Wilson, W. E. (1985). Child development in a network of relationships. In R. A. Hinde & J. Stevenson-Hinde (Eds.), *Relationships within families* (pp. 48-67). Oxford: Clarendon Press.

Raine, A. (2002). Biosocial studies of antisocial and violent behaviour in children and adults: A review. *Journal of Abnormal Child Psychology, 30*, 311-326.

Raine, A., Meloy, J. R., Bihrle, S., Stoddard, J., Lacasse, L., & Buchbaum, M. S. (1998). Reduced prefrontal and increased subcortical brain functioning assessed using positron emission tomography in predatory and affective murderers. *Behavioural Sciences and the Law, 16*, 319-332.

Ramirez, J. M., Fujihara, T., & Van Goozen, S. V. (2001). Cultural and gender differences in anger and aggression: A comparison between Japanese, Dutch and Spanish students. *Journal of Social Psychology, 114* (1), 119-121.

Rauch, S. L., van der Kolk, B. A., Fisler, R. E., Alpert, N., Orr, S. P., Savage, C. R., Fischman, A. J., et al. (1996). A symptom provocation study of Posttraumatic Stress Disorder using positron emission tomography and script driven imagery. *Archives of General Psychiatry, 53*, 380-387.

Renk, K., Phares, V., & Epps, J. (1999). The relationship between parental anger and behaviour problems in children and adolescents. *Journal of Family Psychology, 13*(2), 209-227.

Richell. R. A., & Anderson, M. (2004). Reproducibility of negative mood induction: A self-referent plus musical mood induction procedure and a controllable/uncontrollable stress paradigm. *Journal of Psychopharmacology, 18,* 94-101.

Riggs, D. S., Dancu, C. V., Gershuny, B. S., Greenberg, D., & Foa, E. B. (1992). Anger and post-traumatic stress disorder in female crime victims. *Journal of Trauma Stress 5,* 613-625.

Riley, W. T., & Treiber, F. A. (1989). The validity of multidimensional self-report anger and hostility measures. *Journal of Clinical Psychology, 45*(3), 397-404.

Rizzolatti, G., & Craighero, L. (2004). The mirror-neuron system. *Annual Review of Neuroscience, 27,* 169 – 193.

Robbins, P. R., & Tanck, R. H. (1997). Anger and depressed affect in interindividual and intraindividual perspectives. *Journal of Psychology, 131*(5), 489-500.

Roberts, W., & Strayer, J. (1987). Parent responses to the emotional distress of their children: Relations with children's competence. *Developmental Psychology, 23,* 415-425.

Rosenbaum, J. F., Fava, M., & Pava, J. A. (1993). Anger attacks in unipolar depression, part 2: Neuroendocrine correlates and changes following treatment. *American Journal of Psychiatry, 150,* 1164-1168.

Saddler C. D., & Sacks, L. A. (1993). Multidimensional perfectionism and academic procrastination: Relationships with depression in university students. *Psychological Report, 73*(3, Pt. 1), 863-871.

Sanders, M. R. (1994). *Every parent: A positive approach to children's behaviour..* Sydney, NSW: Addison-Wesley.

Scarpa, A., & Raine, A. (1997). Psychophysiology of anger and violent behavior. *The Psychiatric Clinics of North America, 29*, 375-394.

Scarpa, A., & Raine, A. (2000). Violence associated with anger and impulsivity. In J. C. Borod (Ed.), *The neurophysiology of emotion.* Oxford, UK: Oxford University Press.

Schmidt, N. B., Joiner, T. E. Jr., Young, J. E., & Telch, M. J. (1995). The Schema questionnaire: Investigation of psychometric properties and the hierarchical structure of a measure of maladaptive schemas. *Cognition, Therapy and Research, 19*(3), 295-321.

Schmidt, N,. B., Joiner, T. E., Staab, J. P., & Williams, F. M. (2003). Health perceptions and anxiety sensitivity in patients with panic disorder. *Journal of Psychopathology and Behavioural Assessment, 25*(3) 139-145.

Schoenbaum, G., Chiba, A. A., & Gallagher, M. (2000). Changes in functional connectivity in orbitofrontal cortex and basolateral amygdala during learning and reversal training. *Journal of Neuroscience, 20*, 5179-5189.

Schore, A. N. (1994). *Affect regulation and the origin of the self: The neurobiology of emotional development.* Hillsdale, NJ: Erlbaum.

Schore. A. N. (1996). The experience-dependent maturation of a regulatory system in the orbital prefrontal cortex and the origin of developmental psychopathology. *Development and Psychopathology, 8,* 59-87.

Schore, A. N. (1997). The early organization of the nonlinear right brain and the development of a predisposition to psychiatric disorders. *Development and Psychopathology, 45,* 841-867.

Schore, A. N. (2001). The effects of a secure attachment relationship on right brain development, affect regulation, and infant mental health. *Infant Mental Health Journal, 22,* 201-269.

Schore, A. (2003). The human unconscious: The development of the right brain and its role in early emotional life. In V. Green (Ed.), *Emotional development in psychoanalysis, attachment theory and neuroscience.* Hove, UK: Bruner-Routledge.

Schuengel, C., Bakermans-Kranenburg, M. J., & Van Ijzendoorn, M. H. (1999). Frightening maternal behaviour linking unresolved loss and disorganized infant attachment. *Journal of Consulting and Clinical Psychology, 67*(1), 54-63.

Scott, J. (2001). Cognitive therapy as an adjunct to medication in bipolar disorder. *The British Journal of Psychiatry, 178,* 164-168.

Seligman, M. E. P. (1975). *Helplessness: On depression: development, and death.* San Francisco, CA: W.H. Freeman.

Shapiro, F. (1995). *Eye Movement Desensitization and Reprocessing: Basic principles, protocols and procedures.* New York: Guilford.

Shiffrin, R. M., & Schneider, W. (1977). Controlled and automatic information processing II: Perceptual learning, automatic attending and a general theory. *Psychological Review, 84,* 127-140.

Skarlicki, D. P., & Folger, R. (1997). Retaliation in the workplace: The roles of distributive, procedural, and interactional justice. *Journal of Applied Psychology, 82*(3), 434-443.

Smith, C.A., Haynes, K. N., Lazarus, R. S., & Pope, L. K. (1993). In search of the 'hot' cognitive attributes, appraisals, and their relationship to emotion. *Journal of Personality and Social Psychology, 65*(5), 916-929.

Snyer, J., & Patterson, G. R. (1986). The effects of consequences on patterns of social interaction: A quasi-experimental approach to reinforcement in natural interaction. *Child Development, 57,* 1257-1268.

Soenens, B., Elliot, A. J., Goossens, L, Vansteenkiste, M., Luyten, P. & Duriez, B. (2005). The intergenerational transmission of perfectionism: Parents' psychological control as an intervening variable. *Journal of Family Psychology, 19*, 358-366.

Spielberger, C. D., Krasner, S. S., & Solomon, E. P. (1988.). The experience, expression and control of anger. In M. P. Janisee (Ed.), *Health psychology: Individual differences and stress* (pp. 89-109). New York: Springer-Verlag.

Spielberger, C. D., Johnson, E. J., Russell, S. F., Crane, R. J., Jacobs, G. A., & Wordern, T. J. (1985). The experience and expression of anger: Construction and validation of an anger expression scale. In M. A. Chensey & R. H. Rosenman (Eds.), *Anger and hostility in cardiovascular and behavioral disorders.* Washington, DC: Hemisphere.

Steer, R. A., Beck, A. T., Clark, D. A., & Beck, J. S. (1994). Psychometric properties of the cognition checklist with psychiatric outpatients and university students. *Psychological Assessments, 6*, 67-70.

Stein, D. J., & Young, J. E. (1992). Schema approach to personality disorders. In R. L. Woolfolk & P. M. Lehrer (Eds.), *Principles and practice of stress management.* London, UK: Guilford.

Steinberg, L., Elmen, J. D., & Mounts, J. (1989). Authoritative parenting, psychosocial maturity and academic success among adolescents. *Child Development, 60,* 1424-1436.

Steiner, J. E. (1979). Human facial expressions in response to taste and smell stimulation. In H. Resse & L. P. Lipsett (Eds.), *Advances in child development and behaviour* (pp. 257-293). New York: Academic Press.

Steptoe, A. & Fidler, H. (1987). Stage fright in orchestral musicians: A study of cognitive and behavioural strategies in performance anxiety. *British Journal of Psychology, 78,* 241-249.

Stern, D. (1994). One way to build a clinically relevant baby. *Infant Mental Health Journal, 15,* 9-25.

Stott Despoja, N. (2004). *Senator Natasha Stott Despoja speaks on the adjournment: Domestic violence.* Australian Democrats Speeches. Retrieved from: http://www.democrats.org.au/speeches/?speech_id=1413&display=1

Strohschein, L. (2005). Parental divorce and child mental health trajectories. *Journal of Marriage and Family, 67*(5), *1286-1301.*

Stover, C. S., & Berkowitz, S. (2005). Assessing violence exposure and trauma symptoms in young children: A critical review of measures. *Journal of Traumatic Stress, 18*(6), 707-717

Suarez, E. C., & Williams, P. N. (1988). Situational determinants of cardiovascular and emotional reactivity in high and low hostile men. *Psychosomatic Medicine, 51*, 404-418.

Tafrate, R.C., Kassinove, H., & Dundin, L. (2002). Anger episodes in high- and low-trait-anger community adults. *Journal of Clinical Psychology, 58*(12), 1573-1590.

Tavris, C. (1984). *Anger: The misunderstood emotion.* New York: Touchstone.

Teasdale, J. D. (1983). Negative thinking in depression: Cause, affect or reciprocal relationship? *Advances in Behavioural Research and Therapy, 5,* 3-25.

Teasdale, J. D. (1988). Cognitive vulnerability to persistent depression. *Cognition and Emotion, 2*(3), 247-274.

Teasdale, J. D. (1996). Clinically relevant theory: Integrating clinical insight with cognitive sciences. In P. M. Salkovis (Ed.), *Frontiers of cognitive therapy* (pp. 26-47). New York: Guildford.

Teasdale, J. D. (1999). Emotional processing, three modes of mind and the prevention of relapse in depression. *Behavior Research and Therapy, 37,* S53-S77.

Topalli, V., & O'Neal, E. C. (2003). Retaliatory motivation enhances attributions of hostility when people process ambiguous social stimuli. *Aggressive Behaviour, 29,* 155-172.

Tronick, E. Z., Ricks, M., & Cohn, J. (1982). Maternal and infant affective interchange: Patterns of adaptation. In T. Field & A. Fogel (Eds.), *Emotion and early interaction* (pp. 57–82), Hillsdale, NJ: Erlbaum.

van der Kolk, B. A. (1987). *Psychological trauma*. Washington, DC: American Psychiatric Press.

van der Kolk, B. A., & Fisler, R. E. (1994). Childhood abuse and neglect and loss of self-regulation. *Bulletin of the Menninger Clinic, 58,* 145-168.

van der Kolk, A., McFarlane, A. C., & Weisaeth, L. (1996). The black hole of trauma. In B. A. van der Kolk, A. C. McFarlane, & L. Weisaeth, (Eds.), *Traumatic stress: The effects of overwhelming experience on mind, body, and society* (pp. 3–23). New York: Guilford.

Velten, E. (1968). A laboratory task for induction of mood states. *Behaviour Research and Therapy, 6,* 473 – 482.

Voeller K K.(1986). Right-hemisphere deficit syndrome in children. *American Journal of Psychiatry; 143* 1004–1009.

Waller, G., Meyer, C., & Ohanian, V. (2001). Psychometric properties of the long and short version of the Young Schema Questionnaire: Core beliefs among bulimic and comparison women. *Cognitive Therapy and Research, 25,* 137-147.

Weiss, R. (1975). *Marital separation*. New York: Basic Books, Inc.

Weiss, B., Dodge, K., Bates, J. E., & Pettit, G. S. (1992). Some consequences of early harsh discipline: Child aggression and maladaptive social information processing style. *Child Development, 63,* 1321-1335.

Weisz, J. R., Suwanlert, S., Chaiyasit, W., Weiss, B., Achenbach, T. M., & Walter, B. (1987). Epidemiology of behavioral and emotional problems among Thai and American children: Parent reports for ages 6 to 11. *Journal of the American Academy of Child and Adolescent Psychiatry, 26*, 890-897.

Weston, D. (1999). *Psychology, mind, brain and culture*. New York: John Wiley.

White, H. R., & Widom, C. S. (2003). Intimate partner violence among abused and neglected children in young adulthood: The mediating effects of early aggression, antisocial personality, hostility and alcohol problems. *Aggressive Behavior, 29*, 332-345.

Wickless, C., & Kirsch, I. (1988). Cognitive correlates of anger, anxiety, and sadness. *Cognitive Therapy and Research, 12*, 367-377.

Wilcox, S., King, A. C., Vitaliano, P. P., & Brassington, G. S., (2000). Anger expression and natural killer cell activity in family caregiver participants in physical activity trial. *Journal of Health Psychology, 5*(4), 437-441.

Williams, J. M. G., Watts, F. N., MacLeod, C., & Mathews, A., (1997). *Cognitive psychology and emotional disorders* (2nd Ed.). Chichester, UK: Wiley.

Wilson, R., (1984). A review of self-control treatments for aggressive behavior. *Journal of the Council for Children with Behavioral Disorders, 9*(2), 131-140.

Young, J. (1990). *Cognitive therapy for personality disorders: A schema focused approach.* Sarasota, FL: Professional Resource Exchange, Inc.

Young, J. E. (1994). *Cognitive therapy for personality disorders: A schema-focused approach* (2nd ed.). Sarasota, FL: Professional Resource Exchange, Inc.

Young, J. E. (2002). Schema-focused therapy for personality disorders. In G. Simos (Ed.), *Cognitive Behaviour Therapy: A guide for the practising clinician* (pp. 201-222). Hove, UK: Brunner-Routledge.

Young, J. E., Klosko, J.S., & Weishaar, M. E. (2003). *Schema Therapy: A practitioners' guide.* New York: Guilford.

Young, J. E., Weinberger, A. D., & Beck, A. T. (2001). Cognitive therapy for depression. In D. H. Barlow (Ed.), *Clinical Handbook of psychological disorders: A step-by-step treatment manual* (3rd ed.) (pp. 264-308). New York: Guilford.

Young, T. F. (1991). Locus of control, depression and anger among native Americans. *Journal of Social Psychology, 131*(4), 583-585.

Appendix A

Effects of Anger on Health

Whilst anger is the emotion most often seen as a legal issue, anger also firmly fits in the health system. Research on health and anger has shown anger sometimes has positive effects on health. For example, Wilcox, King, Vitaliano, and Brassington (2000) found that the immune system's natural killer cell activity increased when anger was expressed rather than held in. In general though, chronic anger is seen as a health hazard. Many adverse health effects have been linked to anger (Spielberger, Johnson, Russel, Crane, & Worden, 1985; Friedman, & Rosenman, 1959; Chesney, 1985; Chesney, Rosenthal, 1985; Spielberger, Krasner, & Soloman, 1988) and these are discussed below.

A cluster of distinctive behaviours or 'personality' characteristics were strongly associated with coronary heart disease (CHD), elevated blood pressure, and premature death (Spielberger et al., 1985). These were 'Type A behaviours and involved individuals being 'driven,' being irritable or angry, and being competitive. More recent studies confirm the adverse effects of anger on health, linking anger to coronary artery disease, and hypertension (Frasure-Smith, Lesperance, & Talajic, 1995). Being angry activates the sympathetic-adrenal-medullary, and hypothalamic-pituitary-adrenocortical systems, which results in increased blood pressure, heart rate, and in the constriction of the peripheral blood vessels associated with coronary artery disease. McDermott, Ramsey, and Bray (2001) found anger and hostility were strong risk factors in coronary artery disease. Labott, Sanjabi, Jenkins and Iannuzzi (2001) found a relationship between anger and increased chronic obstructive pulmonary disease. Jacobs (2003) found that when anger became chronic, particularly when in the form of hostility, such persons

'lived with a permanently '*short fuse*,' had an 'overreactive amygdala,' increased blood pressure, increased heart rate, increased blood fat and cholesterol, which resulted in blood platelets becoming 'stickier,' which blocked artery walls, constricted blood vessels, and decreased oxygen flow to the heart. In all, hostile and angry people were found to be at greater risk for heart attacks and heart disease. Chronic anger and hostility also served to weaken the immune system (Jacobs, 2003). For these reasons, Jacobs concluded anger was 'the toxic emotion.' However, Jacobs also noted that where individuals learnt to reduce their anger, their hostility diminished, and their risk of heart attack was commensurately reduced.

Appendix B

Reasons for Selecting Non-clinical Participants

Because Study 1 was concerned with anger, depression and anxiety, this might be thought to suggest that a clinical group should have been approached. It was decided not to use a clinical sample, in part because of privacy concerns, but also because clinicians would have had to approach patients, which could have brought additional problems, such as clinicians forgetting to distribute questionnaires. In addition, it is not always possible to find sufficient numbers of patients of a particular type to provide a viable sample. For these reasons, it was decided to follow previous researchers and involve a nonclinical group.

The use of a nonclinical population can also be justified by noting that numbers of previous 'clinical' investigations have employed nonclinical populations. For instance, Burns and Eidelson (1998) deemed a non-clinical population more suitable than a clinical one when exploring the specific cognitive content associated with depression and anxiety. Osman, Gutierrez, Jiandani, Kopper, Barrios, Linden, and Truelove (2003) selected a non-clinical sample of high-school youths when evaluating the factor structure, reliability and validity of the Positive and Negative Suicidal Ideation scale (PANSI). Watson, and Sinha (1998) explored the issue of comorbidity in personality disorders using a nonclinical population sample of university students. Mazure, Maciejewski (2003) used a nonclinical sample to explore the risk for depression arising from adverse life events. Endler, Rutherford, and Denisoff (1999) explored the dimensionality of the Beck Depression Inventory (BDI) using a nonclinical group.

The choice of nonclinical participants was also recommended by Garber and

Hollon (1991) who noted, that when undertaking specificity studies that require heterogeneous control, the best compromise is often to involve nonclinical participants, particularly where it is not practical to obtain samples of diagnostically homogeneous controls. Based on these considerations, it was decided that a 'nonclinical' population would provide a sufficiently large range of people for studies exploring the cognitive specificity in relation to anger, depression and anxiety.

Appendix C

Informed consent information for Study 1, Study 2 and Study 3.

EMOTIONS QUESTIONNAIRE

Plain Language Statement

My name is Monica Maud and I am a student in the Professional Doctorate in Clinical Psychology at the University of Ballarat. This research is designed to address some of the unanswered questions about emotions: what thoughts accompany different emotions and what may trigger these thoughts. If we can understand these things we may be able to stop the damage caused when people are extremely emotional. Because there has not been a great deal of research in this area, your involvement will make an important contribution to our understanding of emotion.

What you will be asked to do

If you agree to participate, you will be given a questionnaire to complete. It will take between 10 to 15 minutes.

You will be asked questions about your emotions (e.g., When do you feel distant from other people?

Informed Consent

If you decide to complete and return the questionnaire, this will be taken as an indication of your informed consent. You are, of course, free to cease your participation at any time before handing in your questionnaire, should you so wish. After that, you cannot withdraw because all questionnaires are anonymous.

Your Wellbeing

It is not very likely that you will find any aspects of the study upsetting, but if you do, you might wish to speak to a counsellor. A list of useful contacts has been included at the end of the questionnaire for you to retain. Some additional strategies to relieve mild distress have also been included.

Your responses will be treated confidentially.

In order to protect your confidentiality:

1) At no stage will you be required to identity yourself on the questionnaire.
2) This means that there is no way that your responses will be able to identify you or be linked to you.
3) Only group data will be reported.
4) As is required by the University, all data will be securely retained for 5 years and then destroyed.

Any questions or concerns,

Please feel able to contact the Principal Researcher, Dr Angus McLachlan, Department of Psychology, Ballarat University, Mt Helen, Victoria 3350, Phone, (03-35279666).

Should you have concerns about the conduct of this research project, please contact the Executive Officer, Human Research Ethics Committee, Office of Research, University of Ballarat, P.O. 663, Victoria, 3353. Telephone (03) 53279765.

Interested In The Results Of Study?

If you would like to find out the outcome of this research, please send me a separate letter with your name and address and I will send out a brief summary when I complete the study in 2004.

Monica Maud, Department of Psychology, University of Ballarat, Gear Avenue, Mt Helen, Victoria, 3350.

Emotions Questionnaire

1. If you decide to participate please answer all questions.
2. Please return the completed white pages to me at the session (or, if not completed at group session, place in the envelope supplied and post to me)
3. Please read and keep the Wellbeing Statement on the yellow page.
4. Please keep and dispose of the blue sheet.

HOW TO COMPLETE THE QUESTIONNAIRES

Please read the instructions at the start of each set of questions.

There are no right or wrong answers to these questions.

Appendix D

Demographics Questionnaire

Demographics Questionnaire

Please complete all questions. Your answers are confidential so please make sure that you do not put your name on any piece of paper.

1. Tick one. Are you?

1. ☐ Male 2. ☐ Female

2. What is your age? .....years

3. Have you ever been treated for (or attended groups) for any of the following? If 'YES,' tick those which apply.

1. ☐ Depression
2. ☐ Anxiety
3. ☐ Stress
4. ☐ Anger Management
5. ☐ Panic
6. ☐ Obsessive Compulsive Disorder
7. ☐ Schizophrenia
8. ☐ Attention Deficit Disorder
9. ☐ Phobias
10. ☐ Post Traumatic Stress Disorder
11. ☐ Post Natal Depression
12. ☐ Other

Appendix E.

Young Schema Questionnaire

WHAT YOU FEEL

Listed below are statements that a person might use to describe himself or herself. Please read each statement and decide how well it describes you.
When you are not sure, base your answer on what you emotionally **feel,** not on what you are **thinking** to be true. Choose the **highest rating from 1-6** that describes you, and write the number in the space before the statement.

Rating Scale

1 = Completely untrue of me **2 = Mostly untrue of me**
3 = Slightly more true than untrue **4 = Moderately true of me**
5 = Mostly true of me **6 = Describes me perfectly**

1. ___ Most of the time, I haven't had someone to nurture me, share him/herself with me, or care deeply about everything that happens to me

2. ___ In general, people have not been there to give me warmth, holding, and affection.

3. ___ For much of my life, I haven't felt that I am special to someone.

4. ___ For the most part, I have not had someone who really listens to me, understands me, or is tuned into my true needs and feelings.

5. ___ I have rarely had a strong person to give me sound advice or affection when I'm not sure what to do.

6. ___ I find myself clinging to people I'm close to, because I'm afraid they'll leave me.

7. ___ I need other people so much that I worry about losing them.

8. ___ I worry that people I feel close to will leave or abandon me.

9. ___ When I feel someone I care for pulling away from me, I get desperate.

10. ___ Sometimes I am so worried about people leaving me that I drive them away.

___

11. ___ I feel that people will take advantage of me.

12. ___ I feel that I cannot let my guard down in the presence of other people, or else they will intentionally hurt me.

13. ___ It is only a matter of time before someone betrays me.

14. ___ I am quite suspicious of other people's motives.

15. ___ I am usually on the lookout for people's ulterior motives.

16. ___ I don't fit in.

17. ___ I'm fundamentally different from other people.

18. ___ I don't belong.

19. ___ I feel alienated from other people.

20. ___ I always feel on the outside of groups.

21. ___ No man/woman I desire could love me once he/she saw my faults.

22. ___ No one would want to stay close to me if he/she knew the real me.

23. ___ I'm unworthy of the love, attention, and respect of others.

24. ___ I feel that I'm not lovable.

25. ___ I am too unacceptable in very basic ways to reveal myself to other people.

26. ___ Almost nothing I do at work (at school) is as good as other people can do.

27. ___ I'm incompetent when it comes to achievement.

28. ___ Most other people are more capable than I am in areas of work and achievement.

29. ___ I'm not as talented as most people are at their work.

30. ___ I'm not as intelligent as most people when it comes to work (school).

___

31. ___ I do not feel capable of getting by on my own in everyday life.

32. ___ I think of myself as a dependent person, when it comes to everyday functioning.

33. ___ I lack common sense.

34. ___ My judgment cannot be relied upon in everyday situations.

35. ___ I don't feel confident about my ability to solve everyday problems that come up.

36. ___ I can't seem to escape the feeling that something bad is about to happen.

37. ___ I feel that a disaster (natural, criminal, financial, or medical) could strike at any moment.

38. ___ I worry about being attacked.

39. ___ I worry that I'll lose all my money and become destitute.

40. ___ I worry that I'm developing a serious illness, even though nothing serious has been diagnosed by a physician.

41. ___ I have not been able to separate myself from my parent(s), the way that other people my age seem to.

42. ___ My parent(s) and I tend to be over-involved in each other's lives and problems.

43. ___ It is very difficult for my parent(s) and me to keep intimate details from each other, without feeling betrayed or guilty.

44. ___ I often feel that my parent(s) are living through me -- I don't have a life of my own.

45. ___ I often feel that I do not have a separate identity from my parent(s) or partner.

46. ___ I think that if I do what I want, I'm only asking for trouble.

47. ___ I feel that I have no choice but to give in to other people's wishes, or else they will retaliate or reject me in some way.

___

48. ___ In relationships, I let the other person have the upper hand.

49. ___ I've always let others make choices for me, so I don't really know what I want for myself.

50. ___ I have a lot of trouble demanding that my rights be respected and that my feelings be taken into account.

51. ___ I'm the one who usually ends up taking care of the people I'm close to.

52. ___ I am a good person because I think of others more than myself.

53. ___ I'm so busy doing things for the people I care about that I have little time for myself.

54. ___ I've always been the one who listens to everyone else's problems.

55. ___ Other people see me as doing too much for others and not enough for myself.

56. ___ I am too self-conscious to show positive feelings to others (e.g., affection, showing I care).

57. ___ I find it embarrassing to express my feelings to others.

58. ___ I find it hard to be warm and generous.

59. ___ I control myself so much that people think I am unemotional.

60. ___ People see me as uptight emotionally.

61. ___ I must be the best at most of what I do, I can't accept second best.

62. ___ I try to do my best, I can't settle for 'good enough.'

63. ___ I must meet my responsibilities.

64. ___ I feel there is constant pressure for me to achieve and get things done.

65. ___ I can't let myself off the hook easily or make excuses for my mistakes.

66. ___ I have a lot of trouble accepting 'no' for an answer when I want something from other people.

___

67. ___ I'm special and shouldn't have to accept many of the restrictions placed on other people.

68. ___ I hate to be constrained or kept from doing what I want.

69. ___ I feel that I shouldn't have to follow the normal rules and conventions other people do.

70. ___ I feel that what I have to offer is of greater value than the contributions of others.

71. ___ I can't seem to discipline myself to complete routine or boring tasks.

72. ___ If I can't reach a goal, I become easily frustrated and give up.

73. ___ I have a very difficult time sacrificing immediate gratification to achieve a long-range goal.

74. ___ I can't force myself to do things I don't enjoy, even when I know it's for my own good.

75. ___ I have rarely been able to stick to my resolutions.

76. ___ If I make a mistake, I deserve to be punished.

77. ___ If I don't try my hardest, I should expect to lose out.

78. ___ There is no excuse if I make a mistake.

79. ___ People who don't 'pull their own weight' should get punished in some way.

80. ___ Most of the time, I don't accept the excuses other people make. They're just not willing to accept responsibility and pay the consequences.

81. ___ If I don't do the job, I should suffer the consequences.

82. ___ I often think about mistakes I've made and feel angry with myself.

83. ___ When people do something bad, I have trouble applying the phrase, 'Forgive and forget.'

84. ___ I hold grudges, even after someone has apologized.

85. ___ I get upset when I think someone has been 'let off the hook' too easily.

86. ___ I get angry when people make excuses for themselves, or blame other people for their problems.

87. ___ It doesn't matter why I made a mistake; when I do something wrong, I should pay the price.

88. ___ I give myself a really hard time when I mess things up.

89. ___ I'm a bad person who deserves to be punished.

Appendix F

State Trait Anger Scale (STAS)

HOW DO YOU FEEL NOW?

A number of statements that people have used to describe how they feel are given below. Read the statements below and indicate **how you feel at the moment** by placing the appropriate number next to each item.

Rating Scale

1= Not at all **2 = Somewhat** **3 = Moderately** **4 = Very much so**

1. _____ I am mad.
2. _____ I feel angry.
3. _____ I am burned up.
4. _____ I feel irritated.
5. _____ I feel frustrated.
6. _____ I feel aggravated.
7. _____ I feel like I'm about to explode.
8. _____ I feel like banging on the table.
9. _____ I feel like yelling at somebody.
10. _____ I feel like swearing.
11. _____ I am furious.
12. _____ I feel like hitting someone.
13. _____ I feel like breaking things.
14. _____ I am annoyed.
15. _____ I am resentful.

Trait Anger Items of STAS

HOW DO YOU GENERALLY FEEL?

A number of statements that people have used to describe themselves are given below. Read the statements below and indicate how you **generally feel** by placing the appropriate number next to each item.

Rating Scale

1= Almost never 2 = Somewhat 3 = Often 4 = Almost always

1	I have a fiery temper.
2	I am quick tempered.
3	I am a hot headed person.
4	I get annoyed when I am singled out for correction.
5	It makes me furious when I am criticized in front of others.
6	I get angry when I'm slowed down by others' mistakes.
7	I feel infuriated when I do a good job and get a poor evaluation.
8	I fly off the handle.
9	I feel annoyed when I am not given recognition for doing good work.
10	People who think they are always right irritate me.
11.	When I get mad, I say nasty things.
12	I generally feel irritated.
13	I generally feel angry.
14	When I get frustrated, I feel like hitting someone.
15	It makes my blood boil when I am pressured.

Appendix G
Depression Anxiety and Stress Scale

HOW DID YOU FEEL OVER THE PAST WEEK?

Please read each statement and write the number 0, 1, 2, or 3 to indicate how much the statement applied to you **over the past week.**

There are no right or wrong answers. Do not spend too much time on any statement.

Rating Scale **0 = Did not apply to me at all.**
1 = Applied to me to some degree, or some of the time
2 = Applied to me a considerable degree, or a good part of time
3 = Applied to me very much, or most of the time

1. I couldn't seem to experience any positive feeling at all.
2. I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion).
3. I found it difficult to work up the initiative to do things.
4. I experienced trembling (e.g., in the hands).
5. I was worried about situations in which I might panic and make a fool of myself.
6. I felt that I had nothing to look forward to.
7. I felt down-hearted and blue.
8. I felt close to panic.
9. I was unable to become unenthusiastic about anything.
10. I felt I wasn't worth much as a person.
11. I was aware of the action of my heart in the absence of physical exertion (e.g., sense of heart rate increase, heart missing) a beat).
12. I felt scared without any good reason.
13. I felt life was meaningless.
14. I found it hard to wind down.

Appendix H

Wellbeing Statement

IMPORTANT
'WELLBEING STATEMENT'
Please keep and read this blue sheet.

Your Wellbeing

Even though this was not the intention of the research, I am aware that on some occasions a person completing a questionnaire such as one of these, may feel some discomfort or become upset by the content of some items. Your wellbeing is important so, if this applies to you, you should make an appointment to see a counsellor or psychologist.

1 If you are a **student**, you could contact the Student Counselling Service (Mt Helen Campus on 53279470, SMB on 53278000).

2 If you are not a student, you could contact the Community Health Centre and ask to speak to a counsellor (53331635).

3 Or you could ring **LIFELINE**, which offers a 24-hour personal service, on 13 11 14

You could try some of these suggestions:

Remember, our emotions can be related to our thoughts. So dwelling on things that upset you can make the situation even more upsetting.

If you are feeling upset NOW as a result of completing the questionnaire, you could try one/some of the following strategies:

4 Tell yourself that the upset comes from the past, it's like looking at an old photo, and if you put the photo away your mood will lift.

5 Tell yourself that what upset you is not happening now.

6 Do something to distract yourself (like go for a walk, do some dishes, listen to some cheerful music).

7 Phone a friend.

8 Talk to a family member.

If you feel the need for further help, make an appointment to see a counsellor or a psychologist

Any questions? Please feel able to contact the Principal Researcher, Dr Angus McLachlan, Department of Psychology, Ballarat University, Mt Helen, Victoria 3350, Phone, (03-53279666).

Appendix I

Anger Induction YSQ items.....

Listed below are statements that a person might use to describe himself or herself. Please read each statement and decide how well it describes you. When you are not sure, base your answer on what you emotionally **feel.** Not on what you are **thinking** to be true. Choose the **highest rating from 1-6** that describes you, and write the number in the space before the statement.

Rating Scale

1 = Completely untrue of me
2 = Mostly untrue of me
3 = Slightly more true than untrue
4 = Moderately true of me
5 = Mostly true of me
6 = Describes me perfectly

1. _____ I feel that people will take advantage of me.
2. _____ I feel that I cannot let my guard down in the presence of other people. Or else they will intentionally hurt me.
3. _____ It is only a matter of time before someone betrays me.
4. _____ I am quite suspicious of other people's motives.
5. _____ I'm usually on the lookout for people's ulterior motives.
6. _____ I can't seem to discipline myself to complete routine or boring tasks.
7. _____ If I can't reach a goal. I become easily frustrated and give up.
8. _____ I have a difficult time sacrificing immediate gratification to achieve a long-range goal
9. _____ I can't force myself to do things I don't enjoy, even when I know it's for my own good.
10. _____ I have rarely been able to stick to my resolutions.

Appendix J

Depression Induction YSQ items.....

Listed below are statements that a person might use to describe himself or herself. Please read each statement and decide how well it describes you. When you are not sure, base your answer on what you emotionally **feel.** Not on what you are **thinking** to be true. Choose the **highest rating from 1-6** that describes you, and write the number in the space before the statement.

Rating Scale

1 = Completely untrue of me
2 = Mostly untrue of me
3 = Slightly more true than untrue
4 = Moderately true of me
5 = Mostly true of me
6 = Describes me perfectly

1. _____ I feel that people will take advantage of me.
2. _____ I feel that I cannot let my guard down in the presence of other people, or else they will intentionally hurt me.
3. _____ It is only a matter of time before someone betrays me.
4. _____ I am quite suspicious of other people's motives.
5. _____ I am usually on the lookout for people's ulterior motives.
6. _____ I don't fit in.
7. _____ I'm fundamentally different from other people.
8. _____ I don't belong: I'm a loner.
9. _____ I feel alienated from other people.
10. _____ I always feel on the outside of groups.

Appendix K

Anxiety Induction YSQ Items

Listed below are statements that a person might use to describe himself or herself. Please read each statement and decide how well it describes you. When you are not sure, base your answer on what you emotionally **feel.** Not on what you are **thinking** to be true. Choose the **highest rating from 1-6** that describes you, and write the number in the space before the statement.

Rating Scale

1 = Completely untrue of me
2 = Mostly untrue of me
3 = Slightly more true than untrue
4 = Moderately true of me
5 = Mostly true of me
6 = Describes me perfectly

1. _____ I can't seem to escape the feeling that something bad is about to happen.
2. _____ I feel that a disaster (natural, criminal, financial, or medical) could strike at any moment.
3. _____ I worry about being attacked.
4. _____ I worry that I'll lose my money ad become destitute.
5. _____ I worry that I'm developing a serious illness, even though nothing serious has been diagnosed by a physician.
6. _____ I think that if I do what I want, I'm only asking for trouble.
7. _____ I feel that I have not choice but to give in to other people's wishes, or else they will retaliate or reject me in some way.
8. _____ In relationships, I let the other person have the upper hand.
9. _____ I've always let others make choices for me, so I really don't know what I want for myself.
10. _____ I have a lot of trouble demanding that my rights be respected and that my feelings be taken into account.

Appendix L

Feelings Indicator.

FEELING INDICATOR

Please indicate how you are feeling **now** by circling the number that fits your feeling/s at this moment.

Circle a number to indicate the level of that feeling:

1 = Strongly agree,
2 = Agree,
3 = Neither agree or disagree,
4 = Disagree,
5 = Strongly disagree

1.	Right now I feel calm	1	2	3	4	5
2.	Right now I feel satisfied	1	2	3	4	5
3.	Right now I feel angry	1	2	3	4	5
4.	Right now I feel depressed	1	2	3	4	5
5.	Right now I feel anxious	1	2	3	4	5
6.	Right now I feel amused	1	2	3	4	5
7.	Right now I feel stressed	1	2	3	4	5
8.	Right now I feel pleased	1	2	3	4	5
9.	Right now I feel helpless	1	2	3	4	5
10.	Right now I feel happy	1	2	3	4	5

Thank you, for your participation.

Please either had the white paper to me or if envelope provided, place it in the envelope provided and place in a post box.
Please remember to read and retain the blue and yellow sheets.

Appendix M

Activity for Anger Induction.

Please read through the items again and think about each item that you have just rated, and write down an example of a time or an incident when this thought occurred to you. You may use the same episode for more than one statement. In fact it is possible that the one episode will do for all the items but think about each one anyway in case it gets you thinking about another time or incident.

Think of a time when you have felt that people will take advantage of me.

Think of a time when you felt that you couldn't let your guard down in the presence of other people.

Think of a time whey you thought that it was only a matter of time before someone betrayed you.

Think of a time when you were suspicious of other people's motives.

Think of a time when you were on the lookout for people's ulterior motives.

Think of a time that you felt that you didn't fit in.

Think of a time that you felt you were fundamentally different from other people.

Think about a time that you felt that you didn't belong.

Think about a time when you felt alienated from other people.

Think about a time that you felt that you were on the outside of a group.

Please turn to Part D which is on the white sheet.

Appendix N

Activity for Depression Induction.

Please read through the items again and think about each item that you have just rated, and write down an example of a time or an incident when this thought occurred to you. You may use the same episode for more than one statement. In fact it is possible that the one episode will do for all the items but think about each one anyway in case it gets you thinking about another time or incident.

Think about a time when you felt that something bad was about to happen.

Think about a time that you felt that a disaster (natural, criminal, financial, or medical) could strike at any moment.

Think about a time when you were worried about being attacked.

Think about a time that you were worried that you'd lose all your money and become destitute.

Think about a time when you were worried that you were developing a serious illness, even though nothing serious had been diagnosed by a physician.

Think about a time that you thought that if you did what you wanted, you'd only asking for trouble.

Think about a time that you felt that you had no choice but to give in to other people's wishes, or else they would retaliate or reject you in some way.

Think about a time that you had a difficult time sacrificing immediate gratification to achieve a long-range goal

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Think about a time that in a relationship, you let the other person have the upper hand.

Think about a time that you had a lot of trouble demanding that your rights be respected and that your feelings be taken into account.

Please turn to Part D which is on the white sheet.

Appendix O

Activity for Anxiety Induction.

Please read through the items again and think about each item that you have just rated, and write down an example of a time or an incident when this thought occurred to you. You may use the same episode for more than one statement. In fact it is possible that the one episode will do for all the items but think about each one anyway in case it gets you thinking about another time or incident.

Think of a time when you have felt that people will take advantage of me.

Think of a time when you felt that you couldn't let your guard down in the presence of other people.

Think of a time whey you thought that it was only a matter of time before someone betrayed you.

Think of a time when you were suspicious of other people's motives.

Think of a time when you were on the lookout for people's ulterior motives.

Think of a time when you couldn't seem to discipline yourself to do routine or boring tasks.

Think about a time when you became easily frustrated and gave up on doing something which would have helped you to reach a goal.

Think about a time when you had a difficult time sacrificing immediate gratification to achieve a long-range goal.

Think about a time when you couldn't force yourself to do something you didn't enjoy, even though you knew it was for your own good.

Think about a time when you didn't stick to one of your resolutions

Appendix P

Neuharth Parenting Types

Neuharth (1998) studied the effects of controlling parents on their adult offspring and discerned eight subtypes of controlling parents. These are shown in Table 23.

Table 23

Neuharth's Parenting Types, their characteristic behaviours and their Effects on Offspring

Parenting Type	Characteristic Behaviour	Effect on Offspring
Depriving Parents	Disapproving	Suffer self-doubt
	Emotionally unreachable	Lack confidence
	Use love as a commodity to be withheld	Feel unlovable
		Experience depression
Perfectionistic Parents	Driven	Emotionally 'bottled up'
	Compulsive	Compulsive
	Emphasize status	Self-doubting
	Had to have everything perfect	Depressed
Cultlike Parents	Fearful of dissent	Distrustful
	Seek control through 'ironclad beliefs'	Gullible
		Feel socially isolated
	Feared being questioned about their beliefs	Show reduced initiative
Chaotic Parents	Had difficulties with limits	Confused about emotion
	Were inconsistent	Hypervigilant
	Used double-binds so that their offspring received ambiguous messages	Had little trust in others
Smothering Parents	Overbearingly scrutinized their offspring,	Lacked healthy interpersonal boundaries
	Feared being alone	Had difficulty with commitment and intimacy
	Discouraged their child's individuality	Were extremely dependent
	Had difficulty distinguishing between their wants and those of their children	Showed reduced initiative
Using Parents	Demanded loyalty and admiration	Felt used,
	Were emotionally immature	Had poor self-images
	Were insensitive to others' needs	Had difficulties with emotion
		Were unclear about love
Abusing	Used brute force	Were depressed
	'Blamed-the-victim'	Had addictions
	Felt they had a right to abuse their children	Could not trust others
		Believed that they deserved to be treated in this way
	Had poor impulse control	
Childlike Parents	Were incapable of behaving like adults	Tended to put others first
	Wanted others to look after them	Had difficulty in expressing anger
	Induced guilt in their offspring	

Appendix Q

Young's Parenting Inventory .....

PARENT RATINGS

Listed below are statements that you might use to describe your parents.

Please read each statement and decide how well it describes your parents. Choose the **highest rating from 1 to 6** that describes your mother, then your father, **when you were a child** and write the number in the spaces beside each statement.

If someone substituted as your mother or father, please rate the scale for that person. If you did not have a mother or father, leave the appropriate column blank.

Rating Scale

1= Completely untrue **2 = Mostly untrue**
3 = Slightly more true than untrue **4 = Moderately true**
5 = Mostly true **6 = Describes him/her perfectly**

Mother	**Father**	
----1.	-----1.	Loved me, treated me as someone special.
----2.	-----2.	Spent time with me and paid attention to me.
-----3.	------.3	Gave me helpful guidance and direction.
-----4.	-----4.	Listened to me, understood me, shared feelings with me.
-----5.	-----5.	Was warm and physically affectionate.
-----6.	-----6.	Died or left the house permanently when I was a child.
-----7.	-----7.	Was moody, unpredictable, or an alcoholic.
-----8.	-----8.	Preferred my brother(s) or sister(s) to me.
-----9.	-----9.	Withdrew or left me alone for extended periods.
-----10.	-----10.	Lied to me, deceived me or betrayed me.
-----11.	-----11.	Abused me physically, emotionally, or sexually.
-----12.	-----12.	Use me to satisfy his/her needs.
-----13.	-----13.	Seemed to get pleasure from hurting me.

Mother	Father	
-----14.	-----14.	Worried excessively that I would get hurt.
-----15.	-----15.	Was fearful that I would get sick.
-----16.	-----16.	Was a fearful or phobic person.
-----17.	-----17.	Overprotected me.
-----18.	-----18.	Made me feel I couldn't rely on my decisions or judgments.
-----19.	-----19.	Did too many things for me instead of letting me do things on my own.
-----20.	-----20.	Treated me as if I were younger than I really was.
-----21.	-----21.	Criticized me a lot.
-----22	-----22.	Made me feel unloved or rejected.
-----23.	-----23.	Treated me as if there was something wrong with me.
-----24.	-----24.	Made me ashamed of myself in important details.
-----25.	-----25.	Never taught me the discipline necessary to succeed in school.
-----26.	-----26.	Treated me as if I was stupid or untalented.
-----27.	-----27.	Didn't really want me to succeed.
-----28.	-----28.	Expected me to be a failure in life.
-----29.	-----29.	Treated me as if my opinions or desires didn't count.
-----30.	-----30.	Did what he/she wanted, regardless of my needs.
-----31.	-----31.	Controlled my life so that I had little freedom of choice.
-----32	-----32.	Everything had to be on his/her terms.
-----33.	-----33.	Sacrificed his/own needs for the sake of the family.
-----34.	-----34.	Was unable to handle many daily responsibilities, so I had to do more than my fair share.
-----35.	-----35.	Was unhappy a lot and relied on me for support and understanding.
-----36.	-----36.	Made me feel that I was strong, and should take care of other people.
-----37.	-----37.	Had very high expectations for him/herself.

Mother	Father	
-----38.	------38.	Expected me to do my best at all times.
------39.	------39.	Was a perfectionist in many areas; things had to be 'just so.'
------40.	------40.	Made me feel that almost nothing I did was quite good enough.
------41.	------41.	Had strict, rigid rules of right and wrong.
-----42	------42.	Became impatient if things weren't done properly or quickly enough.
-----43.	------43.	Placed more importance on doing things well than on having fun or relaxing.
-----44.	------44.	Spoiled me, or was overindulgent, in many areas.
------45.	------45.	Made me feel I was special, better than most other people.
-----46.	------46.	Was demanding, expected to get things his/her way.
-----47.	------47.	Didn't teach me that I had responsibilities to other people.
-----48.	------48.	Provided very little discipline or structure for me.
-----49.	------49.	Set few rules or responsibilities for me.
-----50.	------50.	Allowed me to get very angry or lose control
-----51.	------51.	Was an undisciplined person.
-----52	------52.	We were so close that we understood each other almost perfectly.
-----53.	------53.	I felt that I didn't have enough individuality or sense of self separate from him/her.
-----54.	-----54.	I felt that I didn't have my own sense of direction while I was growing up because he/she was such a strong person.
-----55.	-----55.	I felt that we would hurt each other if each of us went away from the other.
-----56.	-----56.	Worried a lot about the family's financial problems.
-----57.	-----57.	Made me feel that if I made even a small mistake, something bad might happen.

Mother	**Father**	
-----58.	------58.	Had a pessimistic outlook, expected the worst outcome.
-----59.	-----59.	Focused on the negative aspects of life or things going wrong.
-----60.	-----60.	Had to have everything under control.
-----61.	------61.	Was uncomfortable expressing affection or vulnerability.
-----62	-----62.	Was structured and organized; preferred the familiar over change.
-----63.	-----63.	Rarely expressed anger.
-----64.	-----64.	Was private; rarely discussed his/his feelings.
-----65.	-----65.	Would become angry or harshly critical when I did something wrong.
-----66.	-----66.	Would punish me when I did something wrong.
-----67.	-----67.	Would call me names (like 'stupid' or 'idiot') when I made mistakes.
-----68.	-----68.	Blamed people when things went wrong.
-----69.	-----69.	Was concerned with social status and appearance.
-----70.	-----70.	Placed strong emphasis on success and competition.
-----71.	-----71.	Was concerned with how my behaviour would reflect on him/her in the eyes of others.
-----72	-----72.	Seemed to love me more or pay attention to me when I excelled

Appendix R

Details of YPI Factors for Mother and Father Parenting

This is presented in three sections: first, the component items of Mother factors; second the component items associated with Father's factors; third, comparisons of Rejecting Father and Mother factors; comparison of Controlling Mother and Father factors; and comparison of Rejecting Father and Controlling Mother factors.

Before the components analysis was undertaken, the following items were removed:

Mother Items Deleted before Factor Analysis

6. Died or left the house permanently when I was a child.
10. Lied to me, deceived me or betrayed me.
12. Use me to satisfy his/her needs.
14. Worried excessively that I would get hurt.
15. Was fearful that I would get sick.
26. Treated me as if I was stupid or untalented.
33. Sacrificed his/own needs for the sake of the family.
34. Was unable to handle many daily responsibilities, so I had to do more than my fair share.
35. Was unhappy a lot and relied on me for support and understanding.
36. Made me feel that I was strong, and should take care of other people.
37. Had very high expectations for him/herself.
38. Expected me to do my best at all times.
44. Spoiled me, or was overindulgent, in many areas.
45. Made me feel I was special, better than most other people.
47. Didn't teach me that I had responsibilities to other people.
48. Provided very little discipline or structure for me.
49. Set few rules or responsibilities for me.
50. Allowed me to get very angry or lose control
51. Was an undisciplined person.
55. I felt that we would hurt each other if each of us went away from the other.
56. Worried a lot about the family's financial problems.
61. Was uncomfortable expressing affection or vulnerability.
63. Rarely expressed anger.
64. Was private; rarely discussed his/his feelings.
66. Would punish me when I did something wrong.
72. Seemed to love me more or pay attention to me when I excelled.

MOTHER FACTORS

Rejecting Mother (24 items)

22. Made me feel unloved or rejected.
24. Made me ashamed of myself in important details.
1. (DID NOT) Loved me, treated me as someone special.
23. Treated me as if there was something wrong with me.
28. Expected me to be a failure in life.
11. Abused me physically, emotionally, or sexually.
67 Would call me names (like 'stupid' or 'idiot') when I made mistakes.
2. (DID NOT) Spent time with me and paid attention to me.
27. Didn't really want me to succeed.
9. Withdrew or left me alone for extended periods.
3. Gave me helpful guidance and direction.
13. Seemed to get pleasure from hurting me.
4. Listened to me, understood me, shared feelings with me.
29. Treated me as if my opinions or desires didn't count.
30. Did what he/she wanted, regardless of my needs.
12. Criticized me a lot.
25. Never taught me the discipline necessary to succeed in school.
5. Was (NOT)warm and physically affectionate.
8. Preferred my brother(s) or sister(s) to me.
68. Blamed people when things went wrong.
52. We were so close that we understood each other almost perfectly.
7. Was moody, unpredictable, or an alcoholic.

Controlling Mother (24 items)

60. Had to have everything under control.
43. Placed more importance on doing things well than on having fun or relaxing.
39. Was a perfectionist in many areas; things had to be 'just so.'
54. I felt that I didn't have my own sense of direction while I was growing up because he/she was such a strong person.
42. Became impatient if things weren't done properly or quickly enough.
71. Was concerned with how my behaviour would reflect on him/her in the eyes of others.
46. Was demanding, expected to get things his/her way.
20. Treated me as if I were younger than I really was.
41. Had strict, rigid rules of right and wrong.
53. I felt that I didn't have enough individuality or sense of self separate from him/her.
18. Made me feel I couldn't rely on my decisions or judgments.
17. Overprotected me.
57. Made me feel that if I made even a small mistake, something bad might happen.
19. Did too many things for me instead of letting me do things on my own.
31. Controlled my life so that I had little freedom of choice.
32. Everything had to be on his/her terms.
40. Made me feel that almost nothing I did was quite good enough.
65. Would become angry or harshly critical when I did something wrong.
59. Focused on the negative aspects of life or things going wrong.
62. Was structured and organized; preferred the familiar over change.
70. Placed strong emphasis on success and competition.
58. Had a pessimistic outlook, expected the worst outcome.
69. Was concerned with social status and appearance.
16. Was a fearful or phobic person.

Section B

FATHER FACTORS

As with the mother items, a number of items were removed before component analysis. The following items were removed before Principal Components Analysis:

Father Items Deleted

6. Died or left the house permanently when I was a child.
16. Was a fearful or phobic person.
33. Sacrificed his/own needs for the sake of the family.
34. Was unable to handle many daily responsibilities, so I had to do more than my fair share.
35. Was unhappy a lot and relied on me for support and understanding.
36. Made me feel that I was strong, and should take care of other people.
37. Had very high expectations for him/herself.
44. Spoiled me, or was overindulgent, in many areas.
45. Made me feel I was special, better than most other people.
50. Allowed me to get very angry or lose control
55. I felt that we would hurt each other if each of us went away from the other.
56. Worried a lot about the family's financial problems.
58. Had a pessimistic outlook, expected the worst outcome.
61. Was uncomfortable expressing affection or vulnerability.
62. Was structured and organized; preferred the familiar over change.
63. Rarely expressed anger.
64. Was private; rarely discussed his/his feelings.

Father Factors

Rejecting Father (33 Items)

22. Made me feel unloved or rejected.
1. (DID NOT) Loved me, treated me as someone special.
3. (DID NOT) Gave me helpful guidance and direction.
30. Did what he/she wanted, regardless of my needs.
4. (DID NOT) Listened to me, understood me, shared feelings with me.
2. (DID NOT) Spent time with me and paid attention to me.
29. Treated me as if my opinions or desires didn't count.
28. Expected me to be a failure in life.
67. Would call me names (like 'stupid' or 'idiot') when I made mistakes.
25. Never taught me the discipline necessary to succeed in school.
9. Withdrew or left me alone for extended periods.
26. Treated me as if I was stupid or untalented.
23. Treated me as if there was something wrong with me.
21. Criticized me a lot.
48. Provided very little discipline or structure for me.
24. Made me ashamed of myself in important details.
5. Was warm and physically affectionate.
7. Was moody, unpredictable, or an alcoholic.
47. Didn't teach me that I had responsibilities to other people.
27. Didn't really want me to succeed.
11. Abused me physically, emotionally, or sexually.
68. Blamed people when things went wrong.
57. Made me feel that if I made even a small mistake, something bad might happen.
10. Lied to me, deceived me or betrayed me.
49. Set few rules or responsibilities for me.
52. We were so close that we understood each other almost perfectly.
40. Made me feel that almost nothing I did was quite good enough.
51. Was an undisciplined person.
13. Seemed to get pleasure from hurting me.
8. Preferred my brother(s) or sister(s) to me.
12. Use me to satisfy his/her needs.
59. Focused on the negative aspects of life or things going wrong.
38. Expected me to do my best at all times.
54. I felt that I didn't have my own sense of direction while I was growing up because he was such a strong person.

Controlling Father (21 Items)

41. Had strict, rigid rules of right and wrong.
60. Had to have everything under control.
43. Placed more importance on doing things well than on having fun or relaxing.
39. Was a perfectionist in many areas; things had to be 'just so.'
31. Controlled my life so that I had little freedom of choice.
42. Became impatient if things weren't done properly or quickly enough..
18. Made me feel I couldn't rely on my decisions or judgments.
17. Overprotected me.
65. Would become angry or harshly critical when I did something wrong.
32. Everything had to be on his/her terms.
20. Treated me as if I were younger than I really was.
46. Was demanding, expected to get things his/her way.
71. Was concerned with how my behaviour would reflect on him/her in the eyes of others.
70. Placed strong emphasis on success and competition.
15. Was fearful that I would get sick.
66. Would punish me when I did something wrong.
69. Was concerned with social status and appearance.
19. Did too many things for me instead of letting me do things on my own.
14. Worried excessively that I would get hurt.
72. Seemed to love me more or pay attention to me when I excelled
53. I felt that I didn't have enough individuality or sense of self separate from him.
67. Would call me names (like 'stupid' or 'idiot') when I made mistakes.

Section C

COMPARISON OF REJECTING MOTHER AND FATHER COMPONENTS

Common Items for Rejecting Mothers and Rejecting Fathers 24 items)

22. Made me feel unloved or rejected.
24. Made me ashamed of myself in important details.
1. (DID NOT) Loved me, treated me as someone special.
23. Treated me as if there was something wrong with me.
28. Expected me to be a failure in life.
11. Abused me physically, emotionally, or sexually.
67 Would call me names (like 'stupid' or 'idiot') when I made mistakes.
2. (DID NOT) Spent time with me and paid attention to me.
9. Withdrew or left me alone for extended periods.
3. Gave me helpful guidance and direction.
13. Seemed to get pleasure from hurting me.
4. Listened to me, understood me, shared feelings with me.
29. Treated me as if my opinions or desires didn't count.
30. Did what he/she wanted, regardless of my needs.
5. Was (NOT)warm and physically affectionate.
8. Preferred my brother(s) or sister(s) to me.
68. Blamed people when things went wrong.
52. We were so close that we understood each other almost perfectly.
7. Was moody, unpredictable, or an alcoholic.
27. Didn't really want me to succeed.
25. Never taught me the discipline necessary to succeed in school.
21. Criticized me a lot.

Rejecting Father Items not shared with rejecting Mothers (13 Items)

26. Treated me as if I was stupid or untalented.
21. Criticized me a lot.
48. Provided very little discipline or structure for me.
47. Didn't teach me that I had responsibilities to other people.
57. Made me feel that if I made even a small mistake, something bad might happen.
10. Lied to me, deceived me or betrayed me.
49. Set few rules or responsibilities for me.
40. Made me feel that almost nothing I did was quite good enough.
51. Was an undisciplined person.
12. Use me to satisfy his/her needs.
59. Focused on the negative aspects of life or things going wrong.
38. Expected me to do my best at all times.
54. I felt that I didn't have my own sense of direction while I was growing up because he was such a strong person.

Items Specific to Rejecting Mothers (NONE)

COMPARISON OF REJECTING MOTHER AND FATHER COMPONENTS

Common Items For Controlling Mothers And Father (16 Items)

41. Had strict, rigid rules of right and wrong.
60 Had to have everything under control.
43. Placed more importance on doing things well than on having fun or relaxing.
39. Was a perfectionist in many areas; things had to be 'just so.'
31. Controlled my life so that I had little freedom of choice.
42. Became impatient if things weren't done properly or quickly enough.
18. Made me feel I couldn't rely on my decisions or judgments.
17. Overprotected me.
65. Would become angry or harshly critical when I did something wrong.
32. Everything had to be on his/her terms.
20. Treated me as if I were younger than I really was.
46. Was demanding, expected to get things his/her way.
71. Was concerned with how my behaviour would reflect on him/her in the eyes of others.
70. Placed strong emphasis on success and competition.
69. Was concerned with social status and appearance.
53. I felt that I didn't have enough individuality or sense of self separate from him.

Controlling Father Items not shared with Controlling Mothers (6 Items)

15. Was fearful that I would get sick.
66. Would punish me when I did something wrong.
19. Did too many things for me instead of letting me do things on my own.
14. Worried excessively that I would get hurt.
72. Seemed to love me more or pay attention to me when I excelled
67. Would call me names (like 'stupid' or 'idiot') when I made mistakes.

Controlling Mother items not shared with Controlling fathers (8 items)

54. I felt that I didn't have my own sense of direction while I was growing up because he/she was such a strong person.
57. Made me feel that if I made even a small mistake, something bad might happen.
19. Did too many things for me instead of letting me do things on my own.
40. Made me feel that almost nothing I did was quite good enough.
59. Focused on the negative aspects of life or things going wrong.
62. Was structured and organized; preferred the familiar over change.
58. Had a pessimistic outlook, expected the worst outcome.
16. Was a fearful or phobic person.

COMPARISON OF REJECTING FATHERS AND CONTROLLING MOTHERS

Items Shared By Rejecting Fathers And Controlling Mothers (4 Items)

57. Made me feel that if I made even a small mistake, something bad might happen.
40. Made me feel that almost nothing I did was quite good enough.
59. Focused on the negative aspects of life or things going wrong.
54. I felt that I didn't have my own sense of direction while I was growing up because he was such a strong person.

Rejecting Father Items Not Shared With Controlling Or Rejecting Mothers (9 Items)

26. Treated me as if I was stupid or untalented.
21. Criticized me a lot.
48. Provided very little discipline or structure for me.
47. Didn't teach me that I had responsibilities to other people.
10. Lied to me, deceived me or betrayed me.
49. Set few rules or responsibilities for me.
51. Was an undisciplined person.
12. Use me to satisfy his/her needs.
38. Expected me to do my best at all times.

Controlling Mother Items Not Shared With Controlling Fathers Or Rejecting Fathers (4 Items)

19. Did too many things for me instead of letting me do things on my own.
62. Was structured and organized; preferred the familiar over change.
58. Had a pessimistic outlook, expected the worst outcome.
16. Was a fearful or phobic person.