Interpersonal concomitants of generalised anxiety disorder

Dragica Denise Milicevic

University of Wollongong

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Interpersonal Concomitants of Generalised Anxiety Disorder

A thesis submitted in partial fulfilment of the requirement for the degree of Doctorate of Psychology (Clinical Psychology) from University of Wollongong, Australia

by

Dragica Denise Milicevic
B.Sc. (Psychology) UNSW
Grad Dip. (Psychology) Macquarie University
M.A. (Family Therapy) UWS

Department of Psychology, 2006
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DEDICATION

This thesis is dedicated to my two nephews,

Simun Milicevic and Daniel Milicevic

who give me inspiration and so much joy every day.
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ABSTRACT

**Objective:** Current treatment models of Generalised Anxiety Disorder (GAD) emphasise maladaptive worry cognitions in the aetiology and maintenance of the disorder. However, although worry cognitions are often relational in content, interpersonal and developmental concomitants of the disorder have been neglected in contemporary research. New models of treatment are urgently needed as current evidence suggests that over half of those treated with the current best practice therapies gain only limited help and remain symptomatic. This study adopts an interpersonal attachment perspective to studying GAD to examine the purported links between adult cognitive, interpersonal and emotional functioning and the related perceptions of early family environment. **Method:** Study 1 (quantitative, N=100) investigated 50 participants with GAD compared with 50 normal control participants matched by age, sex and marital status. The measures investigated symptoms of GAD, alexithymia, interpersonal factors, parental bonding, attachment and relationship patterns. Study 2 (qualitative, N=12 GAD) explored pervasive relationship themes in childhood experiences. **Results:** Study 1 found that GAD participants had more emotional and interpersonal difficulties than controls. Fearful and preoccupied attachment sub-types were associated with these interpersonal difficulties, which may predispose worry. Study 2 found that these interpersonal patterns related sensibly to perceptions of early family environments. Six pervasive early childhood themes provided insight into possible GAD vulnerability. **Conclusion:** There is a need to consider specific interpersonal concomitants into the clinical picture of GAD. The proposed developmental/interpersonal model needs replication. It may be important to incorporate an interpersonal and emotional component to the treatment of GAD.
INTRODUCTION

Individuals with a primary diagnosis of Generalised Anxiety Disorder (GAD) report a tendency to worry that has usually existed since childhood and early adolescence (Akiskal, 1998; Hunt, Issikidis & Andrews, 2002; Le Roux, Gatz & Wetherell, 2005). The chronicity and pervasiveness of GAD is associated with psychological distress, significant psychosocial impairment and substantial risk of secondary psychological disorders (Bourland, Stanley, Snyder et al, 2000; Massion, Warshaw & Keller, 1993; Yonkers, Dyck, Warshaw & Keller, 2000). In particular difficulty with emotional functioning, lower quality of life and poorer quality of relationships with spouse, relatives and friends have been reported by individuals with GAD (Borkovec, Roemer & Kinyon, 1995; Massion et al, 1993; Yonker et al, 2000). Such reported difficulties have important consequences in terms of poorer psychosocial adjustment and mental health of sufferers (Hammen, Burge, Daley et al, 1994; Hazan & Shaver, 1987, 1990; Parker, 1981, 1983; Roberts, Gotlib, Kessel, 1996).

Despite the fact that epidemiological studies reveal that GAD is one of the most common of the anxiety disorders, GAD still continues to receive less research attention than other anxiety disorders such as panic disorder/agoraphobia, posttraumatic stress disorder and obsessive-compulsive disorder (Barlow, 1988; Dugas, 2000; Hunt et al, 2002; Jetty, Charney & Goodard, 2001; Rapee, 1991). The estimated prevalence rate of GAD is approximately 4.0%-7.0% over the lifetime and it is thought to be more common in women than in men (Carter, Wittchen, Pfister & Kessler, 2001; DSM-IV, American Psychiatric Association (APA), 1994; Kessler, Keller & Wittchen, 2001; Wittchen, Zhao, Kessler & Eaten 1994). GAD is also a frequent secondary diagnosis to
other anxiety disorders and its central feature, chronic worry, is pervasive throughout all anxiety disorders (Bourland et al, 2000).

The annual percentage of anxiety disorder publications devoted to GAD increased in the 1980's, following its official recognition as a distinct psychiatric disorder in 1987 (DSM-III-R, American Psychiatric Association (APA), 1987), and has generally remained stable during the 1990's (Dugas, 2000; Norton, Cox, Asmundsum & Maser, 1995). Studies on GAD comprise mainly of descriptive issues (sociodemographic, clinical features, onset, course, epidemiology) and treatment outcome issues (psychosocial and pharmacological) (Dugas, 2000). The large numbers of publications concerned with descriptive issues is still reflecting the ongoing debate on the diagnostic validity of GAD (Barlow, 1988; Brown, Barlow & Liebowitz, 1994). In addition, a significant number of publications concerning treatment of GAD did not address specific developmental and maintenance factors of GAD (Dugas, 2000). As a consequence the publications on the treatment of GAD tended not to clarify why certain treatments were or were not effective (Dugas, 2000).

A smaller proportion of studies in the literature were devoted to process issues in GAD, which included the development of GAD, functions of worry, as well as affective, interpersonal, cognitive, behavioural and physiological variables associated with GAD. Although these studies are less common, they have made a significant contribution to the understanding of GAD, particularly the cognitive process of worry, which is thought to maintain this disorder (Borkovec & Hu, 1990; Borkovec & Inz, 1990; Wells, 1999; Wells & Butler, 1997). This current research is suggesting that further investigations of the role of process variables in the development and maintenance of GAD may lead to
new breakthroughs in current understanding and treatments of this prevalent anxiety disorder.

Description, Diagnosis and Treatment

The diagnostic criteria of GAD have evolved over two decades. Controversy has surrounded the diagnosis of GAD since its introduction into the Diagnostic and Statistical Manual of Mental Disorders-III (DSM-III, APA, 1980) because of the extremely high comorbidity of GAD with other mental disorders in clinical samples. This high comorbidity led critics to suggest that GAD was better grouped with other mood disorders or better conceptualised as a prodrome, residual, or severity marker rather than as an independent disorder (Bakish, 1999). However, epidemiological and family studies argued against this view and suggested that GAD is an important independent disorder that includes physiological, cognitive and emotional symptoms that discriminate between normal and pathological anxiety (Bakish, 1999; DSM-III-R, APA, 1987; Craske, Rapee, Jackel & Barlow, 1989; Kessler et al, 2001).

GAD is of particular interest as it has been associated with low diagnostic reliability, high rates of comorbidity and tends to have an earlier onset and chronic course. Previous research has also linked GAD to neuroticism (Hettema, Prescott & Kendler, 2004). In particular, it has been suggested that the high correlation with GAD and the genes for neuroticism may have implication for the way GAD is conceptualised. As a consequence, some researchers have suggested that GAD may be characterological in nature or even an Axis II disorder (Akiskal, 1998; Hettema et al, 2004; Mannuzza, Fyer, Martin et al, 1989). Dugas and Ladouceur (1998) suggest that many individuals with
GAD do not seek help for their anxiety and worry because they interpret their symptoms as unmodifiable personality traits. It is therefore important that research and evidence is sought regarding the independent diagnostic status of GAD.

Research has shown that the average length of a GAD episode far exceeds the six months stipulated by the DSM-IV (Yonkers et al, 2000). Epidemiological studies found that the duration of GAD was longer than five years in 40% of patients and the average duration of the illness was six to ten years (Blazer, Hughes & George et al, 1991; Yonker, Warshaw & Massion et al, 1996). Unlike other anxiety disorders, GAD appears to have a gradual onset with 80% of GAD clients being unable to recall when symptoms first began (Rapee, 1985). Research by Hoehn-Saric and colleagues (1993) suggested that there may be two forms of GAD based on age. Those with an early onset GAD tended to experience an insidious origin of difficulty, describing childhood issues and fears. Such individuals tended to be inhibited, sensitive and exhibited current marital discord. Later onset GAD was more likely to develop after a negative event and tended to be associated with physical and role disability, poorer quality of life and health (Blazer et al, 1991; Wetherell, Thorp, Patterson et al, 2004).

Studies of community and clinical samples investigating GAD have shown that 'pure' cases of this disorder are rare (Brown & Barlow, 1992; Wittchen et al, 1994). Rates of comorbidity are high in individuals with GAD, reportedly co-occurring with depressive disorders namely, dysthymia (range from 8% to 22%) and major depressive disorder (range from 11% to 46%), and other anxiety disorders, particularly social phobia (range from 17% to 27%) and panic disorder (11% to 36%) (Brown & Barlow, 1992; Hunt et al, 2002; Maser, 1998; Wittchen et al, 1994). GAD was also positively associated with
the occurrence of one or more personality disorders (Cluster B or C), co-occurring with obsessive-compulsive, dependent and avoidant patterns (Mauri, Sarno & Rossi et al, 1992). However no distinct personality disorder was found to be associated with GAD (Dyck, Phillips, Warshaw et al, 2001). Comorbidity in GAD is associated with greater impairment, more treatment seeking, and worse outcome compared with those individuals with GAD without comorbid disorders (Hunt et al, 2002). Research has also shown that GAD is associated with high impairment and lower quality of life even after controlling for other psychopathology (Wittchen, Carter, Pfister, Montgomery & Kessler, 2000).

Currently, according to DSM-IV, GAD is defined as a chronic and pervasive disorder characterised by worry that is excessive and difficult to control (DSM-IV, APA, 1994; Wells, 1999). GAD is associated with particular cognitive, physiological and affective experiences. Motor tension (muscle tension, restlessness, fidgeting) and hyperarousal (difficulties concentrating, irritability and being “on edge”) accompanied by fatigue, gastrointestinal difficulties, sleep disturbances, tension headaches with depressive affect for a minimum of six months are symptoms commonly present in GAD. A diagnosis of GAD according to DSM-IV requires at least three of six associated symptoms of irritability, muscle tension, restlessness, fatigue, sleep disturbance, concentration difficulties. The chronic anxiety characteristic of GAD tends to be in response to internal cognitive and/or somatic anxiety cues and to subtle external threat cues that are wide-ranging in their content (Borkovec, Crnic & Costello, 1993).
Reviews of psychological treatment of GAD have little agreement on the extent to which different therapies produce differential improvement in GAD symptomatology (Barlow, Ester & Vitali, 1998; Fisher & Durham, 1999). Methodological limitations of previous studies include a paucity of well controlled studies and the use of small sample sizes resulting in inadequate power to detect a clinically significant difference in treatment effect (Fisher & Durham, 1999). Currently there are a small number of controlled trials of broadly defined cognitive-behavioural therapies (Gould, Otto, Pollack & Yap, 1997). These studies have a number of methodological limitations including small sample sizes and non-manualised treatment programs.

At this stage, however, outcome research studies do imply that cognitive behavioural therapy (CBT) may be better than other active treatments, specifically applied progressive muscle relaxation (Barlow et al, 1998; Borkovec & Whisman, 1996; Durham, Murphy, Allan et al, 1994; Fisher & Durham, 1999; Gould et al, 1997). Individual therapy was found to be superior to the same treatment delivered in a group modality (Fisher & Durham 1999). However, even the treatment programs found to be most efficacious are not producing clinically significant change among individuals with GAD and display a lower rate of improvement compared to other anxiety disorders (Hunt, 2001; Ost & Brietholtz, 2000). On average psychological treatment results in approximately 40%-50% of individuals with GAD attaining normal functioning (Durham & Allan, 1993; Fisher & Durham, 1999). Such changes are likely to be maintained at three and six-month follow-up. Some studies report recovery rates as low as 4% and 11% (Fisher & Durham, 1999).
Current GAD treatment programs have been criticised because active components of programs have been adopted from other disorders. For example, cognitive therapy for depression and progressive muscle relaxation for panic and phobias have been used in GAD treatment programs (Ost & Brietholtz, 2000). Treatment is likely to be more effective if strategies target the psychological processes and vulnerabilities displayed by individuals with GAD (Dugas, 2000).

In recent years researchers have attempted to develop specific pharmacological treatments for GAD. However, there are a limited number of long-term studies for pharmacotherapy in the treatment of GAD. Review of research on treatment trials suggested that in the short-term, benzodiazepines are an effective treatment of GAD (Roy-Byrne & Crowley, 1998; Schweizer & Rickels, 1996). However, problems of dependence, withdrawal and return of GAD symptomatology when the drug is ceased impede the usefulness of such treatment. The medication, Buspirone, has been found to be as effective as the benzodiazepines, but tends not to be widely used as it takes several weeks before a decrease in GAD symptoms are experienced (Roy-Bryne & Crowley, 1998). Antidepressant medication trials (impramine, trazodone, paroxetine) found that the effects of treatments are significantly better than placebo and just as good as other medications (Rickels, Downing, Schweizer & Hassan, 1993; Rocca, Fonzo, Scotta, Zanalda & Ravizza, 1997). At this stage the role of pharmacotherapy as an adjunct to psychological treatment is not clear.

Psychological treatment strategies have mainly focused on the cognitive process of worry and have included worry exposure and worry behaviour prevention (Brown,
O’Leary & Barlow, 2002), cognitive therapy focused on metacognition (Wells, 1999), mindfulness training (Roemer & Orsillo, 2002), and a therapeutic focus on intolerance of uncertainty (Ladouceur, Gosselin, Dugas, 2000). Such treatments are still providing variable results, with approximately 40%-50% of participants sustaining a clinically significant outcome over follow-up periods of 6-12 months (Durham, Fisher, Dow et al, 2004).

There is very limited research providing therapy for other features of GAD including the affective and interpersonal aspects of the disorder together with the cognitive and physiological aspects. There have only been a few attempts to provide therapy addressing interpersonal difficulties (Crits-Christoph, Connolly, Azarian et al, 1996) and emotional regulation difficulties in GAD (Mennin, 2004). This research is scarce, but suggests that further understanding of the emotional and interpersonal variables of GAD may improve treatment outcome (Mennin, Heimberg, Turk, Fresco, 2002). More treatment outcome research is required on programs specifically designed for GAD that incorporate the psychological processes (the interpersonal, emotional, cognitive, behavioural and physiological) that maintain the symptoms of GAD. However even before specific treatment programs are designed for GAD, a better understanding of the psychological processes, particularly the interpersonal and emotional processes of GAD is required.

**Process Issues**

There is a small proportion of research devoted to process issues in GAD (Dugas, 2000). The majority of the research in this area tended to investigate the form and
functioning of worry and its effect on affective, cognitive and behavioural components of GAD (Borkovec, 1994; Molina, Borkovec, Peasely & Person, 1998; Wells, 1999). These studies have made a significant contribution to the understanding of GAD. The common methodological limitations identified in these studies include small sample sizes and lack of non-anxious, non-psychiatric control groups. Most of the control groups in GAD studies included other psychiatric samples (Yonker et al, 2000), anxious non-psychiatric samples (Bouland et al, 2000) and few studies utilised a non-anxious, non-psychiatric control group (Borkovec & Inz, 1990; Craske et al, 1989; Roemer, Molina & Borkovec, 1997). Even though there are limitations in the current research, previous research has identified phenomenological characteristics of worry in GAD when compared to controls.

Cognitive Component of GAD

Currently, the pervasive worry is thought to be the core feature of GAD and is thought to maintain the cognitive, physiological and emotional symptoms of the disorder. Reports on the content of worries have been derived from retrospective and prospective studies (Brietholtz, Johansson & Ost, 1999; Breitholtz, Westling & Ost, 1998). The content of worries tends to involve an unwanted focus of attention on distressing life topics pertaining to the domains of family, personal health, finances, work and future life stressors, that have a low probability of occurring (Hunt, 2001). Individuals with GAD also showed greater worries in the categories of interpersonal conflict and daily hassles, commonly involving minor events in their day (Borkovec, 1994; Brietholtz et al, 1998, 1999). Worry was also found to disrupt attentional processes and decision-making, and increase hypervigilance and self-focused attention (Wells, 1999).
Previous research by Wells (1999) and Wells and Butler (1997) suggests that worrying is a coping strategy in response to perceived threats and intrusive negative thoughts. Engagement in the process of worry tends to generate a range of catastrophes and potential solutions. In addition individuals display certain beliefs about worrying. The use of worry as a coping strategy is reinforced by positive metabeliefs about worry, whereas the negative appraisal of worrying (worry about worry) is linked to negative metabeliefs developed out of previous experience. These beliefs centre on the themes of uncontrollability of worries and the dangerous consequences of worrying, such as damage to ones health. Negative appraisal of worrying is associated with behavioural and cognitive responses that serve to maintain unwanted thoughts (Davis & Valentiner, 2000; Wells, 1999). Currently worry is understood as a possible coping strategy and researchers have made some attempt to further understand the impact that excessive worry has on emotional functioning, tolerating uncertainty and interpersonal concerns of GAD sufferers.

*Emotional Component of GAD*

Previous investigations have shown that excessive worry is associated with emotional avoidance (Borkovec & Hu, 1990; Borkovec & Inz, 1990; Mathews, 1990; Thayer, Freidman & Borkovec, 1996). In particular, it is thought that through worrying individuals avoid uncomfortable emotional experiences. In research by Borkovec and Hu (1990) and Borkovec and Inz (1990), the process of worry was described as more of a verbal (cognitive and conceptual) process rather than a visual process. In particular, it was found that the verbal process of worry was associated with a lower level of
emotional arousal when compared to imagery. Consequently, this verbalisation strategy of worry is believed to result in the prevention of emotional processing (Thayer et al, 1996). The predominance of thoughts over images in worry is viewed as a way of avoiding deeper emotionally laden topics, which, in turn, interferes with emotional processing and contributes to the maintenance of anxiety (Butler, Wells & Dewick, 1995; Molina et al, 1998). Generally, by processing emotional stimuli cognitively through worry, the experiences of intense emotions are thought to be avoided, thereby negatively reinforcing worry. Although there is a lot of support for the avoidance of arousal theory of worry, it is still unclear how individuals with GAD manage their emotions generally. In particular, little is known about the nature of the emotional states experienced by GAD individuals. In addition, the actual content of the emotion-laden topics, which may be interpersonal in nature, is an under-researched area.

Intolerance of Uncertainty and GAD

Aside from emotional (arousal) avoidance, which is believed to be associated with worry in GAD, excessive worry has also been associated with intolerance of uncertainty (Dugas, Gagnon, Lodouceur & Freeston, 1998). In particular intolerance of uncertainty has been associated with an increased need for contrary evidence about the worry (Tallis, Eysenck & Mathews, 1991) and poor problem orientation (Davey, 1994). These difficulties are thought to lead to an engagement in the worrying process and the avoidance of more threatening situations. Behaviours of avoidance and reassurance seeking further maintain the anxiety (Wells & Carter, 1999).
Interpersonal Component of GAD

As worry in GAD is thought to be associated with avoidance of arousal, intolerance of uncertainty and reassurance seeking, the impact of such difficulties on the interpersonal functioning of GAD may be important to consider. Currently, worry in GAD has been found to be associated with high levels of interpersonal concerns (Borkovec, Robinson, Pruzinsky & Depree, 1983; Brown & Barlow, 1992). GAD individuals showed a predominance of cognitions about interpersonal anxiousness (acceptance, competence, confrontation, responsibility, and self-control) associated with catastrophic interpretation and self doubt when compared to a panic disorder population (Breitholtz et al, 1998, 1999). The worries of GAD individuals tend to reflect a perceived vulnerability and threat, a perceived lack of personal coping skills. A domineering, vindictive and overly nurturant interpersonal style was found to be associated with GAD, however a control group was not used in this study to clarify whether such an interpersonal style was a prominent feature of GAD (Pincus & Borkovec, 1994 cited in Borkovec, Ray, Stober, 1998). Generally, individuals with GAD describe themselves as sensitive by nature, displaying a general perseverative, iterative style when presented with novel/neutral situations (Molina et al, 1998; Sanderson & Barlow, 1990).

Research in the Role of Interpersonal Functioning in GAD

Most of the empirical attention given to GAD has focused on its diagnosis and treatment, as well as attempts to understand the cognitive process of worry that may serve to maintain the disorder. This focus has been extremely useful in advancing knowledge about GAD and worry. Even considering the current available knowledge,
one of the main challenges in GAD is that a high percentage of sufferers are still left with residual symptoms following treatment (Durham & Allan, 1993; Fisher & Durham, 1999; Hunt, 2001; Ost & Brietholtz, 2000). Currently CBT treatments have focused mainly on managing excessive worry, and such treatment is providing variable recovery rates, ranging between 4% and 50% (Durham & Allan, 1993; Fisher & Durham, 1999). These treatment outcome results highlight the need for further better understanding and consideration of process issues in GAD. In the literature the interpersonal and emotional functioning of GAD is still not very well understood and requires further clarification. The importance of addressing interpersonal problems in GAD is further supported in a study showing that the degree of remaining interpersonal problems after CBT was predictive of failure of maintain follow-up gains of treatment (Borkovec, Newman & Castonguay, 2003).

Research in the aetiology of GAD

Research in the aetiology of GAD has included a number of retrospective studies investigating developmental factors that may dispose the child to the later developmental of GAD (Hoehn-Saric, 1981; Raskin, Peeke, Dickman & Pinsker, 1982; Torgersen, 1986). Data from epidemiological cohort studies give evidence of premorbid anxiousness, overadaptation early in development and that distressing conditions in the family are more prevalent among individuals with anxiety disorders or major depression than among community controls (Angst & Vollarth, 1991). There is some consensus in the literature that individuals with GAD have interpersonal difficulties and are interpersonally anxious (Borkovec et al, 1983; Brown & Barlow, 1992). To date most of the research investigating interpersonal concerns has been descriptive highlighting the
type of concerns people with GAD present (Breitholtz et al, 1999; Borkovec, 1994). A study by Whisman, Sheldon and Goering (2000) investigated Axis I psychiatric disorders and the quality of relationships with spouse, relatives, and friends (N = 4,933). This study found that conflict with spouses was related to six Axis I disorders, with the strongest associations found for GAD, major depression, panic, and alcohol problems. These four associations remained significant when the investigators controlled for comorbid disorders.

Currently there is very little research investigating the pervasive characterological nature of GAD. The primary ways of investigating such characterological concerns would be by investigating Axis II disorders or personality (Bartholomew & Horowitz, 1991). Previous research has also indicated that a beneficial approach to studying personality is to use an interpersonal attachment perspective (Bowlby, 1969; Carnelley, Pietromonaco & Jaffe, 1994; Lopez, 1995). In particular, theorists have suggested that attachment theory is postulated to provide a link between cognitive and interpersonal variables in a wide range of psychological disorders.

In summary, GAD has been mainly investigated and understood in terms of how the cognitive process of worry influences the emotional, physiological and behavioural functioning of GAD sufferers. There is limited research investigating the interpersonal and emotional functioning in terms of developmental factors and adult attachment style among individuals with GAD. To date few studies directly assess adult attachment in individuals diagnosed with GAD (Cassidy, 1995; Cassidy, Lichtenstein, Borkovec & Thomas, 1994). To further develop understanding of the origins and mechanisms in GAD, more research is required on the interpersonal and emotional functioning of
individuals with GAD and their adult intimate relationships. In doing so it is useful to examine the ways in which childhood adversity, attachment and interpersonal and emotional styles may influence the clinical picture of GAD.

Aetiology of GAD (Developmental Precursors)

The child’s temperament (Goldsmith & Alansky, 1987; Kagan, 1989), genetics (Kagan, Reznick, Snidman, 1987), environmental factors (Ben-Noun, 1998), parent-child bonding, early separation anxiety and attachment style (Silove, Harris, Morgan et al, 1995; Silove, Parker, Hadzi-Pavlovic, Manicavasagar, Blaszczynski, 1991) have been found to be important in the development of anxiety disorders (Chorpita & Barlow, 1998; Rapee, 2001). Research has started to suggest some possible origins of the interpersonal issues in GAD. Specifically a number of pathways have been hypothesised to be associated with the origins of worry and threat perception in individuals with GAD and comparable interpersonal concerns (Borkovec 1994).

Childhood Early Negative Events and GAD

Some evidence has derived from childhood early negative events-history research implying that threat perception may have developed as a consequence of actual experiences with a dangerous world, early experience with lack of control and prediction over negative outcomes (Barlow, 1988; Roemer et al, 1997). Individuals with GAD reported childhood negative events involving illness, injury or death at a greater rate than did nonanxious participants, particularly a greater incidence of parental loss before age 16 (Torgersen, 1986). However GAD subjects did not differ from panic
disorder subjects on a variety of reported childhood events including abuse, separation and separation anxiety (Raskin et al., 1982). When investigating the self-reported worry content from GAD-analogue (college students who met full or partial criteria for GAD) and GAD clinical populations, Roemer and colleagues (Roemer et al., 1997) found that worries about illness and injury related concerns were not common areas of worry in GAD. The investigators speculated the disparity between early childhood negative events history and worry content provides evidence for worry being a mechanism for avoiding intense negative affect. Theorists suggest that such a perception, or schema, of the world as a dangerous place contributed to elevated judgment of risk and ratings of negative affect that act as a core vulnerability factor for all of the anxiety disorders and is not exclusive to GAD (Borkovec, 1994; Bowlby, 1973). So the impact of early childhood negative events on development of GAD is still unclear and not well understood.

*Childhood Attachment and GAD*

Another potential origin for worry and GAD are characteristics of the parent-infant relationship. Bowlby’s attachment theory (1973, 1980) offers a theoretical framework within which the developmental antecedents of GAD can be considered. General principles of attachment theory states that the quality and condition of the caregiver-infant attachment relationships can mediate an infant’s emotional regulation and provides a template for future relationships. The quality of the attachment bond depends on the degree to which the child believes that the attachment figure can be depended upon to provide a stable and secure base (Ainsworth, 1982; Ainsworth, Blehar, Waters & Wall, 1978). The quality of the attachment bond also depends upon the degree to
which this security can allow confident exploration by the child of its external environment. Knowledge that the child can return to the base for comfort and a sense of security is required when the child feels threatened. If the attachment figure is inconsistent, emotionally unavailable or unresponsive to the attachment needs of the child, the child may experience anxiety and distress which has a consequence for the child’s emerging self concept, social, cognitive, emotional and interpersonal development (Bowlby, 1973).

Over the course of childhood and adolescence, children are hypothesised to internalise their experiences with caretakers to form schemas or what Bowlby refers to as “working models” of close attachment relationships. As a result the child develops internal working models (IWM’s) containing beliefs and expectations about whether the caretaker is someone who is caring and responsive and also whether the self is worthy of care and attention (Belsky & Nezworski, 1988; Bowlby, 1973, 1980; Scroufe, 1988). These working models are then carried forward into new relationships guiding expectations, perceptions and behaviour. Thus, internal working models provide a mechanism for cross-age continuity in attachment style and are of particular importance in understanding the role that early relationships have in determining adult relationships.

Different IWM’s lead to different patterns of attachment called attachment styles (Bowlby, 1973). As an extension of Bowlby’s attachment model, Bartholomew & Horowitz (1991) described four attachment styles. Bartholomew & Horowitz (1991) further dichotomised IWM’s of self and other as either positive or negative. This model proposes that different attachment styles can be distinguished from one another on the
differing configuration of positive and negative view of the self and others. Secure attachment involves an inherently positive view of the self and others and comfort with close relationships, intimacy and autonomy. The insecure-preoccupied attachment style is characterised by feelings of dependence, exaggerated emotionality and preoccupation with close relationships. The insecure-fearful/avoidant attachment style involves a fear of rejection, insecurity, distrust and avoidance of close relationships. The insecure-dismissive/avoidant attachment style involves a dismissive attitude towards relationships, excessive independence and restricted emotionality (Bartholomew & Horowitz, 1991). Generally, individuals with an insecure attachment style tend to have more negative views of self or other and have a risk of anxiety difficulties, unsatisfactory intimate relationships, interpersonal and emotional difficulties and inadequate social support (Bartholomew & Horowitz, 1991; Bowlby, 1973, 1980).

Research has suggested that childhood attachment experiences may be associated with GAD. There is some empirical support for an association between GAD and childhood attachment experiences (Cassidy et al, 1994). In a study by Cassidy and colleagues (1994), GAD was found to be associated with an insecure childhood attachment. In a survey of GAD analogues, nonanxious controls and somatically anxious non-GAD individuals, GAD participants rated greater feelings of enmeshment, role reversal and preoccupying anger and oscillating feelings towards the primary caregiver. In addition individuals with GAD felt significantly more rejected as children by the primary caregiver than did non-GAD individuals. In childhood they reported a tendency to take care of, and anticipate dangers for themselves and their parent(s) (Borkovec, 1994; Cassidy, 1995).
To further investigate the association between GAD and attachment, attachment was further assessed by using the Inventory of Adult Attachment (INVAA; Lichtenstein & Cassidy, 1991, cited in Cassidy, 1995). The INVAA was based on the qualitative measures of the Adult Attachment Interview (George, Kaplan & Main, 1985). The INVAA administered to individuals with GAD supported the insecure-attachment hypothesis (Cassidy, 1995). Individuals with GAD tended to report conflictual feelings regarding their caregivers and lack of childhood memories, further suggesting evidence of cognitive avoidance of intense negative affect in this syndrome (Cassidy et al, 1994). Research by Hoehn-Saric and colleagues (1993), found that in early onset GAD, individuals described being exposed to domestic disturbances in their childhood, childhood fears, and were inhibited and socially maladjusted. As adults, they scored higher than panic disorder clients on trait anxiety and neuroticism, tended to have obsessional traits, were more sensitive in interpersonal relationships, and experienced more marital difficulties.

**Parenting Style and GAD**

There is a strong theoretical argument for studying fundamental parental characteristics (and their anomalous expression). Hinde (1979) has argued that two dimensions, care and protection, underlie all significant interpersonal relationships. Retrospective analyses of the parent-child relationship suggest that parental overprotection and lack of emotional warmth are factors that may contribute to the later development of anxiety disorders in general (Parker, 1983). Parker (1983) hypothesised those parents who exhibit excessive involvement in reducing a child’s possible negative experiences (overprotection) may limit the child’s ability to independently cope with the
environment. Also parents who are consistently unresponsive (lack of emotional warmth) may contribute to a child's belief in a lack of personal control over the environment. Bowlby's model of attachment (1973, 1980, 1988) indicated that the children of such parents would be more likely to develop a world view in which support figures were unreliable when needed and, at times, dangerous, which would predispose individuals to heightened anxiety and depression (Parker, 1983). Thus parental sensitivity and child characteristics are two key influencing factors in the formation and development of attachment relationships. Insecure attachment styles have been associated with inconsistent mother responsiveness producing ambivalently attached children and rejecting/neglecting parents producing avoidant attachment (Ainsworth et al, 1978; Isabella, 1993). Conversely secure attachment tends to be associated with mothers who allow their children to explore their environment and face risks (Kagan, 1989).

Silove and colleagues (1991) compared reports of parenting style among patients with panic disorder, GAD and matched non-anxious controls. They found that overprotection was associated with panic disorder and GAD, whereas a low level of parental warmth was significantly associated only with panic disorder. Raskin and colleagues (1982) compared individuals with panic disorder to individuals with GAD on specific developmental factors. The study found that both panic disorder and GAD had a similar incidence of early separation, separation disorder in childhood and separation or threatening separations as precipitants of anxiety. Furthermore, anxiety related to problems of separation appeared to lead to symptoms for both groups (GAD and panic disorder). In the absence of a normal control group it is difficult to evaluate the importance of early separation and separation disorder in childhood in the development
of both panic disorder and GAD. A study by Parker and Gladstone (1996) highlighted that individuals with a diagnosis of GAD are somewhat more likely to have been recipients of "affectionless control" (that is, low care, high protection), while "affectionate constraint" (that is, high care, high protection) appears to have some specificity to panic disorder. Generally, the current research appears to indicate that although these factors are not unique to GAD, control and warmth may contribute to the later development of pathologic anxiety.

Generally, the emerging research literature on developmental aspects of GAD suggests that the syndrome may be linked to both histories of early negative events and an insecure/conflicted attachment. Childhood attachment issues and early negative events may predispose individuals to worry and lead to GAD and associated difficulties. There is a paucity of research investigating developmental factors in GAD. The research that does exist is methodological flawed and has been mainly criticised for its retrospective bias, small sample size, less reliable measures of attachment and lack of a control group of nonanxious participants. Prospective longitudinal studies would provide the gold standard approach to research into the developmental origins of GAD. However at this stage such prospective studies have not been undertaken. Retrospective data on developmental factors, that is, perceived parental behaviour and environmental factors as well as current interpersonal, emotional and adult attachment functioning could advance our understanding of the development and maintenance of GAD.
Adult Attachment and Psychopathology

A basic principle of attachment theory is that attachment relationships continue to be important throughout the life span (Ainsworth, 1982, 1983; Bowlby, 1973, 1980, 1988). The theory proposes that relationships in childhood are internalised through IWM's over time and serve as a model for expectations and behaviour in relationships throughout the life span.

A small number of longitudinal studies provide evidence of the continuity of attachment style from childhood, adolescence and adulthood (CarneUey et al, 1994; Rothbard & Shaver, 1994). There is also evidence for a certain amount of discontinuity between early and later close relationships, that is, a lack of continuation of early childhood experiences in adult interpersonal relationships (Parker, 1989; Parker, Barrett & Hickie, 1992). However such discontinuity was recognised as being due to current circumstances, with individuals generally rebounding back to the original attachment style (Bartholomew & Horowitz, 1991). Attachment style may be a product of both current circumstance and developmental history, with prior experiences being incorporated into the current patterns of adaptation (Scroufe, Egeland & Kreutzer, 1990). When individuals feel threatened or closeness to the attachment figure is compromised, the attachment system is likely to be activated (Brennan & Shaver, 1995).

Past research has examined the relationships between adults' reports of their early attachment to their caregiver and their attachment relationships as adults (Bartholomew & Horowitz, 1991; Hazan & Shaver, 1987). An association between the two has been
found in a variety of relationship contexts, including romantic relationships  
(Bartholomew & Horowitz, 1991; Hazan & Shaver, 1987), friendships and diffuse peer  

Numerous other cross-sectional studies have shown that adult attachment styles are also  
related to a broad array of social psychological variables, including relationship  
functioning (Brennan & Shaver, 1995), personality (Collins & Read, 1990; Shaver &  
Brennan, 1992), social support (Simpson, 1990; Simpson, Rholes & Nelligan, 1992),  
religiosity (Kirkpatrick & Shaver, 1990), substance use (Brennan & Shaver, 1995), and  
domestic violence (Dutton, Saunders, Starsomski & Bartholomew, 1994). In addition,  
attachment ratings predicted important components of relationship functioning  
(particularly interpersonal dependency and relationship satisfaction) independently of  
their association with personality dimensions (Griffith & Bartholomew, 1994; Shaver &  

*Adult Attachment and Mental Health*

Previous research has also found a consistent association between adult attachment and  
Roberts et al, 1996). Insecure attachment has been regarded as an important  
vulnerability factor for later psychopathology. However, early secure attachment has  
been associated with development of social competence and facilitates resilience for  
coping with adverse life events. Obstacles to secure attachment include parent or child  
vulnerabilities/fears, child abuse, and restricted access to services (Mickelson, Kessler  
& Shaver, 1997; Svanberg, 1998). Recollections of early parenting as well as adult
mental health variables have found associations that are consistent with attachment theory. Such association have been between parental care and low depression (Parker, 1981, 1983); parental care and low affective symptoms (Rodgers, 1996); parental warmth and high self-esteem and sociability (Collins & Read, 1990); secure attachments and low depression and high self-esteem (Salzman, 1996). Parental coldness and control have been associated with poorer mental health (Collins & Read, 1990). Depression was found to be positively associated with insecure attachment styles (Hammen et al, 1994; Hazan & Shaver, 1987, 1990; Roberts et al, 1996), as has anxiety (Hazan & Shaver, 1990; Shaver & Brennan, 1992; Roberts et al, 1996) and low self esteem (Collins & Read, 1990; Hazan & Shaver, 1990; Brennan & Morris, 1997). Furthermore, other studies have found depression to be linked specifically with anxious attachment (Pettem, West, Mahoney & Keller, 1993; Zuroff & Fitzpatrick, 1995). Few studies directly assess adult attachment in individuals diagnosed with GAD (Cassidy et al, 1994). Studies that do exist have found that GAD is associated with an insecure attachment style.

A number of consistent limitations are common through much of the attachment research. These limitations include the retrospective bias of reporting early childhood experiences, small sample sizes and use of measures requiring further validation. Generally, there is limited research investigating the association between individuals’ early attachment-related experiences and the current representation of these experiences in individuals diagnosed with GAD (Borkovec, 1994; Cassidy et al, 1994)
Interpersonal Functioning and Attachment

Research has shown that adult attachment styles correspond to different types of interpersonal problems (Bartholomew & Horowitz, 1991; Birtchnell, 1997; Simpson et al, 1992). Two mechanisms believed to influence the continued impact of early experiences on later interpersonal functioning are internal representations and affective processes (Bartholomew & Horowitz, 1991). Although the link between internal representations, affective processes, and interpersonal functioning has been theoretically linked (Ainsworth, 1982, 1983; Bowlby, 1973, 1980, 1988) very few studies have empirically examined the connection. Past investigations reported that empathy and relationship qualities are two important components of children's interpersonal functioning (Rutter, 1995). It was found that children who saw the world as more supportive had more mature emotional investment in relationships and were more empathic. These findings suggest that children's internal views of the world are strongly associated with their ability to relate to others.

Interpersonal interactions are often researched in terms of close-intimate relationships (Brennan & Shaver, 1995; Griffith & Bartholomew, 1994; Shaver & Brennan, 1992; Simpson et al, 1992). Past research has examined pervasive interpersonal relational patterns in intimate relationships by identifying core relationship themes evident in relationships (Luborsky & Crits-Christoph, 1990). Dysfunctional interpersonal patterns have been identified in adult populations by commonly using the Inventory of Interpersonal Problems (IIP) (Bartholomew & Horowitz, 1991). In particular, different attachment styles in adulthood were found to correspond to different types of interpersonal problems. Interpersonal dimensions associated with secure attachment
tended to include a profile on the warm side of the interpersonal space, a sense of worthiness and expectation that others are accepting and responsive (Horowitz, Rosenberg & Bartholomew, 1993). Insecure/preoccupied attachment was more likely to show an elevation on the overly expressive scale, with a sense of unworthiness combined with a positive view of other. Such people have a strong desire for self-acceptance through others. The insecure/dismissing attachment was more likely to show a profile on the hostile side of the interpersonal space and was highly correlated with the cold subscale. In addition there is a tendency for independence, invulnerability and avoidance of close relationships. The insecure/fearful attachment was more likely to include difficulties with the lack of assertiveness, social inhibition and individuals tended to view others as untrusting and rejecting. There was an avoidance of close relationships in an attempt to avoid rejection.

Another interpersonal dimension associated with adult attachment is self worth, indicating that attachment insecurity had an indirect association with poor problem solving through low self-worth (Davial, Hammen, Burge, Daley & Paley, 1996) and self esteem (Collins & Read, 1990; Salzman, 1996). Thus, there appears to be a continuous path linking early attachment experiences, adult attachment style, self-esteem, and adult intimate relationships. Individuals with insecure attachment styles tend to lack the confidence and trust in the supportiveness of significant others, tending to perceive themselves as having unsatisfactory intimate relationships and inadequate social support (Collins & Read, 1990; Davial et al, 1996; Salzman, 1996; Vivona, 2000).
Research investigating the interpersonal functioning of GAD is very scarce. One of the few to research this area is Cassidy and colleagues (1994) who found that GAD is associated with insecure childhood attachment, and this developmental precursor relates quite closely with the kinds of interpersonal difficulties that individuals with GAD experience in their current interpersonal relationships. In childhood, individuals with GAD tended to take care of, and anticipate dangers for themselves and their parent(s). This history could lead to a perception that the world is potentially a dangerous place and one’s ability to cope is constantly questioned.

Currently there are no empirical studies investigating the predominant type of insecure attachment style evident in people with GAD. Intriguingly, however, current research indicates that the majority of adult GAD clients fall into the overly nurturing cluster, and are domineering and vindictive (Borkovec et al, 1995; Pincus & Borkovec, 1994 cited in Borkovec et al, 1998) on the Inventory of Interpersonal Problems (Horowitz et al, 1993). This indicates that individuals with GAD may have learned as children that taking care of others is necessary in order to receive love and approval, and they may continue to do this in adulthood (Borkovec et al, 1995). Unfortunately, their tendency to overly nurture may result in a lessened likelihood of having their own interpersonal needs met and they may be seen by others as intrusive in their caring attempts (Borkovec et al, 1995; Cassidy, 1995). In addition, GAD individuals had significantly more cognitions in the categories of interpersonal confrontation, competence, acceptance, concern about others and worry over minor matters (Breitholtz et al, 1999).
Emotional Functioning and Attachment

Bowlby (1973, 1980, 1988) and Ainsworth (1982, 1983) have suggested that there are differences in the emotional experiences of individuals according to their attachment styles. Emotional regulation is viewed as being adaptive in helping a child attain his/her goals and regulate interpersonal relationships. Early patterns of emotional regulation may help maintain the relationship with the attachment figure in two main ways: (1) infant emotional regulation contributes to the infant's attachment response to experiences with the caregiver; and (2) the infant signals to the parent that he/she will cooperate in helping maintain the parent's own state of mind in relation to attachment. Such early childhood experiences with parents can influence the development of children's emotional regulation.

Fuendeling (1998) found that early experiences influenced the ways people with different attachment styles regulate their affect. This variation was particularly evident in the management of individuals' attention, appraisal styles and the ability to interact with others. Further, emotions are generally viewed as responsible for motivating and regulating adaptive behaviours. Thus, it is important to explore emotional development as a function of adult attachment, perception of early parent-child attachments and interpersonal roles to which individuals must adapt (Brody, 1985).

Research has provided support for a direct link between caregivers' characteristics and the regulation of negative emotionality in infancy (Bartholomew & Horowitz, 1991; Scher & Mayseless, 1997). In their investigation of the contribution of mothers'
attachment concerns to infant negative emotionality, Scher and Mayseless (1997) found that infants of mothers who tended to be avoidant in their close adult relationships showed increased levels of negative emotionality during the latter part of the first year of the infant’s life. Further, infants of mothers who appeared secure (not avoidant) in their adult close relationships showed decreased levels of negative emotionality. Kochanska, Clark and Goldman (1997) have shown that mothers high in negative emotionality and disagreeableness showed more negative affect, and their children were more defiant and angry. They also reported more power-assertiveness, less nurturant parenting and less secure attachment.

*Emotional Experience and Attachment Style*

Bartholomew & Horowitz (1991) studied the emotional experience of men and women in each of four adult attachment styles and found that insecure attachment patterns were associated with the three emotions of anxiety, anger and depression. Aspects of emotionality were addressed in terms of the affect regulation strategies generally used in response to feelings of anxiety, anger and depression. Research by Bartholomew and Horowitz (1991) and Scher and Mayseless (1997) found that secure individuals were less anxious, and displayed less inwardly directed anger when compared to the avoidant-dismissing attachment group. Securely attached individuals were found to be less depressed than each of the three insecurely attached groups. In addition, the insecurely attached groups were found to experience different forms of depression. The depression of the preoccupied individual tended to be characterised by sad mood and helplessness. The depression of the avoidant-fearful individual tended to be
characterised by guilt and social introversion and the depression of the avoidant-dismissing individual tended to be characterised by low energy and social introversion.

Previous research by Kobak and Sceery (1988) and Kobak and Ferenz-Gillies (1995) indicated that obtaining information for a descriptive emotional profile of each attachment group is potentially useful in treatment. In particular having an emotional profile of clients may provide a situation for identifying appropriate affective interventions and promoting secure emotionality among treated populations. Generally, it has been found that securely attached people use emotional regulation strategies that minimised stress and emphasised positive emotions (Mikulincer & Florian, 2001). Those with insecure attachment follow emotional regulation strategies that emphasised negative emotions and tended to experience situations in a more stressful manner.

*Emotional Processing and GAD*

Currently there is limited research on the emotional profile of GAD individuals, particularly the emotional processing of GAD individuals (Roemer et al, 1997; Thayer et al, 1996). Previous studies have found differences between the emotional processing of individuals with GAD, and non-anxious controls (Roemer et al, 1997). Cognitive and clinical researchers (Borkovec, 1994; Roemer et al, 1997; Wells, 1999) have attempted to elucidate the processes associated with emotional memories, as well as the individual differences that contribute to the recollection of emotional material and emotional functioning. It is speculated that individuals with GAD tend to develop worry as a coping strategy to try and distract themselves from the more disturbing emotional content of their concerns (Roemer et al, 1997). Worry is viewed as a
verbalisation strategy, which is negatively reinforced by its suppressing effects on autonomic (hyperarousal) activity and avoidance of deeper emotional laden topics (Thayer et al, 1996). This lack of emotional processing in turn is believed to contribute to the maintenance of anxious meanings and responses (Borkovec, 1994; Borkovec et al, 1995; Butler et al, 1995). Overall previous research has specifically investigated the relationship between worry and processing of the possible emotions associated with worries (Borkovec, 1994; Roemer et al, 1997), instead of considering the general emotional functioning in this population.

It is apparent that little is known about the relationship between the cognitive, interpersonal and emotional processing of GAD. The investigation of the connections between insecure attachment and GAD can make a unique contribution to knowledge of the association between emotional and interpersonal functioning, cognition and adult attachment style. According to attachment theory, emotional, interpersonal and cognitive functioning are linked to children's representation of the attachment figure and the self in adulthood (Bowlby, 1980; Cassidy, 1995; Izard & Kobak, 1991). There has been little empirical work examining the developmental precursors of GAD and this requires further investigation. In the absence of prospective research, the individuals’ current perception (or internal psychological models) of early childhood experiences and their current functioning are important to consider and may further advance understanding of this disorder.
Current Study

A beneficial approach to studying the characterological nature of GAD is to use an interpersonal attachment perspective. There is very little research investigating the concepts of interpersonal functioning and emotional regulation in individuals with GAD in the context of their adult relationships.

A Developmental / Interpersonal Model of GAD

Previous studies have suggested that GAD may be linked to both histories of early negative events and insecure childhood attachment (Raskin et al, 1982; Torgersen, 1986). It is proposed that the worry component of GAD is associated with the insecure/preoccupied adult attachment style and interpersonal concerns. The key feature of the preoccupied style is associated with a sense of unworthiness combined with a high regard for other people. The pervasive worry of GAD may be viewed as a way of protecting sufferers from deeper emotional experiences (Borkovec et al, 1995). Such emotional difficulties may be a consequence of early parental experiences, particularly 'affectionless control' (Parker & Gladstone, 1996), which has been associated with a lack of representation of emotional expression in adulthood and a perception of being unworthy. This experience may be associated with a difficulty in finding an emotional outlet, thus promoting a tendency for over involvement and over nurturance (Bartholomew & Horowitz, 1991) in terms of adult attachment relationships. Overly nurturing tendencies (greater feelings of enmeshment and role reversal) in GAD, combined with a need for acceptance, competence, responsibility and self-control may be linked to a perception that their needs are not being met. The sense of unworthiness
associated with the preoccupied adult attachment style may account for the high comorbidity of GAD with depression. The high regard for others in their adult relationships may be associated with emotional regret and oscillating feelings of anger (Cassidy et al, 1994) as their own needs are not being met.

Aim of Current Study

A large proportion of the research on GAD has been on the concept of worry. Thus the aim of the present study is to expand the research on GAD by investigating interpersonal correlates of the core GAD symptoms and problems such as worry. The present study also aims to investigate the above proposed model of attachment and GAD, in particular the link between interpersonal and emotional functioning in adult attachment relationships and their perception of childhood environments. Such an investigation aims to contribute to knowledge about the mechanisms of GAD. This knowledge may be used to re-evaluate treatment programs for GAD, possibly addressing interpersonal and affective functioning in adult attachment relationships, which are currently not adequately addressed (Crits-Christoph et al, 1996).

Research Questions and Hypotheses:

This study has 4 central Research Questions and 6 associated hypotheses. These are presented in Table 1 and discussed in detail below.
Table 1

The 4 Major Research Questions of the Thesis and the associated 6 Hypotheses

Research Question 1: What is the difference in symptoms between a clinical group with GAD and a matched community control?

_Hypothesis One:_ Adults with GAD experience more pathological worry and higher levels of depression, stress and anxiety

Research Question 2: Do the interpersonal patterns in GAD differ to the control group? If there are differences, do the interpersonal patterns in GAD cluster in predictable patterns? For example is there support for the insecure/preoccupied attachment style and its parental bonding concomitants in GAD?

_Hypothesis Two:_ Adults with GAD report greater interpersonal difficulties than controls. There will be a significant relationship between worry in GAD and the interpersonal difficulties these individuals display. GAD sufferers will fall in the overly nurturant cluster and will evidence a domineering and vindictive style.

_Hypothesis Three:_ Adults with GAD are more likely to be insecure in attachment style compared to controls. It is proposed that the insecure/preoccupied attachment style is associated with the GAD symptom of worry and interpersonal problems.

_Hypothesis Four:_ Adults with GAD perceive greater interpersonal conflict in their intimate relationships compared to controls. There will be a significant relationship between worry in GAD and interpersonal conflict in their intimate relationships.

_Hypothesis Five:_ Adults with GAD will report a negative perception of parenting received as a child compared to controls. In particular, adults with GAD will be recipients of 'affectionless control' (i.e. low care, high control).

Research Question 3: What is the role of worry and emotional functioning in GAD? In particular what is the role of Alexithymia in individuals with GAD?

_Hypothesis Six:_ Adults with GAD demonstrate impairment in emotional functioning when compared to controls. It is predicted that worry involves the avoidance of affect.

Research Question 4: Do the interpersonal patterns identified by individuals with GAD in their intimate relationships relate sensibly to remembered family environment and therefore offer further understanding to the developmental model of GAD?
**Research Question 1:** What is the difference in symptoms between a clinical group with GAD and a matched community control?

**Hypothesis One:** Adults with GAD experience more pathological worry and higher levels of depression, stress and anxiety.

Studies in GAD that use control groups are scarce. Major methodological limitations identified in these studies include small sample sizes and lack of non-anxious and non-psychiatric control groups. Previous studies that do utilise non-anxious and non-psychiatric control groups found that GAD is associated with higher impairment in functioning when compared to a control group (Borkovec & Inz, 1990; Craske et al, 1989; Roemer et al, 1997; Wittchen et al, 2000). In particular individuals with GAD showed greater worries, psychological distress and daily hassles (Bourland et al, 2000). This hypothesis aimed to identify the differences in symptoms between a clinical GAD group and a non-anxious and non-psychiatric control group.

As this study is an exploratory study not a confirmatory study a community control group is widely understood as an appropriate sample when investigating psychological conditions. The concept of worry is pervasive in the general community, so it is important to distinguish GAD worry from the worry evident in the general community. Overall a community control group matched on age, gender and marital status to the clinical group is an appropriate baseline to investigate the main symptoms of GAD and is consistent with psychological research.
Research Question 2: Do the interpersonal patterns in GAD differ to the control group? If there are differences, do the interpersonal patterns in GAD cluster in predictable patterns? For example is there support for the insecure/preoccupied attachment style and its parental bonding concomitants in GAD?

Hypothesis two: Adults with GAD report greater interpersonal difficulties than controls. There will be a significant relationship between worry in GAD and the interpersonal difficulties these individuals display. GAD sufferers will fall in the overly nurturant cluster and will evidence a domineering and vindictive style.

There are limited studies investigating interpersonal difficulties in GAD using a non-anxious and non-psychiatric control group. This hypothesis aims to confirm previous findings that adults with GAD display interpersonal difficulties and are interpersonally anxious (Borkovec et al, 1983; Breitholtz et al, 1999; Brown & Barlow, 1992). This hypothesis also aims to replicate the finding of previous research suggesting that adults with GAD are more likely to fall into the overly nurturing cluster and are domineering and vindictive (Pincus & Borkovec, 1994, cited in Borkovec et al, 1998) on the Inventory of Interpersonal Problems (Horowitz et al, 1988).

As there are few studies examining the interpersonal characteristics associated with GAD (Borkovec, 1994; Breitholtz et al, 1999; Pincus & Borkovec, 1994, cited in Borkovec et al, 1998), this hypothesis aims to further identify additional interpersonal difficulties associated with worry in GAD. This hypothesis also aims to provide evidence that individuals with GAD may display a certain profile of interpersonal difficulties.
Hypothesis three: Adults with GAD are more likely to be insecure in attachment style compared to controls. It is proposed that the insecure/preoccupied attachment style is associated with the GAD symptom of worry and interpersonal problems.

There is some previous research that supports an association between GAD and childhood attachment experiences (Cassidy et al, 1994). Cassidy and Colleagues (1994) found that individuals with GAD demonstrated an insecure attachment style, when compared to non-anxious controls and somatically anxious non-GAD individuals. In addition a later qualitative study supported the insecure-attachment hypothesis (Cassidy, 1995). This hypothesis aims to confirm previous finding of the relationship between GAD and attachment.

Currently there is no research investigating the type of insecure attachment style associated with GAD. Bartholomew & Horowitz's (1991) description of four adult attachment styles (one secure and three insecure) may improve understanding of the interpersonal problems in GAD. As a result this hypothesis is also exploratory. Past research identified that GAD has been associated with a high desire for acceptance and overly nurturing behaviour (Breitholtz et al, 1998, 1999; Pincus & Borkovec, 1994, cited in Borkovec et al, 1998). Individuals with GAD also tend to engage in self-doubt and perceive themselves as not coping (Borkovec, 1994; Butler & Booth, 1991). It is proposed that the worry in GAD is associated with the insecure/preoccupied adult attachment style. The key feature of the preoccupied style is a sense of unworthiness combined with a high regard for other people.
Hypothesis Four: Adults with GAD perceive greater interpersonal conflict in their intimate relationships compared to controls. There will be a significant relationship between worry in GAD and interpersonal conflict in their intimate relationships.

Previous research has found that individuals with GAD report poorer quality of relationships with their spouse, relatives and friends when compared to psychiatric populations and anxious non-psychiatric controls (Massion et al, 1993; Yonkers et al, 2000). This hypothesis aims to explore the type of difficulties acknowledged by worriers in their close relationships when compared to controls.

There is limited research examining the relationship between excessive worry and interpersonal conflict in the intimate relationships of GAD sufferers. In particular it has been found that GAD individuals have significantly more cognitions in the categories of interpersonal confrontations, competence, acceptance and concern about others suggesting a link between worry and interpersonal conflict in intimate relationships (Breitholtz et al, 1999). As research investigating types of interpersonal conflicts in intimate relationships of individuals with GAD is scarce, this hypothesis is exploratory in nature.

Hypothesis Five: Adults with GAD will report a negative perception of their parenting received as a child compared to controls. In particular, adults with GAD will be recipients of 'affectionless control' (i.e. low care, high control).

Previous research has linked both anxiety and depression to negative perceptions of parenting received as a child (Rapee, 1997). In GAD, negative parental bonding has
been associated low parental care and high parental control/overprotection 'affectionless control’ (Parker & Gladstone, 1996). Major methodological limitations of previous studies have been insufficient sample sizes and the absence of a normal control group (Rapee, 1997). As a consequence it is unclear from past research whether ‘affectionless control’ is unique to GAD. This hypothesis aims to further explore the link between the parental bonding and symptoms of GAD.

**Research Question 3: What is the role of worry and emotional functioning in GAD? In particular what is the role of Alexithymia in individuals with GAD?**

**Hypothesis Six: Adults with GAD demonstrate impairment in emotional functioning when compared to controls. It is predicted that worry involves the avoidance of affect.**

This hypothesis aims to explore the general ability to identify and describe emotions in GAD, which has not been specifically investigated. Previous research has investigated the relationship between worry and processing of the possible emotions associations with worries (Borkovec, 1994; Roemer et al, 1997), instead of emotional functioning generally in this population. Such investigations have found that emotional processing of GAD individuals when they are worrying is more impaired than non-anxious controls (Roemer et al, 1997). In particular it is suggested that worry reduces somatic reactivity and so functions to prevent emotional processing at the time of worry (Roemer & Borkovec, 1993). This lack of processing in turn is believed to contribute to the maintenance of anxious meanings and responses, as worrying is counterproductive to long-term habituation and reduction in negative affect (Borkovec, 1994). As worry has a predominance of thoughts rather than images it is viewed as a way of avoiding deeper
emotionally laden topics, which interferes with emotional processing (Butler et al, 1995; Molina et al, 1998).

There is some consensus in previous research that the worrying process in GAD is associated with the avoidance of emotions at the time of worry (Borkovec, 1994), however there is still limited understanding on how individuals with GAD generally function emotionally. This hypothesis aims to explore alexithymia and GAD to further understand emotional functioning in this population. It is possible that the avoidance of affect may be associated with other processes relevant to the clinical picture of individuals with GAD. This exploratory hypothesis aims to investigate whether other processes of GAD are associated with alexithymia.

**Research Question 4:** Do the interpersonal patterns identified by individuals with GAD in their intimate relationships relate sensibly to remembered family environment and therefore offer further understanding to the developmental model of GAD?

There are few past studies that have provided empirical support for an association between GAD and childhood attachment experiences (Cassidy et al, 1994; Cassidy, 1995). Generally there is little consensus in the literature on past and current attachment experiences and interpersonal functioning of individuals with GAD. Currently the literature implies that individuals with GAD were rejected more by the primary caregiver (Cassidy, 1995). GAD individuals tended to report conflictual feeling towards their caregivers (feelings of enmeshment, oscillating anger and role reversal). A lack of childhood memories was also prominent among GAD sufferers. There is no research investigating the link between remembered family environment among GAD
sufferers and their current intimate relationship difficulties. This research question aims to investigate major memories, themes and experiences reported by GAD sufferers in their past and current attachment relationship. This will further explore the developmental model of GAD.
QUANTITATIVE METHOD

Participants

This study consisted of a research group and a matched control group. All participants in this study volunteered freely, and gave explicit written informed consent following Institutional Ethics Review Boards approval for the study. The fifty research participants were recruited from new consecutive clients attending specialist anxiety clinic services in two area health services of Sydney, New South Wales, Australia. Participants were recruited through the Wentworth Area Health Service, Nepean Anxiety Disorders Clinic and the Bankstown Anxiety Disorders Clinic, South Western Area Health Service. Both anxiety clinics are outpatient units within public teaching hospitals. Both clinics are free services and provide psychological assessment and treatment to clients. Participants were either referred to the clinics by general practitioners, treating psychiatrists, community health centres or were self-referrals.

Inclusionary criteria for participation in this research group were adults meeting a primary diagnosis of GAD according to the Diagnostic and Statistics Manual, Fourth Edition (DSM-IV, APA, 1994), and an ability to speak, read and write English adequately. People with a past or current history of bipolar disorder, psychotic disorder and drug/alcohol abuse disorder were excluded from the study.

The control group included a matched community control group, which consisted of fifty participants. The snowball sampling method (McCall & Simmons, 1969) was initiated by recruiting participants known to the researcher from areas that
demographically matched the two areas in which the two anxiety units were located. The community group was matched for age, gender and marital status with the research group and excluded people who had any current or past treatment for psychological disorders.

A total sample size of 100 (2 x 50) was utilised in this study, this sample size is generally consistent with the literature investigating GAD in a clinical sample (Gould, Otto, Pollack & Yap, 1997). In the literature sample sizes are larger when utilising undergraduate university students, however the advantage of this thesis is that the clinical group were new consecutive clients attending a specialist anxiety service in two area health services. By utilising a clinical sample, it is believed that the results of this research would substantially contribute to literature on GAD.

**Instruments**

The **Structured Clinical Interview for the DSM-IV (SCID-IV)** (First, Spitzer, Gibbon & Williams, 1997) is a semi-structured, clinician administered diagnostic schedule and was used to assess Axis I anxiety and mood disorders. The principal diagnosis was operationally defined as the disorder associated with the most severe current impairment and distress. The Structured Clinical Interview for DSM-IV personality disorders was also utilised to diagnose Axis II personality disorders. The interview was used purely for diagnostic purposes, so the psychometric properties will not be discussed.

The **Penn State Worry Questionnaire (PSQW)** (Meyer, Miller, Metzger & Borkovec, 1990) was used as a measure of the frequency and intensity of worry, not related to
specific worry topics. In particular the 16-items of the PSWQ measure the trait-like tendency to worry. Responses are requested on a 5-point Likert-type rating scale ranging from 1 ‘not at all typical’ to 5 ‘very typical’. Total scores can range from 16 to 80, with higher scores indicating more pathological worry. In particular, participants with a diagnosis of GAD score significantly higher on the PSWQ than participants who meet only some of the criteria for a diagnosis of GAD (Meyer et al, 1990). This measure has also demonstrated strong sensitivity and specificity in discriminating individuals with GAD from those without GAD (Brown, Antony, Barlow, 1992; Chelminski & Zimmerman, 2003).

The PSWQ is one of the most widely utilised measures of worry (Brown et al, 1992; Meyer et al, 1990). This scale appears to be a psychometrically sound self-report instrument with good validity for assessing the trait of worry (Meyer et al, 1990). Several studies in both clinical and nonclinical samples have reported high internal consistency (alpha=. 86 to.97) (Davey, 1994; Stober, 1998), test-retest reliability (r =.93) and convergent and criterion-related validity (Brown et al, 1992; Davey, 1994). In the current study the alpha coefficients of reliability was found to be high (α= 0.98). Test scores appear not to be influenced by social desirability (Meyer et al, 1990). In a comparison of three worry questionnaires in a UK sample, Davey (1994), found the PSWQ to be a purer measure of pathological worry, less confounded by task-oriented worrying, than other measures, including the Worry Domain Questionnaire (WDQ) (Tallis et al, 1992) and the Student Worry Scale (SWQ) (Davey, Hampton, Farrell & Davidson, 1992).
The Toronto Alexithymia Scale (TAS-20) (Taylor, Parker & Bagby, 1990) was used to measure the construct of alexithymia, particularly a deficiency in emotional awareness and imaginal activity. The measure was developed in an attempt to improve the previous 26-item version of the scale (Bagby, Parker & Taylor, 1994). The TAS is a 20-item inventory that is made up of three subscales, namely, Difficulty Identifying Feelings (DIF) (7 items), Difficulty Describing Feelings (DDF) (5 items), Externally-Oriented Thinking (EOT) (8 items) and yields a total TAS score. Each item is rated on a 5-point Likert scale, ranging from 1 “strongly disagree” to 5 “strongly agree”. Each participant attains a total score and three additional scores, one for each subscale.

Individuals with a TAS-20 total score greater than or equal to 61 are considered alexithymic (Bagby et al, 1994). Those individuals scoring less than or equal to 51 are considered non-alexithymic.

The TAS-20 has been used widely in a variety of populations, including depression, personality disorders (Honkalampi, Hintikka, Antikainen, Lehtonen & Viinamaki, 2001); anxiety (Bankier, Aigner & Bach, 2001; Schut, Castonguay & Borkovec, 2001); chronic pain (Smith, Lumley & Longo, 2002); somatoform disorders (Bankier et al, 2001) and psoriasis (Fortune, Richards, Griffiths & Main, 2002). The TAS-20 has good psychometric properties, including, good internal consistency (.81) and test-retest reliability (.77) over a 3-week interval (Bagby et al, 1994). For the use in research and comparison of groups, the reliability of the TAS-20 and its factors is sufficient. However, for the purpose of individual diagnosis, only two characteristics of alexithymia, DIF and DDF were reliably covered by the TAS-20 (Fortune et al, 2002; Honkalampi et al, 2001; Kooiman, Spinhoven & Trijsburg, 2001; Schut et al, 2001). Previous research has found that the factor EOT had poor internal consistency (α < .60).
The low internal consistency of the EOT subscale is presumed to be due to the content of items and the low number of items in this subscale (Kooiman et al., 2001). In the current study the alpha coefficients of reliability were 0.92 (total TAS-20), 0.92 (DDF) and 0.93 (DIF). The subscale of EOT ($\alpha = 0.70$) demonstrated low internal consistency, which is consistent with previous research.

The Depression, Anxiety and Stress Scale (DASS) (Lovibond & Lovibond, 1995) is a 21-item self-report scale designed to measure the negative emotional states of depression, anxiety and stress. There are 7 items per scale. Participants are asked to consider each of the 21 individual items and select a response on a 4-point scale on each item, scores range from 0 to 3, where 0 indicated "did not apply to me at all" and 3 indicated "applied to me very much, or most of the time". Higher scores indicate higher levels of depression, anxiety and stress. Scores ranged from normal to extremely severe scores on depression, anxiety and stress scales. The 3 scales of the DASS have excellent internal consistency and temporal stability, as well as convergent and discriminant validity of the scales (Brown, Chorpita, Horotitsch & Barlow, 1997). The current study demonstrated high internal consistency for the three subscales of the DASS, that is, depression ($\alpha = 0.95$), stress ($\alpha = 0.94$) and anxiety ($\alpha = 0.94$). Previous research has found that the DASS-Stress subscale is correlated with scores from PSWQ and is a useful subscale assessing symptoms of GAD (Lovibond & Lovibond, 1995).

The Relationship Questionnaire (RQ) (Bartholomew & Horowitz, 1991) comprises of four brief paragraphs describing the four attachment styles (secure, preoccupied, fearful and dismissive), on a scale of 1 to 100. Participants indicated how well they agreed with each description. The four attachment patterns are defined in terms of two dimensions:
positivity of a person’s model of self and positivity of a person’s model of others.

Secure attachment is characterised by the combination of a positive self-model and a positive model of others. Preoccupied attachment is characterised by a negative self-model and a positive model of others. Fearful attachment is characterised by negative self and other models. Dismissing attachment is characterised by a positive self-model and a negative model of others.

This scale has demonstrated convergent validity with other attachment measures including peer rating, structured interviews and relationship scales questionnaire, correctly classifying 92% of cases (Bartholomew & Horowitz, 1991). A study by Reis & Grenyer, 2002 found highly significant associations between the corresponding RQ items with the four subscales of the Relationship Style Questionnaire (RSQ) (Griffin & Bartholomew, 1994). The RQ demonstrates considerable convergent and discriminant validity via its concordance with corresponding RSQ subscales (Reis & Grenyer, 2002).

The Inventory of Interpersonal Problems (IIP) (Horowitz, Rosenberg, Baer, Ureno & Villasenor, 1988) is designed to assess severity and type of interpersonal difficulties in eight domains (domineering, intrusive, overly nurturant, exploitable, nonassertive, socially avoidant, cold and vindictive). Participants are asked to describe the amount of distress experienced for a number of interpersonal problems on a 5-point scale ranging from 0 (not at all) to 4 (extremely). For this study, the 64-circumplex version of the IIP was used as it is the most researched version (Alden, Wiggins & Pincus, 1990). Higher scores reflect more interpersonal difficulties. The IIP has demonstrated good psychometric properties: internal consistency of subscales has been reported as .82 to .94, and test-retest reliability (10 weeks) was .80 to .90 (Horowitz et al, 1988). In terms
of validity, the total IIP score correlated .64 with the SCL-90 (Alden et al, 1990). In the
current study the alpha coefficient of reliability of the total IIP score was 0.95. The
internal consistency of subscales in the present study ranged from 0.80 to 0.90.

The Central Relationship Questionnaire (CRQ) (Barber, Foltz & Weinryb, 1998) is a
139-item inventory used to assess characteristic patterns of participant’s core
relationships. The CRQ was developed to measure the Core Conflictual Relationship
Theme (CCRT) method developed by Luborsky (1990). Luborsky (1990) postulates that
every individual has a limited number of central relationship patterns, which refer to
characteristic patterns of wishes, ways of relating to others, and modes of experiencing
interpersonal interactions. In accordance with the CCRT, there are three subscales of
the CRQ: the Wish Scale (WS assesses wishes, desires, needs and intentions relating to
significant others), which has 7 subscales. The Response from Other (RO assesses the
response of the main significant other), which has 7 subscales and the Response of Self
(RS assesses the individual responses to self, for example withdrawing and getting
depressed), which has 8 subscales. In addition the CRQ subscales measures more
directly what people want and how they perceive others and themselves. Generally, the
CRQ contributes to the understanding of the intrapsychic aspects of interpersonal
problems.

There is evidence that the factors derived from the subscales of CRQ have acceptable
internal consistency, test-retest reliability, and generally converge and diverge in a
predictable way with measures of interpersonal symptomatology (Barber et al, 1998).
The CRQ also has shown significant consistency in measuring central relationship
patterns across different types of significant others (Foltz, Barber, Weinryb et al, 1999).
In the current study, the three total scales of the CRQ, the Total Wish subscale ($\alpha=0.95$), the Total Response from Other subscale ($\alpha=0.67$) and the Total Response Self subscale ($\alpha=0.80$) demonstrated acceptable internal consistency.

The Parental Bonding Instrument (PBI) (Parker, Tupling & Brown, 1979) is a self-report measure designed to assess the recollection of participants' perception of their relationships with parents during the first sixteen years of their lives. The PBI consists of 25 items and individuals complete a form for each parent. Participants' rate recalled behaviours and attitudes of each parent on a four point answering format ranging from 0(very unlike) to 3(very like). Two dimensions are assessed for each parent, maternal and paternal Care and Overprotection. The two scales are inversely related. High Care scale scores indicate individuals’ recall of caring attitudes and behaviour displayed by parents, low Care scale scores indicate recall of parent coldness, indifference and possible neglect. Lower scores on the Overprotection scale indicate a promotion of the individuals’ independence, whilst elevated scores are indicative of parental control or overprotection. High care and low overprotection is considered optimal, while low care and high overprotection is least optimal (Parker & Gladstone, 1996).

The Parental Bonding Instrument has been used extensively to assess perceived parental bonding in depression (Gittleman, Klein, Smider & Essex, 1998; Kendler, 1996; Mackinnon, Henderson & Andrews, 1993; Neale, Walker & Heath, 1994; Shah & Waller, 2000). A number of studies of differing methodologies (independent rater's, twin studies and family corroborative witnesses) have demonstrated that the PBI is a valid assessment tool of both perceived and actual parenting (MacKinnon et al, 1993; Neale et al, 1994; Parker, 1989; Parker & Lipscombe, 1981). The PBI has also been
shown to be insensitive to the effects of the rater's mood (Parker, 1989). Extensive
evidence exists for the validity and reliability of this measure (Parker, 1989; Wilhelm &
Parker, 1990). The measure has high test-retest reliability and satisfactory concurrent
and predictive validity. The internal consistency of the PBI scales has also been shown
to be acceptable (Gittleman et al., 1998; Shah et al., 2000). In the current study alpha
coefficients of reliability were 0.92 (maternal care), 0.87 (maternal control), 0.93
(paternal care), 0.87 (paternal control). The discriminant validity of the PBI has been
demonstrated (Kashani, Hoeper, Beck, Corcoran, 1987; Patrick, Hobson, Castle,
Howard & Maughan, 1994). These studies reported higher rates of reported
affectionless control (low care/high overprotection) in clinical participants compared to
non-clinical participants.

There has been some discussion in the previous research whether the structures of the
PBI are actually measuring two (Kashani et al., 1987; Patrick et al., 1994) or three factors
(Cubis, Lewin & Dawes, 1989; Gomez-Beneyto, Pedros, Tomas, Aguilar & Leal, 1993;
Murphy, Brewin & Silka, 1997). All previous researchers agree that the original care
dimension (parental warmth) is the main factor, but there have been some inconsistency
with the dimensions of the overprotection factors. Some researchers have suggested
that the overprotection factor be replaced by two factors, namely denial of
psychological autonomy and discouragement of behavioural freedom (Cubis et al., 1989;
Gomez-Beneyto et al., 1993). Kendler (1996) also identified three factors, labelled as
warmth, protectiveness and authoritarianism. As the support for the three factor
structure of the PBI is limited, this study will focus on the two factor structure of the
PBI.
Procedure

Ethics applications were sought through the South Western Sydney area health service and the Wentworth area health service. Consent to conduct this research was obtained by both area health services. Individuals who were referred to the clinics or who self-referred contacted the anxiety clinics to arrange an appointment. After this first contact all individuals initially completed a telephone intake interview with a clinical psychologist to make a provisional assessment of the individual’s suitability to the anxiety units. If at this point the client was considered to be displaying significant features of anxiety, their names were put on the usual waiting list at the anxiety clinics for standard assessment and appropriate psychological treatment. Clients were provided with information about this study. At this point the researcher was notified about the clients that had provisional diagnoses of GAD, who expressed interest in participating in this study. An information sheet and consent form was posted in the mail for clients to read, if they indicated they were interested in participating in this study. If clients completed a written consent form to participate in this study an appointment was organised to complete a research interview and psychometric measures. This interview was completed over two sessions.

At the first research interview participants were firstly administered the Structured Clinical Interview for DSM-IV (SCID-IV) for the anxiety and mood disorders. Interviews were approximately one and a half hours. At the conclusion of the first session participants were provided with a series of questionnaires to be completed at home. These questionnaires included the RQ, DASS, TAS-20, PWSQ, IIP, CRQ, PBI
and the personality disorder SCID-II questionnaire. Another research interview was organised with the client.

In the second interview, if required, the SCID-II for personality disorders was administered and the series of questionnaires completed by clients was reviewed. The second research interview took between half an hour to an hour. All clients who were interviewed and agreed to participate in this study did so. This study did not have any participants who dropped out of this study at any stage.

**Description of the Anxiety Clinics**

The Bankstown Anxiety Clinic is located within the South West Sydney Area Health service, which encompasses a population of approximately 700,900 (ABS Estimated Resident Population, 1994). This anxiety clinic was established as a collaborative project with the Psychiatry Research and Teaching Unit of the School of Psychiatry at the University of New South Wales, Australia.

The Nepean Anxiety Disorders Clinic is located within the Wentworth Area Health Service, which geographically is one of the largest metropolitan areas in NSW. It is located on the western edge of Sydney and includes Hawkesbury, Penrith and Blue Mountains Local Government Area. This area health service encompasses a population of approximately 600,000 (ABS Estimate Resident Population, 1994). This anxiety clinic was established as a collaborative project with the Psychiatry Research and Teaching Unit of the School of Psychiatry at the University of Sydney, Australia.
Statistical Analyses

The data analyses have been designed to answer hypotheses generated in this study. The analyses performed included reliability analyses (Cronbach’s alpha), Student’s t-tests, bivariate correlations, One-Way Analysis of Covariance (ANCOVA) and chi-squared tests.

Student t-tests and chi-square tests were initially conducted to determine the significant differences between the clinical GAD group and the matched community control group on all instruments utilised in this study. Results on the Levene’s test of equal variance assumed and not assumed was the same, so for the ease of interpretation the means of equal variance was reported.

Pearson’s correlations were conducted to determine significance and direction of the relationships between scales of the instruments included in this study. An ANCOVA was conducted on all the statistical analyses comparing the clinical and control groups to ensure that differences between the clinical and control groups could not be accounted for by the demographic variables of this sample.

The psychometric characteristics of all measures were tested by using reliability analyses. In all analyses, the criteria for statistical significance were set at \( p < .05 \). In the case of multiple comparisons greater than four variables, the Bonferroni correction was applied to all analyses. The decision to apply the Bonferroni correction to all analyses with multiple comparisons greater than four was a conservative one following the advice of a university statistical consultant based on considerations of sample size and
estimations of the likely statistical power of the study. The Bonferroni correction was calculated to reduce the likelihood of falsely obtaining results due to chance (inflated Type 1 error).
QUANTITATIVE RESULTS

A total of 100 people participated in this study. Fifty people who consecutively attended the anxiety clinics diagnosed with GAD agreed to participate in the study. Fifty people were also invited to participate in the study as the control group. The control group was matched in terms of age, gender and marital status to the clinical group.

Demographics

The two groups were similar with respect to age, gender and marital status. Most participants in both groups (Clinical sample: 96%, N= 48; Community sample: 84 %, N=42) were born in Australia. Table 2 shows the demographic information for all the participants.
Table 2

Demographics of the Clinical Group and the Community Group (N= 100)

<table>
<thead>
<tr>
<th>Demographic Variable</th>
<th>Clinical Group (N=50)</th>
<th>Community Group (N=50)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age (in years):</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>33.42</td>
<td>33.36</td>
</tr>
<tr>
<td>SD</td>
<td>11.23</td>
<td>11.20</td>
</tr>
<tr>
<td>N (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Gender:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>4 (8)</td>
<td>4 (8)</td>
</tr>
<tr>
<td>Female</td>
<td>46 (92)</td>
<td>46 (92)</td>
</tr>
<tr>
<td><strong>Marital Status:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never married</td>
<td>17 (34)</td>
<td>17 (34)</td>
</tr>
<tr>
<td>Divorced</td>
<td>2 (4)</td>
<td>2 (4)</td>
</tr>
<tr>
<td>Married/defacto</td>
<td>31 (62)</td>
<td>31 (62)</td>
</tr>
<tr>
<td><strong>Birth Place:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td>48 (96)</td>
<td>42 (84)</td>
</tr>
<tr>
<td>Other</td>
<td>2 (4)</td>
<td>8 (16)</td>
</tr>
<tr>
<td><strong>Education:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-tertiary</td>
<td>39 (78)</td>
<td>17 (34)</td>
</tr>
<tr>
<td>Tertiary</td>
<td>11 (22)</td>
<td>33 (66)</td>
</tr>
<tr>
<td><strong>Employment:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>38 (76)</td>
<td>47 (94)</td>
</tr>
<tr>
<td>Unemployed</td>
<td>12 (24)</td>
<td>3 (6)</td>
</tr>
<tr>
<td><strong>No. of children:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>1.46</td>
<td>0.78</td>
</tr>
<tr>
<td>SD</td>
<td>1.39</td>
<td>1.28</td>
</tr>
<tr>
<td>Range</td>
<td>(0-7)</td>
<td>(0-7)</td>
</tr>
</tbody>
</table>

* p<.05
There were significant differences between the demographic characteristics of the two
groups on factors of education ($\chi^2=21.79$, $p=0.00$), employment ($\chi^2=6.35$, $p=0.01$), and
the number of children ($t (98) =2.54$, $p=0.01$) the participants had (see Table 2). Further
analyses were conducted to identify the impact of these demographic variables on core
GAD symptoms as assessed by the PSWQ (see Table 3). It was found that people who
were employed ($M=53.06$, $SD=20.29$) had lower levels of worry when compared to
people who were unemployed ($M=66.00$, $SD=15.36$; $t (98) = -2.35$, $p=0.02$). People
who had tertiary education ($M= 45.41$, $SD=18.38$) reported less worry when compared
to those who had no tertiary education ($M= 62.54$, $SD= 18.22$; $t (98) = 4.65$, $p=0.00$). In
addition having more children was related to more worry ($r = 0.26$, $p=0.01$). The impact
of these sample differences was explored further in this study by conducting a One-Way
Analysis of Covariance (ANCOVA). An ANCOVA was conducted on all the statistical
analyses comparing the clinical and control groups to ensure that the differences
between the clinical and control groups cannot just be accounted for by the
demographic variables of employment, education and number of children. It was found
that these demographic variables essentially did not change any of the results of this
study, with the exception of the EOT subscale of the TAS-20, which was influenced
significantly by educational level ($F=13.49$, $p=0.00$). This is further discussed at
Hypothesis 6.
Table 3

Impact of demographic variables on the Penn State Worry Questionnaire (PSWQ) (N = 100)

<table>
<thead>
<tr>
<th>Total PSWQ</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean (SD)</td>
<td></td>
</tr>
</tbody>
</table>

**Employment Status:**
- Employed: 53.06 (20.29)
- Unemployed: 66.00 (15.36)

**Education:**
- Tertiary: 45.41 (18.38)
- Non-Tertiary: 62.54 (18.22)

**No. of children:** 1.12 (1.37)

* p<.05

Sample Characteristics

As required by the inclusionary criteria of this study, all 50 participants of the clinical group met the primary diagnosis of GAD. None of the 50 participants in the community sample were found to meet criteria for an Axis I or Axis II diagnosis as assessed on the SCID-IV. Within the clinical sample, more than half (60%; N=30) displayed severe symptoms of GAD, while 38 % (N=19) had moderate symptoms of GAD. The SCID-IV ratings of severity rated moderate levels of GAD as three symptoms and severe levels of GAD as more than three symptoms. Nearly three quarters (74%; N=37) of individuals reported childhood onset of GAD, with a smaller proportion reporting adolescent (14%; N=7) and adult (12%; N=6) onset.
The majority of the clinical sample reported the presence of GAD symptoms, of
tiredness (96%; N=48), muscle tension (90%; N=45), restlessness (90%; N=45),
irritability (88%; N=44), trouble sleeping (84%; N=42) and trouble concentrating (82%;
N=91). The mean number of symptoms present in the clinical group was 5.76 (S.D= 0.52 range 4 to 6).

Comorbid Diagnosis

Two percent of the fifty people in the clinical sample did not have an Axis 1 comorbid
diagnosis. In the clinical sample thirty-four percent (34%; N=17) had one Axis 1
comorbid diagnosis, fifty-four percent (54%; N=27) had two Axis 1 comorbid
diagnoses and ten percent (10%; N=5) had three Axis 1 comorbid diagnoses. The most
common Axis 1 comorbid diagnosis was Panic Disorder with/without Agoraphobia
representing 58% (N=29) of those participants identified as having a comorbid
diagnosis. The second most common Axis 1 comorbid diagnosis was Dysthymia (28%,
N=14). Eighteen percent (18%; N=9) had a comorbid Major Depressive Disorder;
while 16% (N=8) had comorbid Social Phobia. A small proportion of clients (2%,
N=1), had comorbid Obsessive Compulsive Disorder.

Seventy-two percent (N=36) of the clinical sample did not have a comorbid personality
disorder. A small proportion of participants did have a comorbid Axis 2 disorder, the
most common being Obsessive Compulsive Personality disorder (8%, N=4). Six percent
(N=3) of the clinical sample also had comorbid Avoidant and Depressive personality
disorders. A smaller proportion of the sample had comorbid Dependent (4%; N=2),
Paranoid (2%; N=1) and Narcissistic (2%; N=1) personality disorders.
Research Questions and Hypotheses

Research Question 1: What is the difference in symptoms between a clinical group and the matched community control?

Hypothesis One: Adults with GAD experience more pathological worry and higher levels of depression, stress and anxiety.

Previous research has shown that individuals with GAD showed greater worries, psychological distress and daily hassles (Bourland et al, 2000). Student’s t-tests were conducted to compare the clinical group and the control group on measures of worry, depression, stress and anxiety.

It was found that adults with GAD (M=74.08, SD=3.77) reported more frequent and intense pathological worry, demonstrating more trait-like worry tendencies as assessed with the PSWQ than the community control sample (M=35.92, SD=7.71; t (98)=31.46, p=0.00) (see Table 4). The three subscales of the DASS significantly discriminated between the GAD group and the community group. The GAD group (M=20.00, SD=11.39) was significantly more depressed than the control group (M=2.84; SD=3.59; t (98) =10.16, p=0.00). The GAD group (M=22.20, SD=10.90) was significantly more anxious than the control group (M=1.68, SD=2.47; t (98) =12.98, p=0.00). The GAD group (M= 27.48, SD= 9.54) was significantly more stressed than the control group (M= 7.08, SD=4.59; t (98) =13.62, p=0.00) (see Table 4). These results support hypothesis one.
In addition Pearson’s correlations were computed to examine the relationship between excessive worry and symptoms of depression, stress and anxiety. It was found that worry was significantly correlated with symptoms of depression ($r = 0.34$, $p=0.02$) and stress ($r =0.35$, $p=0.01$) (see Table 5 and Figure 2 for an overview of significant correlations).

### Table 4

**Comparison between Clinical and Community Groups on PSWQ and DASS**

<table>
<thead>
<tr>
<th></th>
<th>Clinical group (N=50)</th>
<th>Community group (N=50)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PSWQ</strong></td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td></td>
<td>74.08 (3.77)</td>
<td>35.92 (7.71)</td>
</tr>
<tr>
<td><strong>DASS-D</strong></td>
<td>20.00 (11.39)</td>
<td>2.84 (3.59)</td>
</tr>
<tr>
<td><strong>DASS-A</strong></td>
<td>22.20 (10.90)</td>
<td>1.68 (2.47)</td>
</tr>
<tr>
<td><strong>DASS-S</strong></td>
<td>27.48 (9.54)</td>
<td>7.08 (4.59)</td>
</tr>
</tbody>
</table>

Notes: PSWQ = The Penn State Worry Questionnaire; DASS-D = The Depression, Scale of The Depression, Anxiety and Stress Scale; DASS-A = The Anxiety Scale of The Depression, Anxiety and Stress Scale; DASS-S = The Stress Scale of The Depression, Anxiety and Stress Scale.
Table 5

Intercorrelations between the PSWQ and DASS-scales (N = 50)

<table>
<thead>
<tr>
<th></th>
<th>DASS</th>
<th>PSWQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety</td>
<td>.11</td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>.34*</td>
<td></td>
</tr>
<tr>
<td>Stress</td>
<td>.35*</td>
<td></td>
</tr>
</tbody>
</table>

*p < .05

Research Question 2: Do the interpersonal patterns in GAD differ to the control group? If there are differences, do the interpersonal patterns in GAD cluster in predictable patterns, for example, the insecure/preoccupied attachment style and its parental bonding concomitants?

Hypothesis Two: Adults with GAD report greater interpersonal difficulties than controls. There will be a significant relationship between worry in GAD and the interpersonal difficulties these individuals display. GAD sufferers will fall in the overly nurturant cluster and will evidence a domineering and vindictive style.

Previous research has found that adults with GAD display interpersonal difficulties and are interpersonally anxious (Borkovec et al, 1983; Brown & Barlow, 1992). Student’s t-tests were conducted to compare the clinical group and the control group on the Inventory of Interpersonal Problems (IIP). It was found that the clinical group (M=11.52, SD=6.85) did have greater total interpersonal problems compared to the community group (M=4.11, SD=2.69) as assessed by the IIP (t(98) =6.73, p=0.00) (see Table 6). There was a significant difference between the clinical and control group on all the interpersonal subscales of the IIP. Since there were 8 comparisons in this analysis, a Bonferroni adjustment was calculated to reduce the likelihood of falsely
obtaining results due to chance (inflated Type I error) (see Table 6). The clinical group were more vindictive (clinical sample: $M=1.02$, $SD=0.68$; community sample: $M=0.45$, $SD=0.30$; $t\,(98)=5.37$, $p=0.00$), overly nurturant (clinical sample: $M=1.92$, $SD=0.78$; community sample: $M=1.36$, $SD=0.62$; $t\,(98)=4.02$, $p=0.00$), exploitable (clinical sample: $M=1.86$, $SD=0.88$; community sample: $M=1.16$, $SD=0.51$; $t\,(98)=4.09$, $p=0.00$), nonassertive (clinical sample: $M=2.07$, $SD=0.93$; community sample: $M=1.29$, $SD=0.77$; $t\,(98)=4.55$, $p=0.00$), cold (clinical sample: $M=1.05$, $SD=0.74$, community sample: $M=0.43$, $SD=0.43$ $t\,(98)=5.15$, $p=0.00$) and socially avoidant (clinical sample: $M=1.69$, $SD=0.99$, community sample: $M=0.78$, $SD=0.58$; $t\,(98)=5.62$, $p=0.00$) when compared to the community sample (see Table 6). These results support Hypothesis two that individuals with GAD do have greater interpersonal difficulties than controls.

This hypothesis also aims to replicate previous findings using the IIP suggesting that adults with GAD are more likely to be overly nurturing and are domineering and vindictive (Pincus & Borkovec, 1994, cited in Borkovec et al, 1998). The relationship between current patterns of interpersonal problems in people with GAD was considered by examining the relationship between the IIP and PSWQ. Pearson's correlations were computed to examine this relationship and a significant correlation was found between excessive worry as assessed by the PSWQ and total interpersonal difficulties ($r = 0.42$, $p = 0.00$) as assessed by the IIP (see Table 7 and Figure 2). Significant positive relationships were found between excessive worry and the IIP subscales of overly nurturant ($r = 0.32$, $p= 0.02$), nonassertive ($r= 0.40$, $p= 0.00$), exploitable ($r = 0.31$, $p= 0.03$) and socially avoidant ($r= 0.36$, $p= 0.01$) (see Table 7 and Figure 1).
Table 6

Comparison between Clinical and Community Groups on the IIP

<table>
<thead>
<tr>
<th></th>
<th>Clinical group (N=50)</th>
<th>Community group (N=50)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>Total IIP*</td>
<td>11.52 (6.85)</td>
<td>4.11 (2.69)</td>
</tr>
<tr>
<td>Subscales of IIP:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domineering</td>
<td>0.75 (0.62)</td>
<td>0.51 (0.39)</td>
</tr>
<tr>
<td>Vindictive*</td>
<td>1.02 (0.68)</td>
<td>0.45 (0.30)</td>
</tr>
<tr>
<td>Overly Nurturant*</td>
<td>1.92 (0.78)</td>
<td>1.36 (0.62)</td>
</tr>
<tr>
<td>Intrusive</td>
<td>1.17 (0.71)</td>
<td>0.88 (0.57)</td>
</tr>
<tr>
<td>Exploitable*</td>
<td>1.86 (0.88)</td>
<td>1.16 (0.51)</td>
</tr>
<tr>
<td>Nonassertive*</td>
<td>2.07 (0.93)</td>
<td>1.29 (0.77)</td>
</tr>
<tr>
<td>Cold*</td>
<td>1.05 (0.74)</td>
<td>0.43 (0.43)</td>
</tr>
<tr>
<td>Socially Avoidant*</td>
<td>1.69 (0.99)</td>
<td>0.78 (0.58)</td>
</tr>
</tbody>
</table>

*p <.006 (Bonferroni adjustment)
Notes: IIP = The Inventory of Interpersonal Problems.

Table 7

Intercorrelations between the PSWQ and IIP and Subscales (N = 50)

<table>
<thead>
<tr>
<th>IIP Scales</th>
<th>PSWQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total IIP</td>
<td>.42*</td>
</tr>
<tr>
<td>Domineering</td>
<td>.01</td>
</tr>
<tr>
<td>Vindictive</td>
<td>.15</td>
</tr>
<tr>
<td>Overly Nurturant</td>
<td>.32*</td>
</tr>
<tr>
<td>Intrusive</td>
<td>.28</td>
</tr>
<tr>
<td>Nonassertive</td>
<td>.39*</td>
</tr>
<tr>
<td>Exploitable</td>
<td>.31*</td>
</tr>
<tr>
<td>Cold</td>
<td>.23</td>
</tr>
<tr>
<td>Socially Avoidant</td>
<td>.36*</td>
</tr>
</tbody>
</table>

*p <.05

These results partly support Hypothesis Two. These results also provide evidence that a certain profile of interpersonal difficulties may be common in GAD.
Hypothesis Three: Adults with GAD are more likely to be insecure in attachment style compared to controls. It is proposed that the insecure/preoccupied attachment style is associated with the GAD symptoms of worry and interpersonal problems.

There is some previous research that has found that individuals with GAD demonstrated an insecure attachment style, when compared to non-anxious controls and somatically anxious non-GAD individuals (Cassidy et al, 1994). Chi-square analysis was conducted to compare the clinical group and the control group on measures of attachment style. It was found that when compared to the clinical group (6%, N=3) adults in the control group (96%, N=48) demonstrated a secure attachment style as assessed by the attachment measure of RQ (see Table 8). When adults with GAD were compared to controls they were more insecurely attached, demonstrating preoccupied (clinical sample: 34%, N=17; community sample: 0%, N=0) and fearful (clinical sample: 48%,...
N=24; community sample: 0%, N=0) attachment styles as assessed by the RQ ($\chi^2 = 82.71, p=.00$) (see Table 8).

### Table 8

<table>
<thead>
<tr>
<th></th>
<th>Clinical group (N=50)</th>
<th>Community group (N=50)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N (%)</td>
<td>N (%)</td>
</tr>
<tr>
<td><strong>RQ:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secure</td>
<td>3 (6)</td>
<td>48 (96)</td>
</tr>
<tr>
<td>Preoccupied</td>
<td>17 (34)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Fearful</td>
<td>24 (48)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Dismissing</td>
<td>6 (12)</td>
<td>2 (4)</td>
</tr>
</tbody>
</table>

*p <.05

Note: RQ: The Relationship Questionnaire

As there is no research investigating the type(s) of insecure attachment style(s) associated with excessive worriers. The relationship between excessive worry as assessed by the PSWQ and attachment style as assessed by the RQ was examined using Pearson’s correlations. No significant relationships were found between excessive worry as assessed by the PSWQ and attachment style as assessed by the RQ. As previous research has indicated that different attachment styles in adulthood were found to correspond to interpersonal problems (Bartholomew & Horowitz, 1991; Birtchnell, 1997; Simpson et al, 1992), the relationship between attachment style(s) as assessed by the RQ and interpersonal problems, as assessed by IIP was examined using Pearson’s correlations. It was found that there was a significant positive relationship between total interpersonal problems, as measured by the IIP, and the preoccupied attachment style ($r = .43$, $p=.002$), as well as the fearful attachment style ($r = .35$, $p=.018$) as measured by the RQ. A significant negative relationship was found between the secure...
attachment style, as assessed by the RQ and total interpersonal difficulties as assessed by the IIP ($r = -.56, p = .000$) (see Table 9).

Table 9

Intercorrelations between the RQ and IIP

(N = 50)

<table>
<thead>
<tr>
<th>Attachment</th>
<th>IIP</th>
</tr>
</thead>
<tbody>
<tr>
<td>RQ</td>
<td></td>
</tr>
<tr>
<td>Secure Attachment</td>
<td>-.56*</td>
</tr>
<tr>
<td>Fearful Attachment</td>
<td>.35*</td>
</tr>
<tr>
<td>Preoccupied Attachment</td>
<td>.43*</td>
</tr>
<tr>
<td>Dismissing Attachment</td>
<td>-.08</td>
</tr>
</tbody>
</table>

* $p < .05$

Note: RQ = The Relationship Questionnaire.

These results do partly support hypothesis three. GAD sufferers were more insecurely attached than controls. However excessive worry does not appear to be associated with the insecure/preoccupied attachment style. Interpersonal problems were associated with the fearful and preoccupied attachment styles in individuals with GAD. In addition, lower interpersonal problems were associated with secure attachment.
Hypothesis Four: Adults with GAD perceive greater interpersonal conflict in their intimate relationships compared to controls. There will be a significant relationship between worry in GAD and interpersonal conflict in their intimate relationships.

Previous research has found that individuals with GAD report poorer quality of relationships with their spouse, relatives and friends when compared to psychiatric populations and anxious non-psychiatric controls (Massion et al, 1993; Yonkers et al, 2000).

Student's t-tests were conducted to compare the clinical group and the control group on the measure of CRQ. On the three scales (total wish scale, response from other scale, response of self-scale) of the CRQ, there were no significant differences between the two groups. Since there were 25 comparisons in this analysis, a Bonferroni adjustment was calculated to reduce the likelihood of falsely obtaining results due to chance (inflated Type 1 error) (see Table 10). It was found that the clinical group (M=52.08, SD=13.06) demonstrated an anxious response to self when difficulties occurred with their romantic partners compared to controls (M=36.58, SD=13.33; t (98) =5.98, p=0.00). The clinical group (M=18.42, SD=4.18; t (98) =-4.14, p=0.00) reported a less independent response to self when difficulties occurred with their romantic partners than the control group (M=21.62, SD=3.52).
Table 10

Comparison between Clinical and Community Groups on the CRQ

<table>
<thead>
<tr>
<th></th>
<th>Clinical group (N=50)</th>
<th>Community group (N=50)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>Wish Scales (WS)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total WS</td>
<td>231.24 (46.16)</td>
<td>226.70 (44.89)</td>
</tr>
<tr>
<td>WS- be supportive</td>
<td>84.04 (23.67)</td>
<td>86.82 (20.31)</td>
</tr>
<tr>
<td>WS- SC &amp; IND</td>
<td>29.24 (5.50)</td>
<td>29.96 (5.54)</td>
</tr>
<tr>
<td>WS-be in conflict</td>
<td>22.54 (10.99)</td>
<td>19.22 (10.50)</td>
</tr>
<tr>
<td>WS- be recognised</td>
<td>16.06 (4.09)</td>
<td>14.52 (4.64)</td>
</tr>
<tr>
<td>WS- be trusted</td>
<td>27.90 (7.28)</td>
<td>27.98 (8.90)</td>
</tr>
<tr>
<td>WS- not to be abandoned</td>
<td>17.14 (4.12)</td>
<td>13.84 (6.53)</td>
</tr>
<tr>
<td>WS- be sexual</td>
<td>34.32 (13.14)</td>
<td>34.36 (12.37)</td>
</tr>
<tr>
<td>Response from Other (RO)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total RO</td>
<td>125.04 (17.91)</td>
<td>124.24 (16.25)</td>
</tr>
<tr>
<td>RO- hurts me</td>
<td>11.14 (5.27)</td>
<td>9.04 (4.77)</td>
</tr>
<tr>
<td>RO- loves me</td>
<td>60.54 (17.74)</td>
<td>66.08 (16.48)</td>
</tr>
<tr>
<td>RO- is independent</td>
<td>26.08 (5.93)</td>
<td>28.58 (4.29)</td>
</tr>
<tr>
<td>RO- controls me</td>
<td>13.86 (6.86)</td>
<td>10.36 (6.72)</td>
</tr>
<tr>
<td>RO- is out of control</td>
<td>13.90 (6.41)</td>
<td>12.92 (8.66)</td>
</tr>
<tr>
<td>RO- is anxious</td>
<td>11.00 (5.85)</td>
<td>11.06 (6.19)</td>
</tr>
<tr>
<td>RO- is sexual</td>
<td>14.60 (5.12)</td>
<td>14.78 (4.20)</td>
</tr>
<tr>
<td>Response of Self (RS):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total RS</td>
<td>204.98 (31.86)</td>
<td>198.46 (19.25)</td>
</tr>
<tr>
<td>RS- feel valued</td>
<td>36.58 (13.14)</td>
<td>42.76 (12.36)</td>
</tr>
<tr>
<td>RS- feel anxious*</td>
<td>52.08 (13.06)</td>
<td>36.30 (13.33)</td>
</tr>
<tr>
<td>RS- feel disliked</td>
<td>11.74 (4.60)</td>
<td>9.90 (4.32)</td>
</tr>
<tr>
<td>RS- care for others</td>
<td>48.40 (12.63)</td>
<td>51.94 (9.62)</td>
</tr>
<tr>
<td>RS- avoid conflict</td>
<td>11.50 (4.79)</td>
<td>10.04 (4.67)</td>
</tr>
<tr>
<td>RS- am independent*</td>
<td>18.42 (4.18)</td>
<td>21.62 (3.52)</td>
</tr>
<tr>
<td>RS- am domineering</td>
<td>5.98 (4.85)</td>
<td>4.58 (2.04)</td>
</tr>
<tr>
<td>RS- am sexual</td>
<td>20.28 (8.39)</td>
<td>21.32 (7.53)</td>
</tr>
</tbody>
</table>

* p<.002 (Bonferroni adjustment)

Notes: SC & IND = self confident and independent.

Previous studies have found that GAD individuals have significantly more cognitions in the categories of interpersonal confrontations, competence, acceptance and concern about others (Breitholtz et al, 1999). As research investigating types of interpersonal
conflict in the intimate relationships of individuals with GAD is scarce. This hypothesis is exploratory in nature.

The relationship between excessive worry and individuals' perception of their current intimate relationship, as measured by the CRQ was investigated. Pearson's correlations were computed to investigate this relationship. A significant positive relationship was found between worry in GAD and a person's total wishes and desires towards their romantic partner in their intimate relationship ($r = 0.41, p = 0.00$) (see Table 11 and Figure 2). A significant positive relationship was found between worry in GAD and participants' responses to self when difficulties occur in their intimate relationship ($r = 0.40, p = 0.00$) (see Table 11 and Figure 2).

### Table 11

<table>
<thead>
<tr>
<th>CRQ</th>
<th>PSWQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total WS</td>
<td>.41*</td>
</tr>
<tr>
<td>Total RS</td>
<td>.40*</td>
</tr>
<tr>
<td>Total RO</td>
<td>.12</td>
</tr>
</tbody>
</table>

*p < .05.

Notes: CRQ = Core Relationship Questionnaire; WS = Wish Scale; RS = Response of Self; RO = Response of Other.

This result appears to imply that worry is associated with the wishes and responses of self among GAD sufferers.

These results partly support Hypothesis Four. The clinical group does report being more anxious and less independent in their romantic relationship than controls. In addition
excessive worry is associated with higher levels of wishes and desires towards their romantic partner. GAD sufferers’ responses to self (intrapersonal responses) when difficulties occur in their relationships are also associated with excessive worry.

*Hypothesis Five: Adults with GAD will report a negative perception of parenting received as a child compared to controls. In particular, adults with GAD will be recipients of ‘affectionless control’ (i.e. low care, high control).*

In GAD, negative parental bonding has been associated with low parental care and high parental control/overprotection ‘affectionless control’ (Parker & Gladstone, 1996). However it is unclear from past research whether ‘affectionless control’ is unique to GAD. This hypothesis aims to further explore the link between the parental bonding and worry in GAD.

Student’s t-tests were conducted to compare the clinical group and the control group on the measure of the PBI. Individuals in the community group (M=22.06, SD=8.35) perceived a higher level of paternal care than the clinical group (M=17.86, SD=10.75; t(98) = -2.18, p=0.03) (see Table 12). There were no significant differences in perception of maternal care, maternal and paternal overprotection/control between the two groups.
Table 12
Comparison between Clinical and Community Groups on the PBI

<table>
<thead>
<tr>
<th></th>
<th>Clinical group (N=50)</th>
<th>Community group (N=50)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>Maternal Care</td>
<td>24.14 (9.16)</td>
<td>27.08 (7.68)</td>
</tr>
<tr>
<td>Maternal Control</td>
<td>13.84 (8.07)</td>
<td>14.98 (7.58)</td>
</tr>
<tr>
<td>Paternal Care*</td>
<td>17.86 (10.75)</td>
<td>22.06 (8.35)</td>
</tr>
<tr>
<td>Paternal Control</td>
<td>12.02 (7.69)</td>
<td>13.60 (7.46)</td>
</tr>
</tbody>
</table>

*p < .05
Notes: PBI= Parental Bonding Inventory

These results partly support Hypothesis Five. No significant relationships were found between maternal care and control and paternal control between the clinical and control group. However, the perception of lower paternal care was more evident in the GAD group when compared to controls.

**Research Question 3:** What is the role of worry and emotional avoidance in GAD? In particular what is the role of Alexithymia in an individual with GAD?

**Hypothesis Six:** Adults with GAD demonstrate impairment in emotional processing when compared to controls. It is predicted that worry involves the avoidance of affect.

This hypothesis aims to explore further the emotional functioning in GAD sufferers. There is some consensus in the literature that the worrying process in GAD is associated with the avoidance of emotions at the time of worry (Borkovec, 1994), however there is still limited understanding on how individuals with GAD generally function emotionally. The ability to identify and describe emotions in GAD generally has not
been investigated. This hypothesis aims to explore Alexithymia in GAD to further understand emotional processing in this population.

Student t-tests were conducted to compare the clinical and control group on the measure for Alexithymia. Adults with GAD (M= 64.04, SD= 7.75) were more alexithymic than the control group (M= 37.14, SD= 8.30) as assessed by the TAS-20 (t (98) =16.75, p=0.00) (see Table 13). GAD sufferers (M=24.92, SD=5.21) had greater difficulties in identifying (DIF) emotions when compared to the control group (M=11.08, SD=3.71; t (98) =15.29, p=0.00) as assessed by the TAS-20. Difficulties in describing emotions (DDF) as assessed by the TAS-20 were more evident in adults with GAD (M=20.28, SD=1.85) when compared to the community control group (M=9.52, SD= 3.66; t (98) = 18.57, p=0.00). There was also a significant difference between the two groups (clinical group: M=18.84, SD=4.69; control group: M=16.54, SD=4.29; t (98) = 2.56, p=0.01) on externally oriented thinking (EOT), however, when this analysis was controlled for by the educational level, this effect was removed. This is consistent with the previous research that has identified that the EOT subscale had poor internal consistency and was an unreliable subscale of the TAS-20 (Fortune et al, 2002; Honkalampi et al, 2001; Kooiman et al, 2001; Schut et al, 2001).
Pearson's correlations were computed to examine the relationship between worry in GAD and alexithymia. No significant relationships were found between worry in GAD and the total alexithymia score and the 3 subscales of alexithymia (difficulty identifying feeling, difficulty describing feelings and externally oriented thinking). This result indicates that worry is not directly associated with levels of alexithymia in GAD.

Previous research has not investigated Alexithymia and GAD. As a consequence it is possible that the avoidance of affect may be associated with other factors associated with the clinical picture of individuals with GAD. The relationship between alexithymia and other symptoms of GAD were examined by computing the Pearson’s correlations. It was found that symptoms of anxiety (r=0.34, p= 0.02), depression (r=0.34, p= 0.02) and stress (r= 0.33, p= 0.02) as assessed by the DASS were significantly correlated with the subscale of difficulty identifying feelings as assessed by the TAS-20 (see Figure 2). In addition total interpersonal difficulties (r = 0.38, p= 0.01) as assessed
by the IIP was also significantly associated with the subscale of difficulty identifying feelings (see Figure 2). Even though there are limitations with the small sample size, Figure 2 illustrates the pattern of relationships between variables for this study.

**Figure 2: Illustration of the pattern of Significant Relationships Between variables**
QUALITATIVE METHOD

The relationship between adult attachment and emotional and interpersonal functioning of individuals with GAD was further investigated using qualitative methodology. This design addressed: Part (1) *the participants’ repetitive interpersonal patterns as an adult in their significant relationships*, by examining the Core Conflictual Relationship Themes (CCRT) within narratives described by participants; Part (2) *the participants’ perception of their early childhood experiences*, by examining the themes that emerge from the early relationships with significant adults in participants' early environment.

Participants

Twelve participants were recruited for this study. These 12 participants were a randomly selected subset, representative of the 50 participants in the clinical sample from the quantitative study, incorporating the same inclusion/exclusion criteria.

Instruments

*Instruments for Part 1: investigating repetitive interpersonal patterns in relationships (RAPs and CCRTs)*

The *Relationship Anecdotes Paradigm* (RAP) (Luborsky, 1990) is an interpersonal interview investigating participants’ narratives regarding specific interactions with significant others. The RAP involved asking the following questions for each of the participants' significant relationships:
“Now I’d like to ask you about your current important relationships. When I ask you to
begin, I’d like you to speak for 5 minutes, telling me what kind of person your partner
is. You can start by telling me your partners name, how you get along. After you’re
begun to speak, I'd prefer not to answer any questions until the 5 minutes are over, but I
might probe you. Do you have any questions, you'd like to ask me?"

"Now please tell me some incidents or events, each involving yourself in relation to
another person. Each event should be specific (some current and some old incidents).
For each event tell me: a) when it occurred, b) who was the other person it was with, c)
some of what the other person said or did and what you said or did, d) what happened at
the end. I'd like you to talk about 3 separate incidences or events in relation to your
partner".

The narratives or ‘relationship episodes’ (REs) derived from the RAP are transcribed
verbatim and coded to evaluate participants interpersonal themes with significant people
outside of therapy. The RAP provides more discrete and complete REs and is the
method of data collection preferred for research purposes (Luborsky, 1990).

A total of 10 discrete and complete REs are identified for every participant. The REs
are coded or categorised using the Core Confictual Relationship Themes (CCRT)
method (Luborsky, 1997; Luborsky & Crits-Christoph, 1990). The Standard Categories
Edition three was utilised in this study. The CCRT is a content-oriented instrument and
has been used within psychotherapy sessions widely (Barber & Crits-Christoph, 1993).
Luborsky (1997) postulated that every person has a limited number of central
relationship patterns. The central interpersonal patterns as assessed by the CCRT included three components which included the a) Wishes, desires and needs of the participants (WS); the b) Response From Others to the participants (RO) and the c) Response Of the Self that occurs in relation to interactions with others, which involves participants thoughts, emotions, behaviour and symptoms (RS).

The actual categories and codes used to analyse the REs are drawn from a standard CCRT category list (Luborsky, 1990). Although this coding procedure requires clinical judgement, it is judgement at a relatively low level of inference, with interrater reliability coefficients ranging from .61 to .70 (Luborsky and Diguer, 1998).

Once the REs have been coded, frequency counts for each of the three CCRT domains (WS, RO, RS) are recorded. This allows the investigator to operationalise and quantify the individual's basic relationship pattern.

*Instruments For Part 2: Investigating Perception Of Their Early Childhood Experience*

**Adult Attachment Interview (AAI)** (George, Kaplan, Main, 1985) is a one hour-long semi-structured interview asking participants to describe their childhood attachment experiences. Responses are transcribed verbatim and coded to determine the attachment style of the participant. The AAI has been found to correspond to observational measures of attachment (Ainsworth, Blehar, Waters & Wall, 1978). The AAI in particular assesses the relationship between attachment to parents in childhood and attachment to others in adult relationships.
The AAI has been found to have sound psychometric properties (van Ijzendoorn, 1995; Benoit & Parker, 1994) and is considered the “gold standard” in the assessment of attachment (Manassis, Owen, Adams, West & Sheldon-Keller, 1999).

**Procedure**

The 12 participants were a subset of those 50 participants recruited in the quantitative study. Consecutive clients that completed the diagnostic interview (SCID for anxiety, mood and personality disorders) and psychometric questionnaires from the quantitative study were also told about the qualitative study and given an information and consent form. Those clients that were interested in participating in the qualitative study were invited to attend a one-hour interview to complete the AAI with an adapted version of the RAP. The AAI was first administered followed by the RAP. This component of the research assessment was audiotaped. The first 12 participants that completed the quantitative study followed on to also completed the qualitative part of the study.
Data Analysis

Data Analysis: Part 1: RAPs & CCRTs

Once the RAP interview was transcribed and the REs were identified, the CCRT method (Luborsky & Crits-Christoph, 1990) was used to score and code the transcripts. The following steps were followed:

1. Ten REs for every participant were derived from the RAP interview. The REs were identified and separated on each transcript. The time frames, that is, when the REs occurred and the significant others discussed by the GAD sufferer were recorded.

2. The three dimensions of the CCRT, that is, the wishes, needs, or intentions (WS), the responses from other (RO) and the responses of the self (RS) were identified, underlined and labelled within each RE. The total number of distinct components within each of the three dimensions of the CCRT was computed for each participant.

3. The content of each distinct component identified was then scored using the CCRT Standard Category Clusters (Luborsky & Crits-Christoph, 1990). There were eight different clusters within each of the three components of WS, RO, and RS. The content of each distinct component identified in the REs was scored with the best fit item of the eight different clusters within the 3 domains of the CCRT.
For the WS cluster, the 8 categories included:

(a) to assert self and be independent  
(b) to oppose, hurt, and control others  
(c) to be controlled, hurt, and not responsible  
(d) to be distant and avoid conflicts  
(e) to be close and accepting  
(f) to be loved and understood  
(g) to feel good and comfortable  
(h) to achieve and help others.

For the RO cluster, the 8 categories included:

(a) strong  
(b) controlling  
(c) upset  
(d) bad  
(e) rejecting and opposing  
(f) helpful  
(g) likes me  
(h) understands me.

For the RS cluster, the 8 categories included:

(a) helpful  
(b) unreceptive  
(c) respected and accepted
(d) oppose and hurt others
(e) self-controlled and self-confident
(f) helpless
(g) disappointment and depressed
(h) anxious and ashamed.

4. The frequency that each category occurred across the REs was then computed. The pervasive themes for GAD individuals were then identified. A theme was considered pervasive for GAD sufferers if the theme was present in at least 4 of the 10 REs (Eckert, Luborsky, Barber, Crits-Christoph, 1990).

5. The CCRT group formulation was then determined using the dual criteria proposed by Eckert et al, (1990). Themes that were identified in 40% of participants individual REs and for at least 33% of the participants were the themes for the overall group. The reason the group CCRT formulation from the Eckert et al, (1990) was used was because this study was the first study in which the CCRT method was applied to a sample of patients with a single diagnosis of major depression. In the current study of 12 clients with a diagnosis of GAD, the Eckert et al, (1990) methodology was reproduced to enhance the comparability of findings. Other studies have also used this methodology for specific diagnostic groups (Chance, Bakeman, Kaslow, Faber & Burge-Callaway, 2000; Okey, McWhirter & Delaney, 2000).
A clinical psychologist trained in the CCRT method and procedure independently scored the CCRT for six of the participants (50%) to ensure interjudge reliability. The agreement rate between the two judges across the three components was 90%.

_Data Analysis- Part 2: AAI_

Participants' responses on AAI questions were audio taped and transcribed. Transcripts were analysed using a Husserlian phenomenological approach (LoBiondo-Wood & Haber, 1994) which is based on the Interpretative Phenomenological Analysis (IPA) method (Smith & Osborn, 2003). This approach finds meaning to participants' experiences by talking to them. The aim of the transcript analysis was to find the essential themes remembered by participants in their early childhood experiences and current adult experiences.

Previous research has found that the verbal samples contain valid indices of the person's psychological state (Gottschalk, Lolas & Viney, 1986). All transcripts were first read and then re-read to obtain a sense of the main themes. Two researchers attempted to derive meaning from significant statements separately and then together to obtain interrelater reliability. If disagreements occurred these were discussed between the two researchers until consensus was reached. Participants’ significant statements were then organised into themes around remembered childhood experiences in significant relationships. The derived themes were then discussed with some of the 12 research participants in order to check for validity of the identified themes and their meanings. Using participants' input it was ensured that results were valid and applicable to the research population.
QUALITATIVE RESULTS

Demographics and Sample Characteristics

Eleven females and one male participated in AAI and RAP questions. The females mean age was 37.83 years (Range: 21-57 years) and the one male was 34 years old. All participants were born in Australia. All participants reported childhood onset of GAD (mean age = 6.92 years; Range: 2-15 years). Table 14 shows the demographics information for the 12 participants.
Table 14

Comparison of 12 versus 50 GAD participants on demographic variables

<table>
<thead>
<tr>
<th>Demographic Variable</th>
<th>Clinical Sub Group (N=12)</th>
<th>Clinical Group (N = 50)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>37.83 years</td>
<td>33.42 years</td>
</tr>
<tr>
<td>SD</td>
<td>12.72</td>
<td>11.23</td>
</tr>
<tr>
<td><strong>Gender:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>1 (8.3)</td>
<td>4(8)</td>
</tr>
<tr>
<td>Female</td>
<td>11 (91.7)</td>
<td>46 (92)</td>
</tr>
<tr>
<td><strong>Marital Status:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never married</td>
<td>4(33)</td>
<td>19(38)</td>
</tr>
<tr>
<td>Married/defacto</td>
<td>8(67)</td>
<td>31 (62)</td>
</tr>
<tr>
<td><strong>Education:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-tertiary</td>
<td>9(75)</td>
<td>39(78)</td>
</tr>
<tr>
<td>Tertiary</td>
<td>3 (25)</td>
<td>11 (22)</td>
</tr>
<tr>
<td><strong>Employment:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>11 (91.7)</td>
<td>38(76)</td>
</tr>
<tr>
<td>Unemployed</td>
<td>1 (8.3)</td>
<td>12 (24)</td>
</tr>
<tr>
<td><strong>Number of children:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>2.00</td>
<td>1.46</td>
</tr>
<tr>
<td>SD</td>
<td>1.54</td>
<td>1.39</td>
</tr>
<tr>
<td>Range</td>
<td>(0-4)</td>
<td>(0-7)</td>
</tr>
<tr>
<td><strong>Age of Onset:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean:</td>
<td>6.92</td>
<td>10.16</td>
</tr>
<tr>
<td>SD</td>
<td>3.58</td>
<td>5.72</td>
</tr>
<tr>
<td>Range:</td>
<td>(2-15)</td>
<td>(2-24)</td>
</tr>
</tbody>
</table>

* p<.05

Student’s t-tests were conducted to compare the clinical group (N=50) to the sub-clinical group (N= 12) to ensure that the characteristics of the sub-clinical group were representative of the clinical group. There were no significant differences found between the clinical and sub-clinical group on the demographic variables of age, number of children that GAD sufferers had and the age of onset of GAD (see Table 14). Chi-square analyses were also conducted to compare the clinical and sub-clinical groups.
on gender, marital status, education and employment. It was found that there were no significant differences between the clinical and sub-clinical group on gender, marital status, education and employment (see Table 14). These results indicate that the demographic variables of the sub-clinical group are representative of the clinical group.

Student’s t-tests were conducted to ensure the sub-clinical group was representative of the clinical group on the main quantitative measures used in this study. There were no significant differences between the clinical and sub-clinical group (see Table 15). These results indicate that the clinical characteristics of the sub-clinical group are representative of the clinical group.
Table 15

Comparison of 12 versus 50 GAD participants on quantitative measures

<table>
<thead>
<tr>
<th>Quantitative measures</th>
<th>Clinical Sub Group (N=12)</th>
<th>Clinical Group (N = 50)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N (%)</td>
<td>N (%)</td>
</tr>
<tr>
<td>RQ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secure</td>
<td>0 (0)</td>
<td>3 (6)</td>
</tr>
<tr>
<td>Preoccupied</td>
<td>6 (50)</td>
<td>17 (34)</td>
</tr>
<tr>
<td>Fearful</td>
<td>6 (50)</td>
<td>24 (48)</td>
</tr>
<tr>
<td>Dismissive</td>
<td>0 (0)</td>
<td>6 (12)</td>
</tr>
<tr>
<td></td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>PSWQ</td>
<td>76.42 (3.70)</td>
<td>74.08 (3.77)</td>
</tr>
<tr>
<td>IIP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total IIP</td>
<td>13.30 (5.33)</td>
<td>11.52 (6.85)</td>
</tr>
<tr>
<td>Domineering</td>
<td>0.77 (0.61)</td>
<td>0.75 (0.62)</td>
</tr>
<tr>
<td>Vindictive</td>
<td>1.00 (0.53)</td>
<td>1.02 (0.68)</td>
</tr>
<tr>
<td>Overly Nurturant</td>
<td>2.40 (0.85)</td>
<td>1.92 (0.78)</td>
</tr>
<tr>
<td>Intrusive</td>
<td>1.42 (0.79)</td>
<td>1.17 (0.71)</td>
</tr>
<tr>
<td>Nonassertive</td>
<td>2.54 (0.93)</td>
<td>2.38 (0.95)</td>
</tr>
<tr>
<td>Exploitable</td>
<td>2.42 (0.98)</td>
<td>1.86 (0.88)</td>
</tr>
<tr>
<td>Cold</td>
<td>1.09 (0.82)</td>
<td>1.05 (0.74)</td>
</tr>
<tr>
<td>Socially Avoidant</td>
<td>1.67 (1.02)</td>
<td>1.69 (0.99)</td>
</tr>
<tr>
<td>DASS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dass- Depression</td>
<td>24.17 (16.21)</td>
<td>20.00 (11.39)</td>
</tr>
<tr>
<td>Dass- Stress</td>
<td>28.00 (10.02)</td>
<td>27.48 (9.54)</td>
</tr>
<tr>
<td>Dass- Anxiety</td>
<td>19.67 (12.03)</td>
<td>22.20 (10.90)</td>
</tr>
<tr>
<td>TAS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total TAS</td>
<td>59.67 (8.46)</td>
<td>64.04 (7.75)</td>
</tr>
<tr>
<td>DIF</td>
<td>24.00 (6.21)</td>
<td>24.92 (5.21)</td>
</tr>
<tr>
<td>DDF</td>
<td>20.58 (1.88)</td>
<td>20.28 (1.85)</td>
</tr>
</tbody>
</table>

* p<.05

Notes: RQ= The Relationship Questionnaire; PSWQ = The Penn State Worry Questionnaire; IIP = The Inventory of Interpersonal Problems; DASS = The Depression, Anxiety and Stress Scale; TAS = The Toronto Alexithymia Scale; DIF = Difficulty Identifying Feelings; DDF = Difficulty Describing Feeling.
Research Question 4: Do the interpersonal patterns identified by individuals with GAD in their intimate relationships relate sensibly to remembered family environment and therefore offer further understanding to the developmental model of GAD?

There is limited research investigating attachment styles in GAD (Cassidy et al, 1994). In particular there is little consensus in the literature on the impact of past and current attachment experiences on the emotional and interpersonal functioning of individuals with GAD. Currently the literature implies that individuals with GAD experience more rejection by their primary caregiver (feelings of enmeshment, oscillating anger and role reversal). Also GAD sufferers report a lack of childhood memories. As a consequence this research question aims to investigate major memories, experiences and themes reported by GAD sufferers in their remembered past and current attachment relationships. In particular, the current intimate relationship difficulties and remembered family environments in GAD will be explored.

Part 1 Results: RAPS and CCRT

Characteristics of the RAP Narratives

All 12 participants described 10 REs in sufficient detail to be scored. A total of 120 REs were scored in this study. The characteristics of these episodes will be described to provide a complement to the CCRT analysis.

The participants in this study described important and problematic incidents in their relationships with a diverse range of others. In particular, participants described
difficult interactions with their parents, partners/spouses, siblings/friends and children. Participants did describe some positive interactions were their children, while all other interactions described were difficult, problematic and tumultuous. When the REs were categorised based upon the period of time in which they occurred, 70 episodes, 58% of the sample, occurred more than a year ago. Fifty episodes, 50% of the sample occurred within the last 2 weeks.

The dominant emotions of the REs were also examined. It was found that the combined negative responses of self and of others were greater than the combined number of positive responses. The majority of responses had a combined negative emotion (96 episodes = 80%). There were a small proportion of episodes that had positive response of self and other when participants described interactions with their children (24 episodes = 20%)

*Characteristics of the subgroup CCRTs for each relationship type*

CCRT themes that specifically occurred in 40 % of the subgroup are considered pervasive (Eckert et al, 1990). However the most prominent pervasive themes are discussed in the study.

*CCRTs- Parents*

Participants generally described ‘superficially friendly’ relationships with their parents. The predominant pervasive wishes that participants had in terms of their interaction with both parents, included the desire to ‘be loved and understand’ (mother, N=93%;
father, N=98%), 'to feel comfortable' (mother, N=90%; father, N=88%); and to 'avoid conflict' and keep their 'distance' (mother, N=89%; father, N=83%) (see Table 16).

Participants also identified a wish to be 'close and accepting' of their fathers (N=89%) (see Table 16).

Participants tended to describe their mothers as 'controlling' (N=92%) and 'rejecting and opposing' (N=81%) towards them (see Table 16). Fathers predominant response towards participants were also described as 'rejecting and opposing' (N=69%), but to a lesser degree when compared to mothers (see Table 16).

The emotional response identified by participants when interacting with their parents, included feeling 'anxious and ashamed' (mother, N=92%; father, N=78%) (see Table 16).
Table 16

Individuals with GAD (n=12), CCRT within narratives about perceived relationships with parents

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Mother Frequency</th>
<th>Mother % of responses</th>
<th>Father Frequency</th>
<th>Father % of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wish</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To assert self and be independent</td>
<td>66</td>
<td>69</td>
<td>48</td>
<td>50</td>
</tr>
<tr>
<td>To oppose, hurt or control others</td>
<td>52</td>
<td>72</td>
<td>17</td>
<td>23</td>
</tr>
<tr>
<td>To be controlled, hurt or not</td>
<td>42</td>
<td>35</td>
<td>26</td>
<td>22</td>
</tr>
<tr>
<td>responsible</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To be distant and avoid conflicts</td>
<td>64</td>
<td>89</td>
<td>60</td>
<td>83</td>
</tr>
<tr>
<td>To be close and accepting</td>
<td>106</td>
<td>74</td>
<td>128</td>
<td>89</td>
</tr>
<tr>
<td>To be loved and understood</td>
<td>112</td>
<td>93</td>
<td>118</td>
<td>98</td>
</tr>
<tr>
<td>To feel comfortable and good</td>
<td>86</td>
<td>90</td>
<td>84</td>
<td>88</td>
</tr>
<tr>
<td>To achieve and help others</td>
<td>40</td>
<td>42</td>
<td>40</td>
<td>42</td>
</tr>
<tr>
<td>Responses from other</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strong</td>
<td>20</td>
<td>28</td>
<td>24</td>
<td>33</td>
</tr>
<tr>
<td>Controlling</td>
<td>44</td>
<td>92</td>
<td>14</td>
<td>29</td>
</tr>
<tr>
<td>Upset</td>
<td>21</td>
<td>18</td>
<td>14</td>
<td>12</td>
</tr>
<tr>
<td>Bad</td>
<td>22</td>
<td>48</td>
<td>14</td>
<td>29</td>
</tr>
<tr>
<td>Rejecting and opposing</td>
<td>174</td>
<td>81</td>
<td>148</td>
<td>69</td>
</tr>
<tr>
<td>Helpful</td>
<td>12</td>
<td>25</td>
<td>14</td>
<td>29</td>
</tr>
<tr>
<td>Likes me</td>
<td>46</td>
<td>48</td>
<td>60</td>
<td>63</td>
</tr>
<tr>
<td>Understanding and accepting</td>
<td>22</td>
<td>31</td>
<td>20</td>
<td>28</td>
</tr>
<tr>
<td>Responses of self</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helpful</td>
<td>28</td>
<td>39</td>
<td>42</td>
<td>58</td>
</tr>
<tr>
<td>Unreceptive</td>
<td>44</td>
<td>61</td>
<td>30</td>
<td>72</td>
</tr>
<tr>
<td>Respected and accepted</td>
<td>36</td>
<td>25</td>
<td>38</td>
<td>26</td>
</tr>
<tr>
<td>Oppose and hurt others</td>
<td>14</td>
<td>29</td>
<td>10</td>
<td>21</td>
</tr>
<tr>
<td>Self-controlled and self-confident</td>
<td>32</td>
<td>33</td>
<td>38</td>
<td>40</td>
</tr>
<tr>
<td>Helpless</td>
<td>58</td>
<td>60</td>
<td>58</td>
<td>60</td>
</tr>
<tr>
<td>Disappointed, depressed, angry</td>
<td>80</td>
<td>67</td>
<td>78</td>
<td>65</td>
</tr>
<tr>
<td>Anxious and ashamed</td>
<td>66</td>
<td>92</td>
<td>56</td>
<td>78</td>
</tr>
</tbody>
</table>

Note: Percentages are highlighted only for pervasive themes, that is, those present in 40% or more of the sample.
CCRTs - Partners/Spouses

All participants described difficult and tumultuous relationships with their partners. The predominant CCRT that emerged among all participants was a wish to be 'loved, understood (N=98%), accepted, close and validated' (N= 90%) in their intimate relationships (see Table 17). Participants also expressed a desire to be 'comfortable' (N=93%) with their spouses/partners, but to also ‘avoid conflict’ and have some ‘distance’ from their partners (N=72%) (see Table 17).

When difficulties did occur in intimate relationships, all participants described their partners' responses towards them as "unpredictable". The main responses from partners/spouses were described as ‘rejecting and opposing’ (N= 84%) and ‘controlling’ (N=75%) (see Table 17).

When participants experienced relationship difficulties their emotional response was predominately ‘anxiety and shame’ (N= 86%), a sense of ‘helplessness’ (N=77%) and ‘disappointment, anger and feeling depressed’ (N=73%) (see Table 17).
Table 17

Individuals with GAD (n=12), CCRT’s within narratives about perceived relationships with spouses/partners.

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Frequency of responses</th>
<th>% of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wish</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To assert self and be independent</td>
<td>41</td>
<td>43</td>
</tr>
<tr>
<td>To oppose, hurt or control others</td>
<td>18</td>
<td>25</td>
</tr>
<tr>
<td>To be controlled, hurt or not responsible</td>
<td>26</td>
<td>22</td>
</tr>
<tr>
<td>To be distant and avoid conflicts</td>
<td>62</td>
<td>86</td>
</tr>
<tr>
<td>To be close and accepting</td>
<td>129</td>
<td>90</td>
</tr>
<tr>
<td>To be loved and understood</td>
<td>117</td>
<td>98</td>
</tr>
<tr>
<td>To feel comfortable and good</td>
<td>89</td>
<td>93</td>
</tr>
<tr>
<td>To achieve and help others</td>
<td>38</td>
<td>40</td>
</tr>
<tr>
<td><strong>Responses from other</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strong</td>
<td>40</td>
<td>56</td>
</tr>
<tr>
<td>Controlling</td>
<td>36</td>
<td>75</td>
</tr>
<tr>
<td>Upset</td>
<td>76</td>
<td>63</td>
</tr>
<tr>
<td>Bad</td>
<td>18</td>
<td>38</td>
</tr>
<tr>
<td>Rejecting and opposing</td>
<td>182</td>
<td>84</td>
</tr>
<tr>
<td>Helpful</td>
<td>12</td>
<td>25</td>
</tr>
<tr>
<td>Likes me</td>
<td>36</td>
<td>38</td>
</tr>
<tr>
<td>Understanding and accepting</td>
<td>12</td>
<td>17</td>
</tr>
<tr>
<td><strong>Responses of self</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helpful</td>
<td>12</td>
<td>17</td>
</tr>
<tr>
<td>Unreceptive</td>
<td>48</td>
<td>67</td>
</tr>
<tr>
<td>Respected and accepted</td>
<td>26</td>
<td>18</td>
</tr>
<tr>
<td>Oppose and hurt others</td>
<td>30</td>
<td>63</td>
</tr>
<tr>
<td>Self-controlled and self-confident</td>
<td>34</td>
<td>35</td>
</tr>
<tr>
<td>Helpless</td>
<td>74</td>
<td>77</td>
</tr>
<tr>
<td>Disappointed, depressed, angry</td>
<td>88</td>
<td>73</td>
</tr>
<tr>
<td>Anxious and ashamed</td>
<td>62</td>
<td>86</td>
</tr>
</tbody>
</table>

Note: Percentages are highlighted only for pervasive themes, that is, those present in 40% or more of the sample.
CCRTs - Friends/siblings

All participants wished to be ‘loved and understood’ (N=100%) by their sibling and friends. Participants wished to feel ‘comfortable’ (N=96%), ‘close and accepting’ (N=95%) of their siblings and friends (see Table 18).

At times when participants experienced difficult interactions with friends and siblings, participants tended to describe their friends/siblings responses towards them as ‘controlling’ (N=92%) and ‘strong’ (N=86%) (see Table 18).

The predominant emotional responses of participants when discussing interactions that occurred with siblings and friends was ‘disappointment, feeling depressed and anger’ (N=97%) and feelings of ‘anxiety and shame’ (N=92%) (see Table 18).
Table 18

Individuals with GAD (n=12), CCRT within narratives about perceived relationships with friends and siblings.

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Frequency of responses</th>
<th>% of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wish</td>
<td></td>
<td></td>
</tr>
<tr>
<td>To assert self and be independent</td>
<td>70</td>
<td>73</td>
</tr>
<tr>
<td>To oppose, hurt or control others</td>
<td>10</td>
<td>14</td>
</tr>
<tr>
<td>To be controlled, hurt or not responsible</td>
<td>76</td>
<td>63</td>
</tr>
<tr>
<td>To be distant and avoid conflicts</td>
<td>50</td>
<td>69</td>
</tr>
<tr>
<td>To be close and accepting</td>
<td>114</td>
<td>95</td>
</tr>
<tr>
<td>To be loved and understood</td>
<td>120</td>
<td>100</td>
</tr>
<tr>
<td>To feel comfortable and good</td>
<td>92</td>
<td>96</td>
</tr>
<tr>
<td>To achieve and help others</td>
<td>42</td>
<td>44</td>
</tr>
<tr>
<td>Responses from other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strong</td>
<td>62</td>
<td>86</td>
</tr>
<tr>
<td>Controlling</td>
<td>44</td>
<td>92</td>
</tr>
<tr>
<td>Upset</td>
<td>24</td>
<td>20</td>
</tr>
<tr>
<td>Bad</td>
<td>8</td>
<td>17</td>
</tr>
<tr>
<td>Rejecting and opposing</td>
<td>144</td>
<td>67</td>
</tr>
<tr>
<td>Helpful</td>
<td>16</td>
<td>33</td>
</tr>
<tr>
<td>Likes me</td>
<td>50</td>
<td>52</td>
</tr>
<tr>
<td>Understanding and accepting</td>
<td>22</td>
<td>31</td>
</tr>
<tr>
<td>Responses of self</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helpful</td>
<td>24</td>
<td>33</td>
</tr>
<tr>
<td>Unreceptive</td>
<td>42</td>
<td>58</td>
</tr>
<tr>
<td>Respected and accepted</td>
<td>22</td>
<td>15</td>
</tr>
<tr>
<td>Oppose and hurt others</td>
<td>10</td>
<td>21</td>
</tr>
<tr>
<td>Self-controlled and self-confident</td>
<td>36</td>
<td>38</td>
</tr>
<tr>
<td>Helpless</td>
<td>52</td>
<td>54</td>
</tr>
<tr>
<td>Disappointed, depressed, angry</td>
<td>116</td>
<td>97</td>
</tr>
<tr>
<td>Anxious and ashamed</td>
<td>66</td>
<td>92</td>
</tr>
</tbody>
</table>

Note: Percentages are highlighted only for pervasive themes, that is, those present in 40% or more of the sample.

CCRTs- Children

All participants described a desire to not be like their own parents, but to rear their children in the direct opposite way to their parents. In particular, all participants expressed a desire to be ‘loved and understood’ (N=100%) by their children; to be
‘close and accepting’ (N=97%) of their children and wishes to feel ‘comfortable’ (N=94%) and ‘helpful’ (N=89%) toward their children (see Table 19).

All participants described good relationships with their children, but as children got older, they were more likely to be annoyed and frustrated by participants’ constant involvement. The predominant children’s response to participants were feeling ‘upset’ (N=68%) and ‘liked’ (N=63%) (see Table 19).

The prominent emotional responses of participants when interacting with their children were feeling ‘helpful’ (N=83%); ‘respected and accepted’ (N= 80%) and ‘anxious and ashamed’ (N=75%) (see Table 19). Most participants expressed feelings of anxiety and shame when they were told by their children they were over involved as parents.
Table 19

Individuals with GAD (n=12), CCRT within narratives about perceived relationships with children

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Frequency of responses</th>
<th>% of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wish</td>
<td></td>
<td></td>
</tr>
<tr>
<td>To assert self and be independent</td>
<td>40</td>
<td>42</td>
</tr>
<tr>
<td>To oppose, hurt or control others</td>
<td>12</td>
<td>17</td>
</tr>
<tr>
<td>To be controlled, hurt or not responsible</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>To be distant and avoid conflicts</td>
<td>48</td>
<td>67</td>
</tr>
<tr>
<td>To be close and accepting</td>
<td>140</td>
<td>97</td>
</tr>
<tr>
<td>To be loved and understood</td>
<td>120</td>
<td>100</td>
</tr>
<tr>
<td>To feel comfortable and good</td>
<td>90</td>
<td>94</td>
</tr>
<tr>
<td>To achieve and help others</td>
<td>64</td>
<td>89</td>
</tr>
<tr>
<td>Responses from other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strong</td>
<td>22</td>
<td>31</td>
</tr>
<tr>
<td>Controlling</td>
<td>14</td>
<td>29</td>
</tr>
<tr>
<td>Upset</td>
<td>82</td>
<td>68</td>
</tr>
<tr>
<td>Bad</td>
<td>18</td>
<td>38</td>
</tr>
<tr>
<td>Rejecting and opposing</td>
<td>104</td>
<td>48</td>
</tr>
<tr>
<td>Helpful</td>
<td>20</td>
<td>42</td>
</tr>
<tr>
<td>Likes me</td>
<td>60</td>
<td>63</td>
</tr>
<tr>
<td>Understanding and accepting</td>
<td>36</td>
<td>50</td>
</tr>
<tr>
<td>Responses of self</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helpful</td>
<td>60</td>
<td>83</td>
</tr>
<tr>
<td>Unreceptive</td>
<td>16</td>
<td>22</td>
</tr>
<tr>
<td>Respected and accepted</td>
<td>96</td>
<td>80</td>
</tr>
<tr>
<td>Oppose and hurt others</td>
<td>24</td>
<td>50</td>
</tr>
<tr>
<td>Self-controlled and self-confident</td>
<td>52</td>
<td>54</td>
</tr>
<tr>
<td>Helpless</td>
<td>48</td>
<td>50</td>
</tr>
<tr>
<td>Disappointed, depressed, angry</td>
<td>50</td>
<td>42</td>
</tr>
<tr>
<td>Anxious and ashamed</td>
<td>54</td>
<td>75</td>
</tr>
</tbody>
</table>

Note: Percentages are highlighted only for pervasive themes, that is, those present in 40% or more of the sample.

Characteristics of the CCRTs for GAD

Themes that occurred in at least 33% of participants were characteristic of the GAD group (Eckert et al, 1990). Eighteen themes were found to be pervasive for individuals with GAD. The most predominant pervasive themes included the following themes: (a)
the wish to be “loved and understood” (occurring in 98% of the participants); the wish to ‘feel comfortable and good’ (92% of the participants); a wish to be ‘close and accepting’ (84% of the participants) (see Table 20). Participants also expressed a wish to be distant and to avoid conflict (79% of the participants) (see Table 20).

Participants reported (b) ‘rejecting and opposing’ responses from others (70% of the participants) and others as being controlling (63% of the participants) towards them (see Table 20).

The two-predominately pervasive responses of self included feeling (c) ‘anxious and ashamed’ (84% of the participants) and ‘disappointment, depressed and angry’ (69% of the participants) (see Table 20).
Table 20

Pervasive CCRT components among individual with a diagnosis of GAD (n=12)

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Frequency of responses</th>
<th>% of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wish</td>
<td></td>
<td></td>
</tr>
<tr>
<td>To assert self and be independent</td>
<td>65</td>
<td>55</td>
</tr>
<tr>
<td>To oppose, hurt or control others</td>
<td>109</td>
<td>30</td>
</tr>
<tr>
<td>To be controlled, hurt or not responsible</td>
<td>176</td>
<td>29</td>
</tr>
<tr>
<td>To be distant and avoid conflicts</td>
<td>284</td>
<td>79</td>
</tr>
<tr>
<td>To be close and accepting</td>
<td>608</td>
<td>84</td>
</tr>
<tr>
<td>To be loved and understood</td>
<td>587</td>
<td>98</td>
</tr>
<tr>
<td>To feel comfortable and good</td>
<td>441</td>
<td>92</td>
</tr>
<tr>
<td>To achieve and help others</td>
<td>224</td>
<td>47</td>
</tr>
<tr>
<td>Responses from other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strong</td>
<td>160</td>
<td>44</td>
</tr>
<tr>
<td>Controlling</td>
<td>152</td>
<td>63</td>
</tr>
<tr>
<td>Upset</td>
<td>47</td>
<td>36</td>
</tr>
<tr>
<td>Bad</td>
<td>70</td>
<td>29</td>
</tr>
<tr>
<td>Rejecting and opposing</td>
<td>752</td>
<td>70</td>
</tr>
<tr>
<td>Helpful</td>
<td>74</td>
<td>31</td>
</tr>
<tr>
<td>Likes me</td>
<td>252</td>
<td>52</td>
</tr>
<tr>
<td>Understanding and accepting</td>
<td>112</td>
<td>31</td>
</tr>
<tr>
<td>Responses of self</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helpful</td>
<td>166</td>
<td>46</td>
</tr>
<tr>
<td>Unreceptive</td>
<td>180</td>
<td>50</td>
</tr>
<tr>
<td>Respected and accepted</td>
<td>218</td>
<td>30</td>
</tr>
<tr>
<td>Oppose and hurt others</td>
<td>88</td>
<td>37</td>
</tr>
<tr>
<td>Self-controlled and self-confident</td>
<td>192</td>
<td>40</td>
</tr>
<tr>
<td>Helpless</td>
<td>290</td>
<td>60</td>
</tr>
<tr>
<td>Disappointed, depressed, angry</td>
<td>412</td>
<td>69</td>
</tr>
<tr>
<td>Anxious and ashamed</td>
<td>304</td>
<td>84</td>
</tr>
</tbody>
</table>

Note: Percentages that are highlighted are the pervasive components of the CCRTs, that is, those present in 33% or more of the sample.
Part 2: AAI

From the 12 transcripts, many significant statements were identified regarding the perception of early childhood experiences of individuals with GAD.

In this qualitative study, participants remembered childhood relationship experiences and current adult relationship experiences were explored. Six main themes emerged from remembered childhood experiences.

**Remembered childhood experiences**

*Theme 1: Parents described as emotionally unavailable and invalidating of participants leading to ambivalence towards both parents.*

All participants reported their mothers as being the primary care taker and disciplinarian, while fathers were reported as working and not being present during most of participants' childhood and adolescent years. All participants reported having stable homes in their early environment, generally moving once or not at all as children. Even though there was environmental stability present, family life was described as "horrible", "poor", and "lonely", "cold" and "unloving". Participants described both parents as dismissive and invalidating of their feelings. Even so participants were more critical towards their mothers and more empathic towards their fathers. Mothers were described as present but emotionally unavailable and invalidating. Fathers were described as absent and emotionally unavailable and invalidating due to work or
alcoholism. All participants expressed a desire to be emotionally closer to their fathers (see Table 21 for examples).

Table 21

Selected examples of significant statements of participants about the unavailability and invalidation by their parents

<table>
<thead>
<tr>
<th>Significant Statements</th>
<th>Formulated Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. She didn’t listen to me, she never heard me, she always fogged me off. Kids were to be quiet. I was told get out of here, go away, shut up.</td>
<td>a. Participants’ feelings were dismissed and invalidated by their mothers.</td>
</tr>
<tr>
<td>b. She made us deal with things, head in the sand. She seemed out of reach. She didn’t demonstrate affection. I was given a lot of responsibility from a very young age. There was no one to turn to. This is not right. She was very mechanical, void of emotions.</td>
<td>b. Critical towards mother who was present but emotionally unavailable and preoccupied.</td>
</tr>
<tr>
<td>c. I idealised my father and had urges to be close to him but he was an emotional cripple. I felt my father did not like me he would say, get away, leave me alone.</td>
<td>c. Participants were empathic towards their fathers even though their feelings were dismissed and invalidated.</td>
</tr>
<tr>
<td>d. I felt sorry for dad because he worked long hours. He was a weak man, I think he drank so that he felt more at ease with other. He’d tell me your not too bad when drunk and teary</td>
<td>d. Empathic towards father as not emotionally and physically available due to work and alcoholism.</td>
</tr>
</tbody>
</table>
Theme 2: When participants were emotionally distressed these emotions were not expressed in front of their parents.

All participants stated that as children they would express distressing emotions privately in their rooms alone. Generally participants stated when upset they would cry in their rooms and if their parents noticed they were crying they were told to “get over it”.

Participants all clearly identified that they would not go to their parents when upset. Parents were described as unempathetic at times when participants were upset. Participants tended to describe themselves as “outsiders” articulating that their emotional needs were not met and they were ignored or rejected by their mothers, finding it difficult to connect with others. At times when participants were physically hurt they would go to a parent, but the care they received was described as “mechanical” with very little emotion (see Table 22 for examples).
Table 22

Selected examples of significant statements of participants about their emotional expression

<table>
<thead>
<tr>
<th>Significant Statements</th>
<th>Formulated Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. I would go into my bedroom and stay there sobbing, sobbing, and sobbing. I would try and talk to mum and she didn’t want to hear me, so I went into my room and cried.</td>
<td>a. When upset participants would not go to a parent and would cry alone.</td>
</tr>
<tr>
<td>b. When I was upset I had to go away. I was told to settle down and control my emotions. I was told to pull myself together and get over it. Mum would tell me to stop it, that I was stupid and I had no right. I learnt not to talk about emotional stuff.</td>
<td>b. Participants reported no display of empathy when they were upset as children.</td>
</tr>
<tr>
<td>c. I just used to feel rejected all the time. When I stepped outside the boundaries of being a good girl, I got rejected. I just felt different, I was the black sheep of the family. I was very lonely and isolated, an outsider.</td>
<td>c. Participants reported feelings of rejection and loneliness, finding it difficult to connect with others.</td>
</tr>
<tr>
<td>d. Mum would do the right thing, we’d get bandaged up, it was always done properly, but there were no kisses. If I was physically hurt I would go to mum, she gave me mechanical attention. She patted me and mended me and then left me alone.</td>
<td>d. When physically hurt participants would go to a parent. Little emotional support was displayed at these times.</td>
</tr>
</tbody>
</table>
Theme 3: Participants displaying the Preoccupied and Fearful attachment styles demonstrated differences in accessing childhood memories and acknowledging positive and negative childhood experiences.

Based on the Relationship Questionnaire (RQ) results, 6 of the 12 participants reported a preoccupied attachment style and 6 participants reported a fearful attachment style. Generally, participants displaying a fearful attachment style had good access to childhood memories, they provided concrete, specific and detailed description of memories. Most memories that were accessed consisted of negative experience, whilst positive experiences in childhood were very vague and harder to access. When participants articulated negative memories they did quite often make excuses for their parents, stating “it was the best that they could do”, “it would have been hard for them also”, as a way to compensate for their lack of memory of positive childhood experiences. When accessing negative childhood memories, these participants rarely expressed emotions, tending to discuss experiences in a detached manner.

When trying to access childhood memories participants displaying the preoccupied attachment style tended to have poorer access to memories. These participants initially focus on positive childhood experiences when trying to access childhood memories. Their descriptions of these experiences were vague and provided very little detail. When asked to access specific positive childhood experiences participants tended to become emotionally distressed (teary) stating they could not remember anything. In particular statements such as “why can’t I remember”, “they must of looked after me” were expressed. When accessing negative childhood experiences, participants usually changed the tone of their voice (speaking more softly) and kept their responses brief. At
these times participants also made excuses for their parents stating “they did the best they could”.

In summary, participants displaying a fearful attachment style focused on negative childhood experiences, providing specific and elaborate details. Participants found it difficult to recall positive childhood experiences generally. No emotional distress was displayed by these participants when describing their experiences (see Table 23, for examples). Participants displaying a preoccupied attachment style tended to focus on positive childhood experiences, but such memories were vague and lacked detail. Negative childhood experiences were described in brief way, with a tendency to avoid discussion of such experiences (see Table 23, for examples). Both attachment styles when discussing negative childhood experiences attempted to provide an explanation or excuse for their parents.
Table 23

Difference between Fearful and Preoccupied Attachment styles.

<table>
<thead>
<tr>
<th>Fearful Attachment (N=5)</th>
<th>Preoccupied Attachment (N=7)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Negative Memories</strong></td>
<td></td>
</tr>
<tr>
<td>At nighttime you’d wake up and the house would be empty. I’d wait for hours and hours for them to come home. He’d come home every night drunk, he’d throw things around, he’d throw things at the fridge every night. We never had anything.</td>
<td>I didn’t always get along with dad that well. I don’t know why I just didn’t. I can’t remember a specific example. I remember getting hurt. I’m sure they looked after me, they must of, but I can’t remember if they did (teary). I remember just sitting and listening, I had very lonely times. I can’t remember specific times.</td>
</tr>
<tr>
<td><strong>Positive Memories</strong></td>
<td></td>
</tr>
<tr>
<td>I think my dad loved me. I can’t give you a specific memory it was just the way he treated me. I don’t have a clear vision of anything positive of mum at all or dad. Positive memories are just a blur for me.</td>
<td>Mum was fun sometimes, but I can’t remember a specific memory. I feel bad because I can’t remember something specific (teary). Caring, mum was caring. I don’t know I can’t think of anything specific. I’m trying to remember. I remember we used to fight a bit. I think mum would support me, but I can’t remember a specific event. I’m sure she did support me.</td>
</tr>
<tr>
<td>It was hard for my parents there were too many children, too much pressure, not enough money. It was a struggle. Dad was a weak man, he had a terrible childhood I’m sure that they sincerely did what they thought all good parents do. My parents also had very poor models themselves of love.</td>
<td>My parents did the best they could, that’s all you can ask. It’s not my parent’s fault, I didn’t tell them about it. My parents acted as they did due to necessity, they had to keep the large family functioning.</td>
</tr>
</tbody>
</table>
Theme 4: Parental responding style was described as ambiguous and unpredictable. Those with a fearful attachment style were more directly invalidated and dismissed when compared to those with a preoccupied attachment style.

All participants reported a parental responding style that was ambiguous and unpredictable, particularly at times when participants’ emotions were invalidated and dismissed. An example of a typical experience described by participants, included:

"I always had to think twice before I spoke because you never really knew how she was going to react... You couldn't even speak to her about anything, she never intervened with a problem, I was left to do my own thing".

Participants with a fearful attachment style were more likely to be directly told to “move away”, "go away", "to stop it", "not to be so stupid", when upset or around times when their was confrontation in the family context. Those with a preoccupied attachment style were more likely to be "ignored" or "just not listened to" or parents were "just not there" when participants were upset or there were family difficulties.

Theme 5: Childhood experiences were viewed by participants as affecting their adult personality.

Generally all participants viewed their childhood experiences as affecting their adult personalities. In particular, all participants stated that their parents were emotionally unavailable and they grew up believing that they had to strive for perfection to achieve some degree of approval from their parents. Participants also stated that as children they
had a sense of worthlessness, not deserving things and that taking on a lot of responsibility was important. Participants acknowledged that these aspects in their childhood experiences affected their ability to have relationships with others, particularly with members of the opposite sex. When participants were reflecting on aspects of their childhood experiences and how these experiences influenced their current functioning, excessive worry was acknowledged as a problem. For example, participants responded by saying “I suppose I did worry”. It was only upon this reflection that excessive worry was acknowledged. Worry was not acknowledged when participants were accessing childhood memories or when discussing childhood experiences (see Table 24, for examples).
Table 24

Selected examples of significant statements of participants about aspects of their childhood affecting their adult personality.

<table>
<thead>
<tr>
<th>Significant Statements</th>
<th>Formulated Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. I think it affected me a fair bit. I think it really set me back. It’s affected my whole life.</td>
<td>a. Participants acknowledged childhood experiences did affect adulthood.</td>
</tr>
<tr>
<td>b. I didn’t feel loved. I felt worthless. My family environment was not loving. I grew up believing I was unlovable. I had to be perfect. I suppose it’s made me very negative. I have lots of fear, self-doubt, no self-esteem. My confidence was very low. I was pressured to do too much. It made me extremely responsible.</td>
<td>b. Participants acknowledged an invalidating early childhood leading to a sense of worthlessness and being unlovable. Taking on too much responsibility and strive for approval and perfection was acknowledged by participants.</td>
</tr>
<tr>
<td>c. I just can’t seem to have a relationship with anybody. I just wanted to really have a relationship, have a loving mother and father, which I will never had. Its created lots of problems with relationships with men, I picked emotionally unavailable men. I see myself as an outsider.</td>
<td>c. Participants report difficulty having relationships.</td>
</tr>
<tr>
<td>d. I guess the worry affected me. My childhood set up a pattern of worry, I was so isolated</td>
<td>d. Excessive worry was only acknowledged when directly asked about the affects of childhood on adulthood.</td>
</tr>
</tbody>
</table>
Theme 6: Participants articulated a desire to want to accept their parents as they are, even though current relationship with parents were difficult, superficial and void of an emotional connection.

All participants were still reporting difficult relationships with their parents as adults. From the 12 transcripts, four participants reported that they had lost a parent as an adult. All participants reported trying to remain respectful towards their parents and trying to maintain friendly and superficial connection to their parents. Participants also reported trying to achieve an acceptance of their past and to take responsibility for their life as adults. All participants were more empathic towards their fathers trying to justify their fathers' lack of presence physically and emotionally, by stating it was the “drink”, it was “work” and “he was providing for us”. Participants articulated a degree of acceptance about their relationships with their mothers. Generally there was very little physical and emotional connection to parents as adults, participants articulated that this was the way they protected themselves emotionally (see Table 25, for examples).

Those participants with a fearful attachment style described relationship difficulties with their parents in a very direct way, that is, “I don’t like them”; “I have an awful relationship with them”; “It is very difficult”. While those participants with a preoccupied attachment style always tended to describe their current relationships with their parents as “good” or “better”. But then they would go on to describe their parent’s lack of presence both emotionally and physically in their lives. For example, “it is a friendly relationship, but she does not show me any affection”; “it is looking a little better, but with mum it is a bit tense”; “at the moment my relationship is good, but she treats me like a child”; “yes the relationship with my parents have gotten better. But
both my parents can be manipulative, mum will start making me feel guilty”; “it has got better, but I don’t feel it is emotional” (see Table 25, for examples).

Table 25

Selected examples of significant statements of participants’ current relationship with parents.

<table>
<thead>
<tr>
<th>Significant Statements</th>
<th>Formulated Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a.</strong> No the relationship has not changed, it is still difficult. She is old now, so I have some respect for her. No I don’t like them. If they were sick or something I would go and help, because I’d never hurt their feelings. It is friendly and superficial, but I’m protecting myself.</td>
<td>a. Difficult relationships described, but tried to maintain a degree of respect, acceptance and superficial friendliness.</td>
</tr>
<tr>
<td><strong>b.</strong> I don’t see mum much, we don’t relate. I wouldn’t feel devastated if she was gone tomorrow. When I needed her, she was not interested at all. We’d communicate a little, but it was difficult. I try and cut them off emotionally and physically to protect myself.</td>
<td>b. Little physical and emotional connection to parents as adults as a way to protect self emotionally.</td>
</tr>
<tr>
<td><strong>c.</strong> I miss my father, I think I was a lot closer to him. I have more sympathy for him. I felt closer to him when he was alive, we had real conversations a times. I feel I have forgiven him. She is my mother, I need to accept things. Mum is not supportive. I don’t think she means to do it. As I’m getting older I’m trying to accept the fact she is not going to change.</td>
<td>c. More empathy towards father, but a desire to accept mother.</td>
</tr>
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</table>
DISCUSSION

The present study aimed to investigate and further knowledge about the clinical picture of individuals with a primary diagnosis of GAD. In particular, this study investigated the characterological nature of GAD by using the interpersonal attachment perspective. Bowlby and other theorists have suggested that attachment theory can provide a link between cognitive and interpersonal variables in a wide range of psychological disorders (Bowlby, 1969; Carnelley et al, 1994; Lopez, 1995). This study examines the link between the cognitive, interpersonal and emotional functioning in GAD adult attachment relationships and their perception of their childhood environments. This study aimed to expand knowledge about the psychological mechanisms of GAD, as psychological and pharmacological treatments are currently providing varied improvement, between 4%-50% in GAD symptomatology and functioning. The results of this study may be used to further understand the psychological processes and vulnerabilities displayed by individuals with GAD and further assist with future treatment programs for this syndrome. In particular this study aimed to offer further understanding to the developmental/interpersonal model of GAD.

The present study utilised two methodologies to investigate the link between cognitive, interpersonal and emotional functioning in GAD. The quantitative study examined the differences in symptoms between the GAD clinical group and the matched controlled group. In particular, this study aimed to examine relationships between the cognitive process of worry and attachment style, parental bonding, interpersonal and emotional functioning in GAD. Bowlby and others have emphasised that attachment is a continuous process throughout childhood, adolescence and adulthood and may be
influenced by, or may influence later intimate interpersonal relationships. As a consequence, the qualitative study aimed to investigate whether the interpersonal patterns in intimate adult relationships related to remembered early childhood environments of GAD sufferers. Both studies aimed to offer further knowledge to the developmental/interpersonal model of GAD.

Quantitative study

Studies in GAD utilising a control group are limited, but the studies that do utilise a non-anxious and non-psychiatric control group found that individuals with GAD showed greater worries, daily hassles and psychological distress (Borkovec & Inz, 1990; Bourland et al, 2000; Craske et al, 1989; Roemer et al, 1997; Wittchen et al, 2000). The first hypothesis predicted that individuals with GAD experience more pathological worry, higher levels of symptoms of depression, stress, and anxiety when compared to the control group.

This hypothesis was supported. GAD individuals demonstrated more frequent, intense, trait like pathological worry when compared to controls. GAD individuals were also significantly more depressed, stressed and anxious when compared to controls. A significant positive relationship was found between the cognitive process of worry and levels of depression and stress. No significant relationship was detected between worry and levels of anxiety, as assessed by the DASS. This finding is consistent with previous findings describing clinical features of GAD. In particular, the current findings are consistent with previous research findings that worry in GAD had been linked to depressive affect and tend to co-occur with depressive disorders (Brown & Barlow,
In addition, to diagnose GAD, according to the DSM-IV, worry and other symptoms of tension and hyperarousal are required, which was assessed by the stress scale of the DASS in this study (DSM-IV, APA, 1994; Wells, 1999). Worry was found to be associated with DASS-stress scale in this study and this finding is consistent with the clinical features of GAD. The anxiety scale, as assessed by the DASS, tended to measure autonomic arousal consistent with panic like sensations (Lovibond & Lovibond, 1995), which is not frequently associated with a diagnosis of GAD and the cognitive process of worry. Again this was supported in this study.

Hypothesis two predicted that individuals with GAD would experience greater interpersonal difficulties than controls. This hypothesis also aimed to replicate previous findings using the IIP, that adults with GAD were likely to be overly nurturing, domineering and vindictive (Pincus & Borkovec, 1994, cited in Borkovec et al, 1998). This hypothesis was partly supported. GAD sufferers did report great interpersonal difficulties and reported being more vindictive, overly nurturing, exploitable, non-assertive, cold and socially avoidant when compared to controls. Following Pearson's correlations there was a significant positive relationship between worry and total interpersonal difficulties experienced by GAD sufferers. Specifically, there was a significant positive relationship between worry and the interpersonal problems of being overly nurturant, non-assertive, exploitable and socially avoidant. This study did not support previous research results that worry in GAD was also associated with interpersonal difficulties of being vindictive and domineering (Pincus & Borkovec, 1994, cited in Borkovec et al, 1998). The Pincus and Borkovec (1994) study is the only known study that used the IIP to assess interpersonal difficulties in GAD.
These current results imply that there may be some evidence for a certain profile of interpersonal difficulties among GAD individuals. In particular, worry in GAD is associated with greater interpersonal difficulties, with GAD individuals being overly nurturing, nonassertive, socially avoidant and exploitable. These findings tentatively suggest that interpersonal problems have a role in the maintenance of GAD.

Hypothesis three aimed to determine whether individuals with GAD were more insecurely attached compared to controls. Previous research has shown that different attachment styles in adulthood were found to correspond to different types of interpersonal problems (Bartholomew & Horowitz, 1991; Birtchnell, 1997; Simpson et al, 1992). As there is no research investigating the type(s) of insecure attachment styles(s) associated with GAD, it was proposed that the insecure/preoccupied attachment style may be associated with worry in GAD. The key feature of the insecure/preoccupied attachment style was sense of unworthiness combined with a positive view of other (Horowitz et al, 1993). Previous research by Cassidy and colleagues found that GAD sufferers had a tendency to overly nurture others and expressed a desire to be accepted by others (Cassidy et al, 1994; Cassidy, 1995). This hypothesis was exploratory, in particular investigating whether the insecure/preoccupied attachment styles corresponded to the interpersonal problems displayed by individuals with GAD and the cognitive process of worry.

This hypothesis was partly supported. This study supported previous research that found that individuals with GAD demonstrated an insecure attachment style when compared to a control group (Cassidy et al, 1994). When compared to the control group GAD
individuals tended to demonstrate two insecure attachment styles, that is, the
preoccupied and fearful attachment styles. Following Pearson's correlations
investigating the relationship between worry and attachment style, there was no
significant relationship between worry and attachment style. These results imply that
individuals with GAD were more insecurely attached than controls. However worry was
not associated with attachment styles and particularly the insecure/preoccupied
attachment style as hypothesised. Pearson's correlations were also computed to
determine the relationship between attachment styles, and total interpersonal difficulties
displayed by individuals with GAD, as adult attachment styles' are thought to
correspond to interpersonal problems (Bartholomew & Horowitz, 1991; Birtchnell,
1997; Simpson et al, 1992). It was found that there was a significant positive
relationship between the interpersonal problems experienced by individuals with GAD
and the insecure/fearful and preoccupied attachment styles. In addition, lower
interpersonal problems were associated with secure attachment. This is a new finding
and it implies that insecure attachment is associated with interpersonal difficulties,
which may predispose people to worry in GAD.

The aim of testing hypothesis four was to determine whether individuals with GAD
experienced greater interpersonal conflict in their intimate relationships compared to
controls. In particular, the relationship between worry and the interpersonal conflict in
intimate relationships that GAD individuals experience was investigated. Previous
research indicated that individuals with GAD reported poorer quality intimate
relationships when compared to controls (Massion et al, 1993; Yonkers et al, 2000).
However, investigating the types of interpersonal conflicts in intimate relationship
among GAD sufferers is scarce. This hypothesis was partly supported. Individuals with GAD reported being more anxious and less independent in their intimate relationships when compared to controls, but on most subscales of the CRQ there were no significant differences between the GAD group and the control group.

There may be a number of possible reasons for these findings. In this study, participants were asked to complete the CRQ in terms of their spouse/partner relationships only. It is possible that the subscales of the CRQ tap into issues pertinent to all relationships particularly when relationships are going through difficult times. The measure may not be sensitive to discriminating differences in responding between a clinical and community group on these subscales in relation to romantic partners. For example, the measure may not be sensitive to the differences between the control and clinical group on the 'wish to be loved'. As the subscales of the CRQ are prominent in all relationships, the sample size of the current study may have been too small to identify differences between the clinical and control groups.

When investigating the relationship between worry and the subscales of the CRQ, a significant positive relationship was found between pathological worry and the wishes and responses to self of GAD sufferers, as assessed by the CRQ. These results indicated that worry in GAD was associated with greater wishes and desires towards the romantic partner, as well as, response of self (intrapersonal responses) in the intimate relationships of GAD sufferers.

Previous research in GAD has overlooked the interpersonal factors of GAD. In this study, the findings of hypotheses three and four indicate that interpersonal difficulties
are related to worry. Results imply that interpersonal difficulties of individuals with GAD fuels worry. The results of this study also imply that worry fuels interpersonal needs and concerns. Overall, the results imply that worry may develop and/or be maintained because of one's interpersonal problems, relationships with others and a failure in having one's interpersonally mediated needs met.

Hypothesis five aimed to investigate whether GAD individuals would report a negative perception of parenting as a child when compared to the control group. In particular it was expected that adults with GAD would be recipients of 'affectionless control', that is low maternal or paternal care and high maternal or paternal control. This hypothesis was not supported, as there were no significant differences between the clinical and control group on the perception of parenting received as a child, as assessed by PBI. These results indicated that the 'affectionless control' might not be unique to GAD.

Hypothesis six aimed to investigate whether individuals with GAD tended to demonstrate impairment in their emotional functioning when compared to controls. Based on previous research it was predicted that through the process of worry that GAD individuals avoid uncomfortable emotional experiences (Borkovec & Hu, 1990; Molina et al, 1998; Thayer et al, 1996). As a consequence, worry is thought to be a way of avoiding deeper emotionally laden topics by interfering with emotional processing. The results of this study only partly supported this hypothesis. Individuals with GAD were more alexithymic than the control group. In particular, GAD individuals had greater difficulties in identifying and describing their emotions when compared to controls. Pearson's correlations were computed to investigate the relationship between pathology worry and emotional functioning as assessed by the TAS-20. No significant
relationships were found between worry in GAD and alexithymia, including the subscales of alexithymia (difficulty identifying and describing feelings). These results indicated that worry is not directly associated with levels of alexithymia, in particular difficulties in identifying and describing emotions. This pattern of results is inconsistent with previous studies that have shown that process of worry is directly associated with the avoidance of affect (Borkovec, 1994; Molina et al, 1998; Thayer et al, 1996). Again, Pearson's correlations were computed to examine the relationship between alexithymia and other clinical features of GAD. A positive significant relationship was found between the symptoms of depression and stress, as assessed by the DASS, and difficulty identifying feelings. There was also a positive significant relationship between difficulty identifying feelings and interpersonal difficulties experienced by GAD individuals.

The results from testing the six hypotheses of this quantitative study suggest that there are significant relationships between attachment styles, interpersonal patterns, emotional functioning, pathological worry and associated symptoms of GAD. There was particularly strong support for the link between the two insecure attachment styles of preoccupied / fearful attachment and total interpersonal difficulties experienced by GAD individuals. However parental bonding was not related to any clinical features of GAD. These results are inconsistent with previous findings suggesting that parental bonding experiences in early childhood are vulnerability factor for the development of anxiety and depression (Neale et al, 1994; Rapee, 1997). In particular, previous research has reported significant relationships between parental control and anxiety (Chorpita & Barlow, 1998; Hudson & Rapee, 2001).
There may be a number of possible explanations for these findings. The first is that the scales of the PBI, measure dimensions of control and overprotection. These dimensions in parenting may not be perceived by GAD sufferers as being an immediate concern in their current functioning and symptoms, as worrying in adults with GAD tends to focus on present and future oriented possible difficulties. Previously, research has shown that the prominent interpersonal pattern evident among individuals with GAD is being overly nurturing (Pincus & Borkovec, 1994, cited in Borkovec et al, 1998). As a consequence of this interpersonal style, it may be quite difficult for GAD sufferers to acknowledge the role of parental bonding in their current functioning and symptomatology. This may lead to GAD individuals dismissing or even denying the impact of their parental bonding experiences in their current functioning.

At this stage it is still unclear how GAD sufferers perceive the role of parental bonding, as there are very few studies investigating parenting bonding in GAD specifically (Silove, Parker & Hadzi-Pavlovic et, 1991). Previous research, assessing parental bonding has mainly consisted of depressed populations (Gittleman et al, 1998; Kendler, 1996; Mackinnon et al, 1993; Parker, 1983; Neale et al, 1994; Shah & Waller, 2000). Previous researchers have asserted that there are implicit problems with the overprotection scale of the PBI (Gittleman et al, 1998). In particular, it has been suggested that the dimension of overprotection may be more variable and complex over time when compared to parental warmth (Horowitz, 1991), indicating that the complexity of the measure of parental overprotection in the PBI is not been captured. Other researchers have suggested a three-factor model of PBI (Cubis et al, 1989; Gomez-Beneyto et al, 1993; Kendler, 1996; Murphy et al, 1997) with the overprotection scale being replaced by two factors of: discouragement of behavioural freedom and
denial of psychological autonomy and the third factor being the original care dimension. Kendler (1996) further discusses the two factors of overprotection as protectiveness and authoritarianism. Currently there is limited research investigating the three-factor model of the PBI. However this highlights there is still some discussion about the complexity of the PBI dimensions and this may also be a possible explanation for the lack of significant differences between the clinical and control group on the PBI in this research.

The significant correlations between the total interpersonal difficulties of GAD sufferers and GAD symptoms of worry and difficulty identifying feelings provide an interesting point of discussion. The results of this research indicate that the insecure attachment styles of fearful and preoccupied are associated with total interpersonal difficulties (see Figure 3). The interpersonal difficulties displayed by individuals with GAD are also independently associated with the process of worry and difficulty identifying feelings. These processes impact independently on symptoms of stress and depression in GAD.
The results of this study do support previous research findings that individuals with GAD tended to demonstrate impairment in emotional functioning, however these results, surprisingly do not support the previous findings linking worry and emotional avoidance (Borkovec, 1994). These results do not support previous findings indicating
that the process of worry allows individuals to avoid uncomfortable emotional experiences (see Figure 3).

There are a number of possible explanations for these findings. The first is that GAD sufferer’s ability to identify, describe and regulate emotions is still not well understood. It is not clear whether individuals with GAD may have a poorer understanding of emotions. As the results of this study seems to imply that individuals with GAD have interpersonal problems, which may be influencing their ability to identify their emotions, rather than worry working as a mechanism to assist GAD individuals in avoiding distressing emotions. The results of this study imply that GAD individuals report difficulty identifying emotions because of their interpersonal difficulties rather than the process of worry.

Another possible reason for this finding is that the measure of emotional regulation, the TAS-20, was measuring a specific aspect of emotional functioning that may not necessarily be measuring the link between worry and any emotional avoidance experienced when worrying. This study did not specifically investigate the relationship between worry, imagery and physiological arousal as have done previous studies concluding that worry is associated with emotional avoidance (Borkovec, 1994; Molina et al, 1998; Thayer et al, 1996). Previous findings about worry being associated with emotional avoidance do not adequately explain the clinical cases where GAD co-occurs with other anxiety disorders, particularly panic disorder (11%–36%) (Brown & Barlow, 1992; Hunt et al, 2002; Maser, 1998; Wittchen et al, 1994). This highlights the importance of understanding interpersonal patterns and emotional functioning in this population.
The present study investigated overall emotional functioning of persons with GAD rather than looking at the specific relationship between the process of worry, imagery and physiological symptoms. The interpersonal difficulties displayed by persons with GAD may reflect poorer confidence in their ability to identify their emotions rather than actually experiencing deficits in understanding their emotions. This may also provide a reason for the result in this study showing that there was no significant association was found between any GAD symptoms and TAS-20 scores and the subscale of difficulty describing emotions. The qualitative section further investigated interpersonal patterns and emotional regulation issues in GAD.

**Qualitative Study**

The aim of the qualitative study was two fold. Firstly this study investigated the current interpersonal patterns and emotional functioning of GAD individuals with their parents, partners/spouses, siblings/friends and their children. Secondly this study investigated pervasive themes regarding perception of early childhood experiences among individuals with GAD. It was hypothesised that the interpersonal patterns identified by individuals with GAD in their intimate relationships would relate sensibly to remembered early family environments. Further understanding to the developmental/interpersonal model of GAD was expected.

There is no previous research investigating the link between remembered family environments and current intimate relational patterns among individuals with GAD. There is no consensus in the literature on past and current attachment experiences and
interpersonal functioning of individuals with GAD. Currently the literature implies that persons with GAD were rejected more by their primary caregiver (Cassidy, 1995). GAD individuals tended to report conflictual feelings towards their caregivers (feelings of enmeshment, oscillating anger and role reversal). Cassidy (1995) reported a general lack of childhood memories as being prominent among GAD sufferers.

The first part of the qualitative study utilised the Luborsky's CCRT method for describing the characteristic relationship patterns for individuals with GAD. This is the first known study to use this method with the GAD population. It was hoped that pervasive relational patterns might emerge, which may be consistent with previous attachment experiences reported by individuals with GAD.

In general, there were pervasive relationship patterns evident across the different relationship types described by GAD sufferers. In particular, this study illustrated eighteen pervasive themes for individuals with GAD. All relationships were described as difficult, problematic and tumultuous. Generally, most relationships described negative response of others and self. However, some positive response of self and others were described when discussing relationships with their children. In particular, all participants articulated a desire to rear their own children in the direct opposite way to the way they were reared.

The four most prominent wishes and desires expressed by individuals with GAD included: a) wishes to be loved and understood; b) wishes to feel comfortable and good; c) wishes to be close and accepting; d) wishes to be distant and to avoid conflict. The two most prominent responses from others reported by participants included: a)
rejecting and opposing responses from others; and b) others being controlling towards participants. The two most prominent responses of self that occurred in relation to interactions with others included: a) anxious and ashamed responses; and b) disappointment, depressed and angry responses.

When investigating specific relationship patterns, persons with GAD described their current relationship with their mothers as featuring predominantly controlling and rejecting and opposing responses, while their fathers were described as rejecting and opposing to a lesser degree compared to GAD mothers. These results do provide some interesting relational patterns that may add further knowledge on interpersonal and emotional functioning in intimate relationships among GAD individuals. These results also partly support the possibility of the continuity of attachment style from childhood to adulthood. The patterns identified in current relational experiences appear to be consistent with the past research investigation of early family experiences (Cassidy, 1995).

As this study is the first known study to apply the CCRT method to GAD, it is important to consider these results carefully and compare these results to other clinical populations that have utilised the CCRT method. From previous research, major depression (Eckert et al, 1990) borderline personality disorder (Chance et al, 2000) and veterans with post-traumatic stress disorder (Okey et al, 2000) are some clinical groups that have utilised the CCRT method. The Eckert et al (1990) was the first study to use the CCRT method in a psychiatric population of major depression (n=20). Twelve pervasive themes emerged from the depression study (Eckert et al, 1990), while four themes were found to be pervasive for veterans with PTSD (n=20) (Okey et al, 2000).
In the borderline personality disorder (n=11) study twenty-two pervasive themes were evident (Chance et al, 2000). When the pervasive themes were compared across the different clinical populations, there were some similarities and differences reported among the clinical groups investigated.

The patterns of pervasive wishes in the depression (loved (67%) and close (71%)); borderline personality (loved (100%), close (100%), control (100%) & assert (91%)) and PTSD (close (45%)) populations did differ in intensity to the GAD population, who displayed wishes to be loved (98%), to feel comfortable (92%), to be close (84%) and to be distant and avoid conflicts (79%). The pattern of pervasive response of others was similar across the clinical groups, all clinical groups reporting rejecting and opposing response from others (depression: 100%; PTSD: 95%; borderline personality: 100%; current study: 70%). The patterns of pervasive response of self did also display similarities and differences across populations when compared to the current study. The depression group reported disappointment, depression and anger (90%) and helplessness (90%), the PTSD group reported disappointment, depression and anger (80%) & the borderline personality group reported disappointment, depression and anger (100%) and helplessness (100%). In the current study, individuals with GAD reported anxiety and shame (84%) and disappointment, depression and anger (69%).

When comparing previous research studies using the CCRT method there is a consistency of findings across different clinical populations. So it is not clear whether there is a distinct interpersonal pattern identified by individuals with GAD. There are a number of possible explanations for this finding. This finding may, in part, be due to the fact that majority of the GAD sufferers who participated in this part of the study
were displaying severe levels of depression as assessed by the DASS. Alternatively, the wish to be loved, and experience of others as rejecting, and depressed response of self may represent a general relational experience that emerges across clinical and potentially non-clinical populations.

In this study, individuals with GAD presented a contradiction in their wishes, which was not as prominent in the other clinical populations discussed. That is, individuals with GAD wished to be loved, close, accepting, comfortable, good and then wished to be distant and avoid conflict. This wish to be distant and avoid conflict may be a way individuals with GAD protect themselves from the experience of others as thwarting of their wishes and responding towards them negatively in a rejecting and controlling manner. GAD sufferers in turn expressed a range of emotions including anxiety, shame, disappointment, depression and anger around relational interactions. These relational patterns may be an efficacious point of intervention in treatment for GAD sufferers and may be considered in the context of the broader interpersonal difficulties displayed by individuals with GAD. These results also appear to be consistent with the previous research finding investigating early family environments, in particular that those with GAD tended to report conflictual feelings towards their primary care takers (Cassidy, 1995). In addition the results of this study imply that individuals with GAD displayed conflictual feelings and wishes in their current intimate relationships.

This study generally highlights that individuals with GAD were able to quite clearly articulate their wishes, responses of others and their own emotional responses in their current close relationships. People with GAD were able to identify and describe difficult current relational experiences. The results from this study shows that the
relational patterns in GAD may be decreasing the possibility of satisfying outcomes for interpersonal interactions and further reinforcing the desire to continue avoiding conflict and be distant. These relational patterns may be reinforcing the emotional reaction in GAD, which is predominantly anxiety and shame, as well as, disappointment, depression and anger. Persons with GAD also had clear memories about experiences in their relationships.

There are a number of issues and concerns that arise around the CCRT method and the standard CCRT categories. It is not clear in this study whether the themes utilised in the CCRT method are themes that are relevant to all relational interactions in clinical and non-clinical groups. So it is not clear whether this method is identifying psychic structures that exist within individuals generally, or patterns that characterise a particular sample. The question also arises whether the standard CCRT categories are sufficiently varied to pick up on differences between clinical and non-clinical groups. For example, a similar wish (e.g. to be loved) may be expressed in significantly different ways in persons without a psychiatric diagnosis, compared to persons with an Axis I disorders, and again compared to persons with an Axis II disorder. Comparison studies may be required to investigate the frequencies of the CCRT themes to further evaluate this issue. Also it may be helpful to interview participants about times their relationship is at its best to help identify relational patterns pertinent to a clinical group. In addition, more recent methods for coding CCRT patterns, which provide greater specificity could be used in future studies, such as the CCRT-LU method (Albani, Pokorny, Blaser, Gruninger, Konig et al, 2002).
Overall, the CCRT method does offer a rich framework for conceptualising an individual's interpersonal relational patterns, but some of the clinical utility of the method might be lost due to coding being limited to the coding options of Standard Categories Edition Three, so there may be certain relational patterns that may not have been identified but are still relevant to GAD. As a consequence the results of the CCRT method need to be interpreted with caution. Given the small sample size and the absence of a CCRT method matched control/community group, it is unclear whether interpersonal relational patterns are unique to a GAD population. Another limiting factor is that there are few diagnostic groups with the CCRT method that have been published, so the results of this finding remain tentative and preliminary, requiring further research.

The interpersonal relational patterns identified in this study needs to be considered by investigating whether patterns relate sensibly to the remembered family environment. Based on previous research, particularly by Cassidy (1995), current relational patterns do appear to relate sensibly to previous findings in the literature about early family environments of individuals with GAD. In particular, in their current interpersonal relational patterns, GAD individuals displayed conflictual wishes of being loved, close, understood, but also distant and avoidant of conflict. Response of others was described as rejecting, opposing and controlling. The emotional response of those with GAD involved a mixture of emotions, including anxiety, shame, disappointment, depression and anger.

Attachment theory proposed that the relationships in early childhood are internalised through internal working models over time and serve as a model for expectations and
behaviours in relationships as adults (Bowlby, 1973, 1980, 1988). The second part of this qualitative study, using the AAI, aimed to investigate the remembered early childhood experiences among individuals with GAD. The results of this study illustrated specific common early experiences and reactions among GAD sufferers. Six main themes emerged from remembered childhood experiences. The majority of participants reported negative childhood experiences with difficult relationships with their parents. In the first theme both parents were described as emotionally unavailable and invalidating leading to ambivalence towards their parents. Participants tended to be more critical towards their mothers (primary care taker), while displaying empathy for their fathers, stating his work or alcoholism affected his behaviour. Participants also expressed a desire to be emotionally closer to their father. This finding is consistent with previous findings suggesting that persons with GAD were rejected more by their primary caregiver, displaying oscillating feelings towards their parents (Cassidy, 1995).

However, the other findings pertaining to fathers are new. As past investigations have reported that empathy and relationship qualities are two important components of children's interpersonal functioning, it may be important to consider these early childhood experiences when considering the developmental/interpersonal model of GAD (Rutter, 1995).

Past research has shown that the two mechanisms believed to influence the continued impact of early childhood experiences on later interpersonal functioning are internal representations and affective processes (Bartholomew & Horowitz, 1991). As early family experiences in GAD have not been extensively investigated, this part of the study also provided further insight into issues common to individuals with GAD when remembering their early childhood environments. In the second theme that emerged,
participants stated when they were emotionally distressed these emotions were not expressed in front of their parents, but privately alone in their rooms. Individuals with GAD stated they were ignored or rejected, finding it difficult to connect with others. However, when they needed physical care this was done "mechanically" with no emotion by GAD mothers. So these results seem to suggest that the individuals with GAD learnt that any display of emotions would be negatively received by others, so emotions tended to be expressed in private away from possible criticism. This finding is also a new finding and implies that persons with GAD may have had a lack of representation of emotional expression in childhood, which may have further maintained a perception of being unworthy. This finding appears to be consistent with previous theory suggesting a link between internal representations, affective processes and interpersonal functioning (Ainsworth, 1982, 1983; Bowlby, 1973, 1980, 1988). In particular that children's internal views of the world are strongly associated with their ability to relate to others (Rutter, 1995).

The third theme that emerged indicated that participants displaying the Preoccupied and Fearful attachment styles demonstrated differences in accessing childhood memories and in their ability to acknowledge positive and negative childhood experiences. As previous research has not investigated the type(s) of insecure attachment in GAD, this is a new finding. Past research by Cassidy (1995), found that a lack of childhood memory was also prominent among persons with GAD. This was only partly supported. In fact it was found that those displaying a fearful attachment style had good access to negative childhood memories, providing concrete, specific and detailed descriptions. However positive memories were very vague and difficult to access. No emotional distress was displayed by participants when accessing positive and negative memories. Past
research by Horowitz et al (1993) indicated that the fearful attachment style difficulties included a sense of unworthiness (negative view of self) and negative view of other. The fearfully attached report a lack of assertiveness, social inhibition and a view of other as untrusting and rejecting (Horowitz et al, 1993). Past research has also found the fearfully attached tended to be more reluctant to engage in close relationships to avoid rejection. This research seems to imply that due to the negative view of others, GAD sufferers in this study were possibly able to access negative childhood memories. However, interpersonal difficulties displayed by individuals with GAD may be linked to maintaining their negative view of self and others.

Those with a Preoccupied attached style tended to focus on positive childhood experiences and memories were vague and lacked detail. When participants were asked to access specific positive experiences, they became emotionally distressed, stating they could not remember. Negative childhood experiences were also brief with a tendency to avoid discussion of such experiences. These findings seems to be consistent with past research that found that interpersonal dimensions associated with the preoccupied attachment style included a sense of unworthiness and positive view of other (Horowitz et al, 1993). Such people have a strong desire for self-acceptance through others, thus maintaining a positive view of others. This may be the reason that GAD sufferers found it hard to access negative memories of parents as adults.

These results partly supported previous research findings. Generally, those with a preoccupied attachment found it difficult to access positive and negative experiences and displayed an emotional reaction around not being able to access positive experiences. Those with a fearful attachment style were able to access negative
memories very well, but found positive memories more difficult to access. There was no emotional expression with the fearfully attached group when describing experiences. Both attachment styles were quite protective of parental responses towards them, that is, what might be interpreted as 'making excuses' for parents. These results seem to imply that the attachment style may be influencing access of memory and emotional functioning in GAD. These results appear to be consistent with previous findings that early experiences influence emotional regulation of those people with different attachment styles (Fuendeling, 1998). As emotional regulation is reviewed as being adaptive in helping children attain their goals and regulates interpersonal relationships (Bowlby, 1973, 1980, 1988), it is important to explore the link between perception of early parent-child attachments, emotional functioning and interpersonal roles to which individuals must adapt (Brody, 1985).

In the fourth theme that emerged, parental responding style was described by participants as ambiguous and unpredictable. Those with a fearful attachment style were more directly invalidated and dismissed when compared to those with a preoccupied attachment style. This is also a new finding. These findings seem to imply that direct invalidation by parents may effect emotional expression in individuals with GAD. Those who were directly invalidated had a negative perception of self and other (fearful attachment style), and tended to display difficulty in finding an emotional outlet (no emotions were expressed). Past research has found that those with fearful attachment tended to display depressive symptoms characterised by guilt and social introversion (Bartholomew & Horowitz, 1991; Horowitz et al, 1993; Scher & Mayseless, 1997). These symptoms of depression may be impacting on the ability for
fearfully attached GAD sufferers to express appropriate affect when describing distressing events in their early childhood.

The findings in this study also showed that those who were not directly invalidated had a negative perception of self and positive perception of other (preoccupied attachment style) and tended to display distressed emotions (depressed mood) trying to access either positive or negative memories of childhood experiences. Past research has found that depression of the preoccupied individuals tended to be characterised by sad mood and instrumental helplessness (Bartholomew & Horowitz, 1991; Horowitz et al, 1993; Scher & Mayseless, 1997). These symptoms of depression may be impacting on GAD sufferer's ability to express appropriate emotions when trying to access negative and positive childhood memories. This study seems to imply that the negative view of self may be maintained by either direct or indirect perception of invalidation by parents, which may impact on the GAD sufferers sense of unworthiness, levels of depression and expression of appropriate emotions.

In the fifth theme, participants viewed their childhood experiences as affecting their adult personality. Participants in particular stated that they grew up believing that they had to strive for perfection to achieve a degree of approval from their parents. As children they reported a sense of worthlessness, not deserving things and taking on lots of responsibility was important. Participants acknowledged these aspects of their childhood experiences affected their ability to have relationships with others. Excessive worry was only acknowledged upon reflection and when specifically asked, most participants indicated “yes, I suppose I did worry as a child”. Worry was not acknowledged when participants were accessing childhood memories. This finding
seems to be consistent with previous findings that GAD appears to have a gradual onset with 80% of GAD clients being unable to recall when symptoms first began (Rapee, 1985).

The results of this study seem to imply that worry is not explicitly evident in childhood memories and experiences. Instead it appears that the attachment style, early invalidating environment, interpersonal and emotional difficulties may be vulnerability factors for persons to engage in the cognitive process of excessive worry as they progress through their development. Previous research in attachment stated that attachment insecurity had an indirect association with poor problem solving through low self worth (Collins & Read, 1990; Davial et al, 1996; Salzman, 1996). This previous finding may be relevant for GAD sufferers, as the identified psychological vulnerabilities in early childhood (insecure attachment, interpersonal and emotional difficulties) may predispose them to poor problem solving abilities when experiencing difficulties, which may predispose them to worry.

In the sixth theme participants articulated a desire to accept their parents as they are, even though current relationships with parents were difficult, superficial and void of emotional connection. Those with a fearful attachment style described the relationship difficulties with their parent in a direct way. While those participants with a preoccupied attachment style tended to describe parents initially in a positive light, they then went on to describe a lack of presence both emotionally and physically. This finding seems to imply that GAD sufferers have internalised their experiences with parents as children and this internal working model may be impacting on current relationship with parents and other intimate relationships. The descriptions of the
wishes, responses of other and responses of self found in the CCRT's appear to be consistent with the experiences identified in early childhood. This finding is consistent with previous research that implies there is a relationship between adults' report of their early attachment to their caregiver and their attachment relationships as adults (Bartholomew & Horowitz, 1991; Hazan & Shaver, 1987).

Overall, the results of the qualitative study, using the AAI provides insight into possible vulnerability factors that may be linked to the development of GAD. There is a degree of consistency in the findings of the quantitative and qualitative studies of this research. The qualitative results appear to confirm the findings that there are significant relationships between attachment styles, interpersonal patterns and emotional functioning evident in the quantitative study. Worry and difficulty with emotional functioning appears to be associated with interpersonal difficulties in both studies. The previous developmental/interpersonal model proposed in this study will be revised, taking into consideration the findings of this study.

Revised proposed Developmental/Interpersonal Model of GAD based on results of this study

Previous research has found that the child's temperament (Goldsmith & Alansky, 1987; Kagan, 1989), genetics (Kagan et al, 1987) environment (Ben-Noun, 1998) parent-children bonding and attachment (Silove et al, 1991, 1995) have been found to be important in the development of anxiety disorders (Chorpita & Barlow, 1998; Rapee, 2001). It is proposed in this study that the child's genetic predisposition together with certain parental factors as well as an insecure attachment style may predispose
individuals with GAD to a certain interpersonal profile (see Figure 4). In this study it was found that the interpersonal difficulties experienced by persons with GAD in turn are associated with worry and emotional functioning and impact on symptoms of GAD (depression and physiological sensations).

In particular the results of this study propose that parental factors such as unpredictable/ambiguous parenting, as well as, not being emotionally available and invalidating (ignoring or rejecting) of children’s feelings may be important. In this study, individuals with GAD tended to be critical of mothers, but tended to display some empathy towards fathers, probably because fathers were not physically present in the home environment most of the time. In this study it was found that two main insecure attachment styles are prominent in GAD, the fearful and preoccupied attachment styles.

The key feature of the fearful style is an association with a sense of unworthiness with a negative view of other (Horowitz et al, 1993). This study found that individuals with a fearful attachment style tended to be invalidated directly by parents and they were able to acknowledge this. It is proposed that due to their rejecting environment and negative view of other, GAD sufferers may have developed a tendency to express any emotional reactions privately, possibly to avoid further invalidation. This may have been used as an adaptive/protective strategy, and possibly reinforced their sense of unworthiness, contributing to their interpersonal difficulties (Horowitz et al, 1993).

The key feature of the preoccupied attachment style is associated with a sense of unworthiness combined with a high regard for other (Horowitz et al, 1993). This study
found that individuals with a preoccupied style tended to be invalidated indirectly (ignored) by their parents and tended to become emotionally distressed (teary/sad mood), when accessing positive and negative memories. Those with a preoccupied style also tended to express any emotions privately, possibly because they were ignored. The results of this study propose that the GAD sufferers tendency to hide with their emotions also may have been an adaptive/protective strategy, possibly reinforcing their sense of unworthiness and contributing to interpersonal difficulties.

Past theorists have found a link between internal representations, affective processes and interpersonal functioning (Ainsworth, 1982, 1983; Bowlby, 1973, 1980, 1988), which is consistent with the results of this study. In particular, this study has found that early experiences together with a lack of representation of emotional expression and a perception of being unworthy may have promoted certain interpersonal difficulties and poor problem solving abilities. In particular, the results of this study found that individuals with GAD tried to solve their difficulties by taking on responsibility and striving for perfection to achieve a degree of approval from others. These experiences together with a difficulty in expressing emotions openly may have promoted a tendency for being over nurturing, nonassertive, socially avoidant and exploitable in terms of adult attachment relationships. This result of this study appears to indicate that the interpersonal difficulties displayed by individuals with GAD are associated with pathological worry and difficulty identifying feelings and that these features of GAD impact on depression and physiological symptoms of GAD. It is proposed that the sense of unworthiness associated with the fearful and preoccupied attachment styles may account for the high comorbidity of GAD with depression. This study proposes that worry in GAD is linked to interpersonal difficulties and that worry may further
reinforce interpersonal relational patterns in the intimate relationships of individuals with GAD.

In this study it was found that persons with GAD also reported rejecting and controlling responses from their current intimate relationships. From the results of this study it is proposed worry may be the strategy developed to deal with current interpersonal relational difficulties, that is, the conflicting wishes (to be loved, close, accepted, comfortable, but also distant and avoidant of conflict) displayed by people with GAD, as well as, the oscillating emotional responses of sufferers (feelings of anxiety, shame, disappointment, depression and anger). Thus worry would further maintain interpersonal difficulties and interpersonal relational patterns.
Figure 4: The Developmental/Interpersonal Model of GAD

**Parental Factors:**
- Unpredictable environment
- Emotionally unavailable/invalidating

**Client Factor:**
- Genetic predisposition

**Insecure Attachment**

**Fearful:**
- (Negative view of self and other)
- Access to negative memories
- Vague positive memories
- Directly invalidated
- Critical of mother
- Empathy towards father

**Preoccupied:**
- (Negative view of self and positive view of other)
- Vague positive and negative memories
- Indirect invalidation
- Critical of mother
- Empathy towards father

**Interpersonal Difficulties:**
- Overly nurturing
- Nonassertive
- Invalidating
- Exploitable

**Interpersonal Wishes**

**Worry**

**Difficulty Identifying Feelings**

**Interpersonal Responses**

**Depression and Stress**
Demographic and Representativeness of the Sample

The demographics of this sample did not differ significantly from those found in other GAD samples. Most of the GAD participants in this study were female in gender (92%), which is consistent with research findings of anxiety samples comprising more of females than males (Carter et al, 2001; Mancini, van Ameringen, Oakman & Figueiredo, 1999). The co-morbidity rates evident in this sample where consistent with previous findings suggesting that the most frequent co-morbid disorders were depressive disorder, panic disorder with/without agoraphobia and social phobia (Hunt et al, 2002). As expected the majority of the sample was Australian born as reflected in the general population. In this sample the 74% of participants reported childhood onset of GAD, which is consistent with previous findings stating that a high proportion of individuals with GAD report having symptoms all their life (Brown et al, 1994). Even so, this sample may be more representative of those clients that have lifelong GAD, rather than GAD sufferers who reported onset later on in life. Past research has suggested that two forms of GAD may exist based on age (Hoen-Saric et al, 1993). In particular, early-onset GAD tended to be characterised by insidious origin with childhood issues. Individuals tended to be inhibited, sensitive and exhibited current marital discord. The clinical characteristics of the clinical subgroup in the qualitative study are representative of the overall clinical group.
Psychometric Properties of the Instruments Used

The internal consistencies of all of the scales used in this study were tested. This was considered particularly important given that some of the scales, such as the Central Relationship Questionnaire (CRQ) have not be extensively utilised and investigated in the literature. All scales utilised in this study had previous literature indicating satisfactory psychometric properties. All instruments used in the study demonstrated high satisfactory reliability with the lowest internal consistency being found in the CRQ-Total Response from Other subscale (α = 0.67) and the Toronto Alexithymia Scale of Externally Oriented Thinking (α = 0.70). All other values were above the internal consistency threshold recommended by Anastassi (1998: α = 0.80).

Limitations and Strengths of this study

One of the major strengths of this study was the use of a matched community control group. In particular the community group was matched to the control group on age, gender and marital status. As worry is a cognitive process evident among most people, it was important to have a community control group to identify the clinical features prominent in GAD. The use of two methodologies in this study (qualitative and quantitative) without any missing data was also an advantage. The qualitative part of this study appeared to confirm quantitative findings, so there was consistency of results across the two methodologies.

Participants were recruited from two anxiety clinics located in metropolitan Sydney. Clinical samples such as these are important to research, as they are more likely to
represent the types of clients that are typically seen in clinical practice generally. This study examined a diagnosis specific group, identifying the co-morbidity of GAD with other Axis I and II disorders. This study did not limit the clinical group to ‘pure’ cases of GAD, which has been identified in the literature as rare in both clinical and community samples (Brown & Barlow, 1992; Wittchen et al, 2001). However this study may only represent early onset GAD rather than GAD clients who report a later onset, so the generalisability of this study’s results may be limited.

One of the major limitations of this research is the use of retrospective instruments. The majority of previous research studies examining the link between psychopathology, developmental and interpersonal patterns have been retrospective (Rapee, 1997). However the arguments against the use of retrospective research are important to acknowledge. One of the main criticisms about the use of retrospective instruments is that responses provided by participants are retrospectively biased. It is hypothesised that the emotional states of people completing self-report measures influence their responses on such measures (Wiffen & Sassevile, 1991; Zemore & Rinholm, 1989). It is thought that people who are anxious and depressed are more likely to view past events more negatively. However other research has reported the stability of retrospective reports, particularly regarding recall of parental behaviour. For example, research has demonstrated high test-retest reliability for up to 10 years, as well as, high correlations between twins and siblings on the PBI (Parker, 1989).

Most researchers acknowledge the difficulties in using retrospective data. However, most researchers also have limited resources and are unable to conduct the gold standard prospective longitudinal studies to determine the relationship between
psychopathology and developmental factors. While it may be preferable to conduct longitudinal studies, it has been argued that it is the perception of clients history and parental behaviour that is of value when considering the course of adult development (Parker, 1989). It is the perceptions held by participants that provide information about the internal working models of participants. In particular beliefs and expectations about parents and others may sensibly be the proper focus of an intervention.

Retrospective data can also be quite useful when understanding research results from an attachment theory perspective. The attachment theory proposes that relationships in childhood are internalised through internal working models over time and serve as a model for expectations and behaviour in relationship through life (Bowlby, 1973, 1980, 1988). It is thus thought that retrospective data will access internal working models, which provides a mechanism for cross-age continuity in attachment style. Internal working models are of particular importance in understanding the role that early relationships have in determining adult relationships.

Another limitation to this study is the sample size. Previous research utilising a clinical and control group have published research with substantially smaller sample sizes (n=13) (Borkovec & Inz, 1990). So the recruitment of 50 clients with clinical GAD and 50 matched community participants in this study is a formidable task, despite some analyses being underpowered and subject to type 1 and 2 errors (for which bonferroni adjustments can only partially control). Another weakness in this study is that it solely relied upon the Toronto Alexithymia Scale to determine level of emotional awareness and functioning in GAD clients. It would have been useful to have another well established measure, on emotional intelligence for example, included in the study. Such
a measure may have been helpful in understanding and interpreting the results of this study. A further limitation in this study concerns the employment of another measure of adult attachment. In this study, the relationship questionnaire was chosen in order to address questions involving Bartholomew’s typology of attachment. Fraley and colleagues (2000) have developed a dimensional scale that can be used, so that the differences in the four attachment types can be further examined.

This study is a cross-sectional study and not a longitudinal study, so an overall limitation of this study is that the design of the study is correlational and not a causal design. Therefore the developmental/interpersonal model of GAD and results found are just possibilities and require further research.

Summary

This study examined the significant relationships between early childhood experiences and interpersonal and emotional functioning in GAD and their significant relationships. A developmental/interpersonal model of GAD is proposed in this study, which may provide further insight into psychological vulnerabilities of individuals that report a lifelong history of GAD.

The results of this study suggest that the insecure attachment style, particularly the preoccupied and fearful styles, is associated with interpersonal difficulties, which may predispose individuals to worry in GAD. Worry was not directly associated with levels of alexithymia, but this study does suggest that difficulties identifying feelings was associated with interpersonal difficulties rather than the process of worry.
Interpersonal relational patterns in GAD were also associated with the process of worry. Worry may be the strategy developed to deal with current interpersonal relational difficulties and be further maintained because of problems in one’s relationship with others and/or with failures in having one’s interpersonally mediated needs met. This study suggests that interpersonal difficulties, including interpersonal problems as well as intrapsychic relations (conflictual relational patterns) in GAD are significant in developing and maintaining the difficulties that GAD sufferer’s experience.

Early childhood environment such as parents being emotional unavailable and invalidating, provide an environment where GAD clients are unable to express emotions openly. Such an environment may lead to individuals having a lack of representation of emotional expression in childhood, which may further maintain a sense of being unworthy. This sense of unworthiness would further maintain and exacerbate interpersonal difficulties. The results reported here suggest that worry is a strategy that is associated with the interpersonal difficulties displayed by GAD sufferers and is further maintained and reinforced by such difficulties.

**Future Directions and Conclusions**

Further research examining the proposed developmental/interpersonal model of GAD is required. It is emphasised in this study that the proposed model of GAD only fits with this particular data set. Further studies are needed with larger sample sizes to properly test the model and replicate the general findings of this study. In particular this research has revealed a need to consider interpersonal difficulties and relational
interpersonal patterns as possibly important aspects of the clinical picture of GAD. The findings reported here lead to the suggestion that the interpersonal difficulties experienced by GAD individuals may be maintaining and reinforcing pathology worry, however this requires further research and investigation. The results of this study are a heuristic in order to move the field forward and it is emphasised again more research is needed to properly test the model proposed.

Another area requiring further investigation is an understanding of the emotional functioning of individuals with GAD. As this study solely relied upon the TAS-20 to determine the level of emotional awareness, it may have been useful to have a well-established measure, such as the Emotional Intelligence Scale (EIS) to assess participant's current level of emotional intelligence. In particular this measure assesses appraisal and expression of emotions, emotional regulation and utilisation of emotions (Schutte et al, 1998). The EIS might have been helpful in further understanding and interpreting the results of this study.

Finally, it may be useful to compare interpersonal and emotional functioning among early onset GAD clients versus a later stage onset of symptoms. As individual with early onset of GAD may differ in symptomatology, developmental and interpersonal factors from those with a later onset. Such a study would be important to clarify how generalisable the current findings would be in the clinical picture of GAD.

Investigation of two possible GAD groups based on age of onset would require large samples sizes to detect meaningful relationships. Also utilising two controls groups, that is, non-anxious/non-psychiatric control group and anxious control group (e.g. possibly using a social phobia or OCD group) would be useful to ascertain results found are
prominent among GAD individuals. In addition it would be interesting to repeat the qualitative study with clinical and non-clinical comparison groups to ascertain the themes identified are pertinent to GAD sufferers.

The results of this current study imply that interpersonal and emotional functioning may be important aspects of GAD to be addressed in treatment. An interpersonal component may be important to include in the treatment of GAD, particularly addressing the interpersonal and emotional functioning in their current intimate relationships. A basic interpersonal/emotional component of treatment would need to be designed and further outcome studies would be required to empirically evaluate a treatment that includes an interpersonal/emotional component in GAD treatment. It may be quite helpful to compare such a treatment to existing interventions such as CBT.
REFERENCES


